



DRAFT

ENVIRONMENTAL IMPACT REPORT

FOR THE

LATHROP GENERAL PLAN UPDATE (SCH: 2021100139)

MAY 2022

Prepared for:

City of Lathrop
Community Development Department, Planning Division
City of Lathrop
390 Towne Centre Drive
Lathrop, CA 95330

Prepared by:

De Novo Planning Group
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El Dorado Hills, CA 95762

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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PURPOSE

The City of Lathrop (City) as lead agency, determined that the Lathrop General Plan Update (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.

The City received five written comment letters on the NOP. Copies of these letters are provided in Appendix A of this Draft EIR and the comments are summarized in the Executive Summary chapter. The City received the following comment letters.

- California Department of Conservation (November 1, 2021)
- California Valley Miwok Tribe (October 26, 2021)
- Central Valley Water Quality Control Board (November 8, 2021)
- Native American Heritage Commission (October 12, 2021)
- San Joaquin Valley Air Pollution Control District (November 4, 2021)

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 Alternative 1, the City would not adopt the General Plan Update. The existing Lathrop General Plan would continue to be implemented and no changes to the General Plan, including the Land Use Map, Circulation Diagram, goals, policies, or actions would occur. Subsequent projects, such as amending the Municipal Code (including the zoning map) and the City’s Design Guidelines, would not occur. The Existing General Plan Land Use Map is shown on Figure 5.0-1.
- **Alternative 2: Modified Project Alternative.** Under Alternative 2, the City would adopt the updated General Plan policy document, but would retain the existing land use map. This alternative would result in the same growth as the existing General Plan and Alternative 1, but would implement the updated goals, policies, and actions found in the General Plan Update. This Alternative would result in more residential growth, and less non-residential development than the proposed Project. This alternative was developed to potentially reduce the severity of impacts associated with noise, air quality, and workforce VMT.
- **Alternative 3: Balanced Density Residential Focused Alternative.** Alternative 3 would adopt the General Plan Update, including the proposed General Plan Land Use Map and updated goals, policies, and actions. However, Alternative 3 would place more emphasis on residential development, increasing the allowed densities for the residential land uses, while reducing the intensity of non-residential development. For comparison it is assumed that this Alternative would result in a 25 percent increase in the number of new residential dwelling units, and a 10 percent decrease in jobs and non-residential square footage when compared to the proposed Project. This Alternative would result in the most dwelling units compared to all other Alternatives. This Alternative would also result in more non-residential growth than Alternatives 1 and 2, but 10% less non-residential growth than the proposed Project. This alternative was developed to create a more equal jobs/housing balance, potentially reducing the severity of impacts related to greenhouse gas emissions and VMT, as new development would be within close proximity to the new job generating uses, which would help to reduce per capita employment VMT. Figure 2.0-2 of Chapter 2 (Project Description) shows the proposed General Plan Land Use Map.

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 (MODIFIED PROJECT)	ALTERNATIVE 3 BALANCED DENSITY (RESIDENTIAL FOCUS)
Aesthetics	3 – Same	4 – Slightly Worse	3 - Same	3 - Same
Agricultural Resources	3 – Same	4 – Slightly Worse	3 – Same	3 - Same
Air Quality	3 – Same	4 – Slightly Worse	2 – Slightly Better	1 – Better
Biological Resources	3 – Same	4 – Slightly Worse	3 – Same	3 – Same
Cultural Resources	3 – Same	4 – Slightly Worse	3 – Same	3 – Same
Geology and Soils	3 – Same	4 – Slightly Worse	3 – Same	3 – Same
Greenhouse Gases, Climate Change, and Energy	3 – Same	4 – Slightly Worse	2 – Slightly Better	1 – Better
Hazards and Hazardous Materials	3 – Same	4 – Slightly Worse	3 - Same	3 - Same
Hydrology and Water Quality	3 – Same	4 – Slightly Worse	3 – Same	3 – Same
Land Use and Population	3 – Same	4 – Slightly Worse	3 – Same	3 – Same
Mineral Resources	3 – Same	3 – Same	3 – Same	3 – Same
Noise	3 – Same	2 – Slightly Better	1 – Better	2 - Slightly Better
Public Services and Recreation	3 – Same	4 – Slightly Worse	4 – Slightly Worse	4 – Slightly Worse
Transportation and Circulation	3 – Same	4 – Slightly Worse	2 – Slightly Better	2 – Slightly Better
Utilities	3 – Same	4 – Slightly Worse	4 – Slightly Worse	4 – Slightly Worse
Wildfire	3 – Same	3 – Same	3 – Same	3 – Same
Irreversible Effects	3 – Same	4 – Slightly Worse	3 – Same	3 – Same
SUMMARY	51	64	48	47

Overall, Alternative 3 is the environmentally superior alternative as it is the most effective in terms of overall reductions of impacts compared to the proposed General Plan and all other alternatives. As such, Alternative 3 is the environmentally superior alternative for the purposes of this EIR analysis. Information related to alternatives and their respective impacts are described in Chapter 5.0 of this DEIR.

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 policies and 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, and the level of significance 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 substantial light or glare which would adversely affect day or nighttime views in the area	LS	<i>None Required</i>	LS
AGRICULTURAL AND FOREST RESOURCES			
Impact 3.2-1: General Plan implementation would result in the conversion of farmlands, including Prime Farmland, Unique Farmland, and Farmland of Statewide Importance, 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
Impact 3.2-2: General Plan Implementation would conflict with existing zoning for agricultural use, or a Williamson Act Contract	PS	<i>Minimized to the greatest extent feasible through General Plan Policies and Actions. No feasible mitigation is available.</i>	SU
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	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
Impact 3.2-4: General Plan implementation would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use	LS	None Required	LS
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	Minimized to the greatest extent feasible through General Plan Policies and Actions. No feasible mitigation is available.	SU
Impact 3.3-2: General Plan implementation would expose sensitive receptors to substantial pollutant concentrations	PS	Minimized to the greatest extent feasible through General Plan Policies and Actions. No feasible mitigation is available.	SU
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	None Required	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	None Required	LS
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	LS	None Required	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
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 remains	LS	None Required	LS
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	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
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			
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 property	LS	None Required	LS
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	LS	None Required	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
sewers are not available for the disposal of waste water			
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 release of hazardous materials into the environment	LS	None Required	LS
Impact 3.8-2: General Plan implementation has the potential to emit hazardous emissions or handle hazardous or acutely hazardous materials,	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
substances, or waste within one-quarter mile of an existing or proposed school			
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 supplies, interfere substantially with groundwater recharge or conflict with a groundwater management plan	LS	None Required	LS
Impact 3.9-3: General Plan implementation could alter the existing drainage pattern in a manner	LS	None Required	LS

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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
which would result in substantial erosion, siltation, flooding, impeded flows, or polluted runoff			
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 would 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	PS	Minimized to the greatest extent feasible through General Plan Policies and Actions. No feasible mitigation is available.	SU
Impact 3.11-2: General Plan implementation would result in the loss of availability of a locally-	PS	Minimized to the greatest extent feasible through General Plan Policies and Actions.	LSU

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
important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan		<i>No feasible mitigation is available.</i>	
NOISE			
Impact 3.12-1: General Plan implementation may result in exposure to significant traffic noise sources	PS	<i>Minimized to the greatest extent feasible through General Plan Policies and Actions. No feasible mitigation is available.</i>	SU
Impact 3.12-2: General Plan implementation may result in exposure to excessive railroad noise sources	LS	<i>None Required</i>	LS
Impact 3.12-3: Implementation of the General Plan could result in the generation of excessive stationary noise sources	LS	<i>None Required</i>	LS
Impact 3.12-4: General Plan implementation may result in an increase in construction noise sources	LS	<i>None Required</i>	LS
Impact 3.12-5: General Plan implementation may result in construction vibration	LS	<i>None Required</i>	LS
Impact 3.12-6: General Plan implementation may result in exposure to groundborne vibration	LS	<i>None Required</i>	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	<i>None Required</i>	LS
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	LS	<i>None Required</i>	LS

CC – cumulatively considerable

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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
TRANSPORTATION AND CIRCULATION			
Impact 3.14-1: General Plan implementation may result in VMT per employee that are greater than 85 percent of Baseline conditions	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	PS	<i>Minimized to the greatest extent feasible through General Plan Policies and Actions. No feasible mitigation is available.</i>	SU
Impact 3.14-3: General Plan implementation may increase hazards due to a design feature, incompatible uses, or inadequate emergency access	PS	<i>Minimized to the greatest extent feasible through General Plan Policies and Actions. No feasible mitigation is available.</i>	SU
UTILITIES AND SERVICE SYSTEMS			
Impact 3.15-1: General Plan implementation would not 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	LS	<i>None Required</i>	LS
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	LS	<i>None Required</i>	LS

CC – cumulatively considerable

LCC – less than cumulatively considerable

LS – less than significant

PS – potentially significant

SU – significant and unavoidable

NI – No Impact

<i>ENVIRONMENTAL IMPACT</i>	<i>LEVEL OF SIGNIFICANCE WITHOUT MITIGATION</i>	<i>MITIGATION MEASURE</i>	<i>RESULTING LEVEL OF SIGNIFICANCE</i>
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	LS	<i>None Required</i>	LS
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	NI	<i>None Required</i>	NI
OTHER CEQA-REQUIRED TOPICS			
Impact 4.1: Cumulative degradation of the existing visual character of the region	LCC	<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 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. No feasible mitigation is available.</i>	CC and SU

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
Impact 4.4: Cumulative loss of biological resources, including habitats and special status species	LCC	None Required	LCC
Impact 4.5: Cumulative impacts on known and undiscovered cultural resources	LCC	None Required	LCC
Impact 4.6: Cumulative impacts related to geology and soils	LCC	None Required	LCC
Impact 4.7: Cumulative impacts related to greenhouse gases, climate change, and energy	PS	Minimized to the greatest extent feasible through General Plan Policies and Actions. No feasible mitigation is available.	CC and SU
Impact 4.8: Cumulative impacts related to hazardous materials and human health risks	LCC	None Required	LCC
Impact 4.9: Cumulative impacts related to hydrology and water quality	LCC	None Required	LCC
Impact 4.10: Cumulative impacts related to local land use, population, and housing	LCC	None Required	LCC
Impact 4.11: Cumulative impacts related to mineral resources	PS	Minimized to the greatest extent feasible through General Plan Policies and Actions. No feasible mitigation is available.	CC and SU
Impact 4.12: Cumulative impacts related to noise	PS	Minimized to the greatest extent feasible through General Plan Policies and Actions. No feasible mitigation is available.	CC and SU
Impact 4.13: Cumulative impacts to public services and recreation	LCC	None Required	LCC
Impact 4.14: Cumulative impacts on the transportation network	PS	Minimized to the greatest extent feasible through General Plan Policies and Actions. No feasible mitigation is available.	CC and SU
Impact 4.15: Cumulative impacts related to utilities	PS	Minimized to the greatest extent feasible through General Plan Policies and Actions. No feasible mitigation is available.	CC and SU
Impact 4.16: Cumulative impact related to wildfire	LCC	None Required	LCC
Impact 4.17: Irreversible and adverse effects	PS	Minimized to the greatest extent feasible through General Plan Policies and Actions. No feasible mitigation is available.	SU

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NI – No Impact

1.1 INTRODUCTION

In 2017, Lathrop 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 Lathrop General Plan Update process, a General Plan Existing Conditions Report was prepared to establish a baseline of existing conditions in the city.

The updated Lathrop 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.

LATHROP GENERAL PLAN UPDATE

General Plan

The Lathrop 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 the city. The General Plan includes the elements and topics mandated by State law, to the extent that they are relevant locally, including: Land Use, Conservation, Circulation, Housing, Open Space, Safety, and Noise. The City may also address other topics of interest; this General Plan includes topics and elements related to Recreation, Public Facilities and Services, Economic Development, and Health and Environmental Justice. 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 San Joaquin County, surrounding cities, and other local, regional, State, and Federal agencies.

Existing Conditions Report

The Existing Conditions Report takes a "snapshot" of Lathrop'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).

Community Profile

Key findings from the Existing Conditions Report were summarized into the Community Profile Report. The Community Profile summarizes key development patterns, natural resources, socioeconomic conditions, and environmental constraints in the city that must be considered when charting the course for Lathrop's future.

Vision and Guiding Principles Summary

The City hosted three General Plan Update Visioning Workshops between April and May of 2018. Each Workshop focused on addressing a different topic 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.

Each workshop included a presentation by the General Plan Update team that explained the role of the General Plan, an overview of the General Plan Update process, and an opportunity for the workshop participants to ask questions and seek clarification on the process and the role of the community. Workshop participants were asked to complete activities and exercises in order to provide information to the General Plan Update team. Each workshop focused on different themes and topics to be addressed in the General Plan. At each workshop, participants were provided an opportunity to identify where future land uses should be located within the community, ideas for community design, and transportation priorities. The maps prepared by the Visioning Workshop participants were reviewed and organized by theme, and major themes from the Visioning Workshop mapping activities were considered during the development of the land use Opportunity Areas.

The topics explored in each Workshop along with summaries of what we heard from the community are provided in the Outreach Summary Report.

A fourth community workshop was held in June 2019, which focused on the topic of Environmental Justice. Due to the importance of local Environmental Justice (EJ) issues, the City of Lathrop in an effort to continue to involve and engage the community on local issues of importance, held a standalone workshop focusing specifically on EJ issues in Lathrop. The Environmental Justice Summary Report summarizes the public's participation and input received during the General Plan Update's Environmental Justice Workshop conducted on June 27th 2019.

A series of three Newsletters have been published, which provide an overview of the General Plan, and identify opportunities for community participation.

The Lathrop Community Vision is an aspirational statement of what Lathrop wants to become through the implementation of its General Plan. The Vision Statement provides a sense of purpose and mission for the General Plan, and sets the tone for the Plan's guiding principles and core values to aid in the development of goals, policies and actions that will guide development in the coming years.

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, including the Land Use Map, 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 Lathrop, as lead agency, determined that the Lathrop 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 Lathrop General Plan. A copy of the Public Draft General Plan is located on the Lathrop General Plan Update website, at lathrop.generalplan.org. The Draft EIR also discusses alternatives to the General Plan, and identifies any 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 Lathrop.

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 unless they meet conditions set forth in the following paragraph.

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 further 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 Lathrop, 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 Lathrop General Plan and subsequent implementation of 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 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 Lathrop General Plan, implementation of future projects within Lathrop 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);
- San Joaquin County Local Agency Formation Commission (LAFCO);
- SJCOG San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP);
- San Joaquin Valley Air Pollution Control District (SJVAPCD); and
- San Joaquin 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 Lathrop circulated a Notice of Preparation (NOP) of an EIR for the proposed Project on October 8, 2021 to trustee and responsible agencies, the State Clearinghouse, and the public. A scoping meeting was held on October 27, 2021 at the City of Lathrop City Hall. Oral comments on the NOP related to the EIR were presented during the scoping meeting. Additionally, during the 30-day public review period for the NOP, which ended on November 8, 2021, five 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 any 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 Lathrop 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 Lathrop 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:

Mark Meissner
Community Development Director
Community Development Department, Planning Division
City of Lathrop
390 Towne Centre Drive
Lathrop, CA 95330
planning@ci.lathrop.ca.us

RESPONSE TO COMMENTS/FINAL EIR

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

CERTIFICATION OF THE EIR/PROJECT CONSIDERATION

The City of Lathrop City Council will review and consider the Final EIR, and any Planning Commission recommendations. 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, significant impacts, alternatives, significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. The EIR reviews environmental and planning documentation developed for the project, environmental and planning documentation prepared for recent projects located within the City of Lathrop, 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

1.0 INTRODUCTION

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 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 five written comment letters on the NOP. Copies of these letters are provided in Appendix A of this Draft EIR and the comments are summarized in the Executive Summary chapter. The City received the following comment letters.

- California Department of Conservation (November 1, 2021)
- California Valley Miwok Tribe (October 26, 2021)
- Central Valley Water Quality Control Board (November 8, 2021)
- Native American Heritage Commission (October 12, 2021)
- San Joaquin Valley Air Pollution Control District (November 4, 2021)

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2.1 BACKGROUND AND OVERVIEW

CALIFORNIA GENERAL PLAN LAW

State planning and zoning law (California Government Code Section 65000 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, 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.

General plans must also 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 also 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]).

GENERAL PLAN UPDATE PROCESS

Lathrop’s current General Plan was last comprehensively updated in 1991, with amendments in 1992, 1997, 2001, 2003, 2004, 2006, 2010, 2011, 2013, 2015, 2016, and 2018. Lathrop’s 5th Cycle Housing Element was adopted in 2019.

In 2017, the City of Lathrop embarked on a multi-year process to comprehensively update its General Plan. Specifically, the General Plan provides policy guidance on land use, housing, transportation, infrastructure, community design, conservation, and other development-related topics. State law requires every city and county in California to prepare and maintain a general plan planning document.

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 Lathrop 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 Lathrop 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.

COMMUNITY OUTREACH AND PARTICIPATION

Gathering public and community input was of paramount importance to the City of during the development of the General Plan.

A brief summary of the community outreach and public participation process is provided below.

Outreach Objectives

Objectives established for the comprehensive outreach program are to:

- Educate the public on the City's history, existing conditions, socioeconomic trends, and fiscal health
- Develop a long-term vision for Lathrop
- Engage a broad spectrum of the City's community members

- Establish a greater connection to current planning issues

Community Outreach and Visioning Workshops

The City hosted three General Plan Update Visioning Workshops between April and May of 2018. Each Workshop focused on addressing a different topic 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.

Each workshop included a presentation by the General Plan Update team that explained the role of the General Plan, an overview of the General Plan Update process, and an opportunity for the workshop participants to ask questions and seek clarification on the process and the role of the community. Workshop participants were asked to complete activities and exercises in order to provide information to the General Plan Update team. Each workshop focused on different themes and topics to be addressed in the General Plan. At each workshop, participants were provided an opportunity to identify where future land uses should be located within the community, ideas for community design, and transportation priorities. The maps prepared by the Visioning Workshop participants were reviewed and organized by theme, and major themes from the Visioning Workshop mapping activities were considered during the development of the land use Opportunity Areas.

The topics explored in each Workshop along with summaries of what we heard from the community are provided in the [Outreach Summary Report](#).

A fourth community workshop was held in June 2019, which focused on the topic of Environmental Justice. Due to the importance of local Environmental Justice (EJ) issues, the City of Lathrop in an effort to continue to involve and engage the community on local issues of importance, held a standalone workshop focusing specifically on EJ issues in Lathrop. The [Environmental Justice Summary Report](#) summarizes the public's participation and input received during the General Plan Update's Environmental Justice Workshop conducted on June 27th 2019.

A series of three Newsletters have been published, which provide an overview of the General Plan, and identify opportunities for community participation.

The [Lathrop Community Vision](#) is an aspirational statement of what Lathrop wants to become through the implementation of its General Plan. The Vision Statement provides a sense of purpose and mission for the General Plan, and sets the tone for the Plan's guiding principles and core values to aid in the development of goals, policies and actions that will guide development in the coming years.

Existing Conditions Analysis

The [Existing Conditions Report](#) takes a "snapshot" of Lathrop's current trends and conditions. It provides a detailed description of a wide range of topics within the city, such as demographic and

2.0 PROJECT DESCRIPTION

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 Community Profile summarizes key development patterns, natural resources, socioeconomic conditions, and environmental constraints in the city that must be considered when charting the course for Lathrop's future.

General Plan Steering Committee

The General Plan Steering Committee, which consisted city staff, stakeholders, collaborated with City staff and the General Plan Update team to identify potential issues and opportunities related to the development of the preferred land use map. Local expertise on issues of utilities and infrastructure, land use conflicts and recent and proposed developments ensures that the General Plan update team is able to stay up to date on planning and building activities within the city, as well as local implementation issues and opportunities for improvements. Meeting were generally technical in nature and the TAC was asked to review potential map changes.

City Council Input

The City Council received periodic briefings from City staff and the consultant team to review and receive information relevant to the specific topics, and provide direction and guidance to staff and the consultant team regarding the Land Use map which is analyzed in this Environmental Impact Report.

During the July 7th, 2021 City Council Meeting, the Council provided direction on land use mapping concepts to be included and analyzed relating to the preferred land use map that is analyzed in this Draft EIR.

Community Open House on Draft General Plan

A community outreach effort is scheduled to coincide with the public review period for this Draft EIR. The City will host a public workshop to answer questions about the General Plan, and receive community feedback.

Other Outreach Opportunities and Tools

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.

- General Plan Website: The City maintains a website (www.lathrop.generalplan.org) devoted to informing the public about, and encouraging participation in, the General Plan Update process. The website includes notices, all workshop materials, and presentations given to

the Steering Committee, Planning Commission, and City Council, background materials, policy documents, and draft versions of the General Plan Land Use Map.

- E-mail distribution list: This list was developed and maintained over time, and included agencies, organizations, stakeholders, and individuals.
- Social Media: The City posts meeting notices and project updates to its social media platform, Facebook.
- GP Newsletters (3)
- Also include a statement about City staff making public announcements during PC and CC meetings of upcoming major milestones.
- Also various Manteca Bulletin articles were written regarding the City's GP Update effort.
- Announcements on City Newsletters and Utility Bill Inserts

2.2 PROJECT LOCATION

REGIONAL SETTING

The Plan Area is located in San Joaquin County along the San Joaquin River generally east of the City of Tracy and west of the City of Manteca. The Plan Area, includes all incorporated lands within the Lathrop City Limits and Sphere of Influence (SOI).

The City of Lathrop is located within California's Central Valley in the southern portion of San Joaquin County. Interstate 5 (I-5) connects Lathrop to Stockton and Sacramento to the north and Los Angeles to the south. I-205 connects Lathrop to Tracy and the Bay Area to the west. State Route (SR) 120 connects Lathrop to Manteca, SR 99, foothill communities, and Yosemite National Park to the east. SR 99 also connects to Modesto and Fresno to the south. The Altamont Corridor Express (ACE) rail service connects Lathrop to San Jose and the Bay Area and also connects Stockton to Lathrop

Figure 2.0-1 shows Lathrop's regional location.

ENVIRONMENTAL IMPACT REPORT STUDY AREA

There are several key boundaries addressed by the General Plan, which make up the study area for the General Plan Environmental Impact Report (EIR). These include the city limits, Sphere of Influence (SOI), Area of Interest, and the Planning Area, as shown on Figure 2.0-2 and described below.

City Limits: The City Limits include all area within the 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). A SOI includes both

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incorporated and unincorporated areas within which a city or special district will have primary responsibility for the provision of public facilities and services.

Area of Interest (AOI): The Area of Interest (AOI) is a geographic area beyond the sphere of influence in which land use decisions or other governmental actions of one local agency (the “Acting Agency”) impact directly or indirectly upon another local agency (“the Concerned Agency”). The AOI includes land in the northwest portion of the Planning Area north of the city limits and SOI, and areas in the Stewart Tract outside of the existing City Limits and SOI. Lands within the northwest portion of the Planning Area had previously been included within the SOI and was subsequently removed during the 2016 Municipal Services Review Sphere Amendment. All lands currently within the AOI are outside of the Lathrop City Limits and SOI.

Specific Plan Areas: Specific Plan Areas within Lathrop include: West Lathrop Specific Plan, Central Lathrop Specific Plan, South Lathrop Specific Plan, and Lathrop Gateway Business Park Specific Plan. The Specific Plans guiding development in these areas aim to integrate development and allow for the coordination of planning efforts between many property owners, and allow for infrastructure cost sharing arrangements.

All new development occurring within each of the Specific Plan Areas of the city must adhere to the General Plan and also to the development standards and guidelines established by the relevant Specific Plan.

Planning Area: For the purposes of the General Plan, the Planning Area is defined as the city limits, SOI, and AOI that is included in the analysis and planning for the 20-year horizon of the General Plan.

2.3 PROJECT OBJECTIVES

The Lathrop 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:

- 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; and
- Address emerging transportation, housing, and employment trends.

2.4 DESCRIPTION OF PROPOSED GENERAL PLAN PROJECT

The City of Lathrop is preparing a comprehensive update to its existing General Plan, which was last comprehensively updated in 1991. The General Plan Update is expected to be complete in 2022.

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 Lathrop, and specific policies and actions that will help implement the stated goals.

GENERAL PLAN ELEMENTS

The Lathrop General Plan includes a comprehensive set of goals, policies, and actions (implementation measures), as well as a revised Land Use Map (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 change and resiliency planning, and environmental justice either as separate elements or as components of the required element framework. The Lathrop General Plan includes all of the State-mandated topics and elements, as well as optional elements and issue areas, including, Public Facilities and Services, Economic Development, and Health and Environmental Justice.

- 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. 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 Lathrop by a variety of transportation modes, including bicycle, pedestrian, and transit.
- The **Economic Development Element** provides tools and strategies to strengthen and diversify the local economy and ensures the City maintains adequate revenues to provide quality public services. This element seeks to sustain and diversify the City's economy, recognizing the importance of supporting existing and local businesses while broadening and expanding the employment base and economic opportunities within the city.
- The **Recreation and Resources Element (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.

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- The **Public Facilities and Services Element** establishes policies and programs that address public services and facilities. While not specifically required by State law for inclusion in the General Plan, the Utilities and Public Facilities and Services Element is a critical component in meeting the infrastructure and utility services needs of businesses and residents.
- 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 Lathrop. 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 **Health and Environmental Justice Element** acknowledges the profound effects of the built environment on travel choices, access to food, levels of physical activity, and exposure to risk from accidents or pollution. The Element addresses the topics of active living, and environmental justice.
- The **Housing Element** has not been updated as part of the larger General Plan Update process.

GOALS, POLICIES, AND ACTIONS

Each element of the General Plan contains a series of goals, policies, and actions. The goals, policies, and actions provide guidance to the City on how to direct change, manage growth, and manage resources over the approximate 20-year life of the General Plan. The following provides a description of each and explains the relationship of each:

- 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.

GENERAL PLAN LAND USE MAP

The General Plan Land Use Map identifies land use designations for each parcel within the City's Planning Area. The proposed General Plan Land Use Map is shown on Figure 2.0-2.

GENERAL PLAN LAND USE DESIGNATIONS

The Land Use Element of the Lathrop General Plan defines various land use designations by their allowable uses and maximum development densities and intensities. 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.

City Proper Land Use Designations

Lands included within the city proper planning area include all lands east of Interstate-5 north of Vierra Rd and S Howland Rd, as well as lands to the west of Interstate 5 within the west Lathrop Specific Plans (WLSF) Mossdale Village Project Area.

LD- Low Density Residential (1-7 du/A)

Low Density Residential development will typically involve single-family detached housing on individual lots although developments at the higher range of the allowed development densities may accommodate clustered developments as part of a Planned Development.

MD- Medium Density Residential (8-15 du/A)

Medium Density Residential provides for a wide variety of housing types including zero lot line, multiplexes, homes on lots with reduced front yard setbacks, garden apartments, condominiums, townhouses, and mobile homes in mobile home parks.

HD- High Density Residential (16-25 du/A)

This designation provides for multi-family development in structures of two to three stories. This density range accommodates a variety of multi-family housing types, ranging from row houses to triplexes and fourplexes, stacked townhouses, walk-up garden apartments, and multi-family apartments and condominiums.

VC- Village Center (Max FAR 0.85) (16-25 du/A)

The Village Center designation provides for a variety of commercial, professional, civic and residential uses. Projects in these areas should be pedestrian-oriented developments typical of a traditional main street with storefronts and residential entryways oriented toward public streets. Projects may consist of wholly residential uses, wholly non-residential uses, or a mix of both residential and non-residential uses. Residential densities within this category shall fall within the HDR density range (16-25 du/A). Sites developed with a mix of uses, or non-residential uses, must adhere to a FAR maximum of up to 0.85. The FAR calculation is not inclusive of the residential component.

NC- Neighborhood Commercial (Max FAR 0.35)

The Neighborhood Commercial classification is designed to encourage the location of smaller local-serving commercial uses and centers near residential areas. Neighborhood Commercial uses generally include retail stores, offices and service establishments which supply goods or provide services primarily to meet the convenience of residents of one or more residential neighborhoods. Uses should be compatible with surrounding neighborhoods, and properties should be accessible by automobile, bicycle, and by foot.

CC- Community Commercial (Max FAR 0.5)

The Community Commercial designation provides for a wide range of retail sales, shopping centers, office uses, and personal and business services, accessed primarily by automobile, and intended to serve the community and the surrounding areas. Residential dwellings are conditionally allowed within this designation, provided they are constructed over a permitted use. Residential densities shall be in accordance with density requirements established within the HDR density range (16-25 du/A).

SC- Service Commercial (Max FAR 0.65)

Service Commercial areas provide for the location of service-oriented uses such as auto sales and repairs, building materials supply, equipment service, and storage. The service commercial designation is intended primarily for establishments engaged in servicing equipment, materials and products, but which do not require the manufacturing, assembly, packaging or processing of articles or merchandise for distribution and retail sale.

FC- Freeway Commercial (Max FAR 0.65)

Freeway Commercial uses cater primarily to the needs of the highway traveler, and include but are not limited to hotels, motels, inns, restaurants and auto services, auto and truck sales and service, fuel stations, auto repair, sales and service.

LI- Limited Industrial (Max FAR 1.0)

The Limited Industrial designation accommodates a wide range of jobs-generating uses, including business parks; clean light industrial; research and development (R&D); science, technology, engineering, and math (STEM); tech/biotech manufacturing; high-tech services that incorporate some combination of assembly, warehousing, and/or sales, hospitals and other health care-related uses, warehouses and distribution centers.

GI- General Industrial (Max FAR 0.75)

General Industrial areas provide opportunities for large-scale industries requiring substantial acreage, with access to rail and freeway facilities. The term "general" implies industrial operations which are relatively high in intensity of operation and which may require special conditions such as noise attenuation equipment or emission controls to mitigate potential adverse impacts.

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P/QP- Public/Quasi-Public

This broad category of land use includes government offices and utility service yards, drainage basins, hospitals, schools, and religious institutions.

P- Park

The Park designation provides for neighborhood, community and regional parks, greenways, golf courses, and other outdoor recreational facilities within urban development. Specific uses include public recreation sites, including ball fields, tot lots and play apparatus, adult softball and soccer playing fields, swimming pools, community center buildings, meeting facilities, libraries, art centers, after school care facilities, art in public places, facilities for night-time recreation, trails benches, interpretive markers, picnic areas, barbecue facilities, landscaping, irrigation, city wells, trees and natural habitat areas. Parks also may be designed to accommodate multi-level storm drainage detention basins that will allow recreation use of areas not needed for detention during a given storm.

OS- Open Space

The Open Space designation identifies areas designated for linear systems along waterways, sensitive habitat areas, groundwater recharge areas, creek corridors, and trails. Development in these areas shall be limited to such structures that support the uses described above. Examples of acceptable buildings and structures may include park facilities, restrooms, trails, signage and utilities infrastructure.

Central Lathrop Land Use Designations

The Central Lathrop area is located west of the I-5 freeway, north of the West Lathrop Specific Plan area, and east of the San Joaquin River. This area's development is guided by the Central Lathrop Specific Plan, approved in 2004. The area was annexed into the City in May 2005.

VR-CL- Variable Density Residential (3-16 du/A)

The Variable Density Residential designation uses include single family or multi-family units provided by way of a variety of product types. These uses are typically scattered throughout the interior of the Plan and may include either detached or attached units. The density range is between 3 and 16 units per acre. Neighborhoods may be designed to accommodate conventional lots, small lots, clusters, duets, zero lot lines, courtyards, townhouses, and other innovative lotting strategies and product types that accommodate the demand for higher density housing products.

HR-CL- High Density Residential (15-49 du/A)

The High Density Residential designation uses generally require attached units and accommodate a variety of product types such as flats, townhouses, condominiums, live/work, lofts, and apartments. These uses are typically located in the core of a project, adjacent to higher intensity services and

streets to provide active walkable areas with convenient access to services while acting as a buffer between commercial areas and less dense neighborhoods.

R/MU-CL- Residential/Mixed Use (0.17-0.6 FAR) (10-40 du/A)

The Residential/Mixed-use designation can accommodate all commercial uses, all residential uses, or a mixture of the two. This designation permits a wide variety of uses to occur and provides flexibility to respond to market demand. While various residential and commercial uses are permitted, no one use is required. Mixed-use development provides a wide range of lively and convenient interactions between different land uses. Commercial uses within this category are generally more local serving in nature.

OC-CL- Office Commercial 0.6 FAR

The Office Commercial designation provides for regional as well as local serving retail and business/professional workspace. Typical uses include a wide variety of shopping including grocery/drug, large floor plate stores, smaller specialty retail, restaurants and fast food, as well as professional offices, incubator and research and development space, and small business flex space. Hotels are also a permitted use. Any mix of office and commercial uses are permitted within this designation. Standalone residential dwellings are conditionally allowed within this designation. Residential densities shall be in accordance with density requirements established within the High Density Residential designation of 16-25 units per acre.

NC-CL- Neighborhood Commercial 0.45 FAR

The Neighborhood Commercial designation allows for convenience shopping for goods and services necessary to provide for local residents as well as smaller scale local serving office development. Standalone residential uses are conditionally allowed within this designation. Residential densities shall be in accordance with density requirements established within the High Density Residential designation of 16-25 units per acre.

LI- Limited Industrial (Max FAR 1.0)

The Limited Industrial designation accommodates a wide range of jobs-generating uses, including business parks; clean light industrial; research and development (R&D); science, technology, engineering, and math (STEM); tech/biotech manufacturing; high-tech services that incorporate some combination of assembly, warehousing, and/or sales, hospitals and other health care-related uses, warehouses and distribution centers.

P/QP -CL- Public/Quasi-Public

The Public/Quasi-Public designation permits the development of civic, cultural, and governmental uses that serve the community. These uses typically are provided by the City or other public entity, and may include a civic center, library, fire station, police station, animal shelter, cultural center, senior center, schools, or boys and girls center.

2.0 PROJECT DESCRIPTION

P-CL- Park

The Park designation provides for neighborhood, community and regional parks, greenways, golf courses, and other outdoor recreational facilities within urban development. Specific uses include public recreation sites, including ball fields, tot lots and play apparatus, adult softball and soccer playing fields, swimming pools, community center buildings, meeting facilities, libraries, art centers, after school care facilities, art in public places, facilities for night-time recreation, trails benches, interpretive markers, picnic areas, barbecue facilities, landscaping, irrigation, city wells, trees and natural habitat areas. Parks also may be designed to accommodate multi-level storm drainage detention basins that will allow recreation use of areas not needed for detention during a given storm.

OS-CL- Open Space

Open Space designations encompass a large variety of natural features, buffers, storm water and water quality management, natural habitat preservation and maintenance, and active or passive recreational opportunities which include the river, associated lands along the river and levee, drainage corridors, and other uses such as boat launches, picnic facilities, and fishing sites. Permitted uses include passive and active recreation, linear detention basins and other storm water and water quality features, and trails.

Lathrop Gateway Land Use Designations

The Lathrop Gateway area is located south of Vierra Road and Yosemite Avenue, between two Union Pacific Railroad tracks that pass through southern Lathrop, east of the I-5 freeway and north of SR-120. This area is immediately south of the City Proper. This area's development is guided primarily by the Gateway Specific Plan (adopted May 16, 2011).

CO-LG- Commercial Office - maximum FAR 0.60

The Commercial Office designation includes administrative, educational, bio-tech, medical, R&D and other professional and commercial office uses, with retail commercial and highway-oriented uses near and along the SR 120 Corridor. Supporting lodging and eating services are also envisioned within this designation.

SC-LG- Service Commercial - maximum FAR 0.66

The Service Commercial designation is characterized by a variety of service-oriented uses, including large-scale service and sales centers, communication centers, storage/warehousing, energy production centers, equipment sales and other service centers, with allowance for a limited number of small support retail stores, and locally-serving eating shops and stores. In addition, other uses may also include professional and administrative support services, automotive, truck, boat, and other vehicle sales and services, building materials businesses, reproduction services, carpenters' shops, communications equipment shops, freight forwarding terminals, and wine-oriented businesses and service.

LI-LG- Limited Industrial - maximum FAR 0.65

The Limited Industrial designation, is envisioned as an important employment-generating land use, intended to provide for well-designed groupings of buildings for manufacturing, assembling, construction, maintenance, administrative office, research and development, bio-tech, warehousing, distribution, and service commercial uses

South Lathrop Land Use Designations

The South Lathrop land use area is located east of the I-5 freeway and south of SR-120 and the Lathrop Gateway Specific Plan Area. This area's development is guided primarily by the South Lathrop Specific Plan (SLSP) (adopted July 20, 2015).

CO-SL- Commercial Office FAR maximum 0.60

The Commercial Office designation includes administrative, educational, bio-tech, medical, R&D and other professional and commercial office uses, with retail commercial and highway-oriented uses near and along the SR 120 Corridor. Supporting lodging, eating services, and clean light industrial are also envisioned. within this designation.

LI-SL- Limited Industrial - maximum FAR 0.65

The Limited Industrial designation, is envisioned as an important employment-generating land use, intended to provide for well-designed groupings of buildings for manufacturing, assembling, construction, maintenance, administrative office, research and development, bio-tech, warehousing, distribution, and service commercial uses.

P/QP-SL- Public/Quasi-Public

The Public/Quasi Public designation includes detention and retention facilities for stormwater and public easements for sanitary sewer and storm drain pump stations.

OS-SL- Open Space River/Levee Park

The Open Space designation is envisioned to connect the City's levee/open space/trail network. The open space corridor along the San Joaquin River is intended as a local community wide facility with the possibility of regional linkage. This Open Space Corridor would also provide the ability to connect the South Lathrop Specific Plan with the West Lathrop Specific Plan Area and other development to the north. provision is for the construction and use of outdoor recreation facilities such as recreation fields, fitness equipment and courses, or other such uses intended for the physical recreation and wellbeing of the community and/or the employee users may also be allowed in this area.

Refer to the South Lathrop Specific Plan for the full range of permitted uses under this land use category.

River Islands Land Use Designations

The River Islands area (adopted in 2003 with subsequent addendums through May 14, 2015), is located within the West Lathrop Specific Plan Area, west of I-5 and the San Joaquin River and north of I-205. Encompassing nearly 5,000 acres, River Islands provides a waterfront master-planned community with a mix of housing types, and commercial uses. On July 14, 2021 River Islands received City approval for an updated Phase 2 project area. This action added 4,010 additional residential units bringing the total to 15,010 units, created a “town center” mixed-use area at Paradise Road (Paradise Cut Village Center), added a mixed-use Transit Oriented Development (TOD) area to complement the future planned Valley Link transit station, and changed the circulation pattern for the Phase 2 area.

RL-R- Residential Low (3-9 du/A)

The Residential Low designation is intended to provide for and protect neighborhoods comprised of single-family dwellings, two-family residences, duplexes, water-oriented residential uses and residential use types compatible with single-family neighborhood communities.

RM-RI- Residential Medium (6-20 du/A)

The Residential Medium designation is intended to provide for and protect neighborhoods comprised of single-family dwellings (both attached and detached), two-family residences, multi-family residences, water-oriented residential uses and residential use types compatible with medium density neighborhoods.

RH-RI- Residential High (15-40 du/A)

The Residential High designation is intended to provide for and protect neighborhoods comprised of two-family residences, multi-family residences, water-oriented residential uses and residential use types compatible with higher density neighborhoods, such as apartments and condominiums.

TOD-RI- Transit-Oriented Development (6-40 du/A)

The purpose of the Transit Oriented Development designation is to establish higher density residential uses within ½ mile of the proposed transit station, for the Valley Link system, at the Union Pacific Railroad and provide the opportunity for these residential uses to be adjacent to or near mixed use commercial, service and office uses in a horizontal or vertical mixed-use orientation. The TOD area will provide a walkable residential village in close proximity to the transit station that will allow residents to minimize their use of automobiles and have easy access to employment centers in the Bay Area via Valley Link’s connection to BART. Parking areas shall be designed to provide opportunities for others who live in Lathrop or the surrounding area to utilize the transit station, as well as complementary service retail and commercial uses.

MU-RI- Mixed Use - (6-40 DU/AC)

The Mixed Use designation allows for the integration in a single project of both residential and commercial uses. Housing is permitted but not required. The mixed use designation allows the placement of residential units over street level businesses, as well as development of residential uses adjacent to compatible commercial, office and recreational uses. Within areas designated mixed use, project densities up to 40 units per acre will be allowed.

RC-RI- Regional Commercial - Maximum FAR of 0.5

The Regional Commercial designation is intended to provide primarily office and employment-generating uses within the River Islands Employment Center (Business Park). The Regional Commercial use designation allows a broad range of commercial uses including regional- and community-serving retail, service, and office uses. This land use category allows professional office uses and service uses, such as local, community, and regional serving retail uses, real estate, accounting, legal, technology oriented, healthcare, education, and other similar uses. It can also allow more typical community-oriented retail uses such as laundries, dry cleaners, beauty salons, finance, restaurants and bars; recreation-oriented commercial uses such as gyms, marinas, or golf courses, hotels, bed and breakfast inns; and, entertainment and cultural facilities. The RC-RI does not allow industrial and warehousing uses.

OS-RI- Open Space

The Open Space designation applies to open space areas within River Islands which are outside of Paradise Cut. The OS area differs from the RCOS designation for Paradise Cut in that these lands interface with adjacent development areas, and some transitional uses, such as parks and recreational uses, are allowed.

RCOS-RI- Resource Conservation-Open Space

The Resource Conservation designation is intended to provide for habitat restoration and preservation-related activities within Paradise Cut.

Stewart Tract Land Use Designations

The Stewart Tract Land Use Area is bisected by I-5 and is bound to the south and east by Paradise Cut and the San Joaquin River, and to the north by the Union Pacific Railroad tracks.

R-ST- Residential - Stewart Tract (1-7 du/A)

The Residential designation is intended primarily to provide low density, detached and clustered single-family dwellings.

RC-ST- Recreation Commercial maximum FAR of 0.5

The Recreation Commercial designation allows for theme parks, agricultural entertainment (“agri-tainment”), retail-oriented agricultural operations such as “U-Pick” produce and farmstands, retail entertainment, participatory activities, spectator events, commercial lodging, and high density

2.0 PROJECT DESCRIPTION

residential at a density of 15-40 units per acre. This category embraces a wide variety of uses which reflect the dynamic character of the market for commercial recreation and entertainment related activities.

RCO-ST- Resource Conservation

The Resource/Conservation designation includes agricultural land, wildlife habitat, watershed areas, rangeland, and conservation areas of.

UR-ST- Urban Reserve

The purpose of the Urban Reserve designation is to hold in reserve those areas designated by the general plan to be held in reserve for future urban expansion and to preserve the availability of agricultural land and vacant land required for future urban expansion and to prevent the premature development of land where the range of municipal-type services are not yet available.

Table 2.0-1: Proposed General Plan Land Use Designation Acreages

Land Use	Acres - AOI	Acres - City Limits	Acres - SOI	Total
City Proper		4,519.76	120.49	4,640.25
CC		52.72		52.72
FC		97.45	54.54	152.00
GI		1,096.56		1,096.56
HD		33.54		33.54
LD		955.04		955.04
LI		1,442.84	65.94	1,508.79
MD		180.42		180.42
NC		8.32		8.32
OS		66.87		66.87
P		82.38		82.38
P/QP		69.29		69.29
ROW		251.12		251.12
SC		157.48		157.48
VC		25.74		25.74
Central Lathrop		1,373.62		1,373.62
HR-CL		13.65		13.65
LI		673.90		673.90
NC-CL		12.02		12.02
OC-CL		167.54		167.54
OS		9.69		9.69
OS-CL		33.69		33.69
P		12.01		12.01
P/QP-CL		54.69		54.69
P-CL		77.04		77.04
R/MU-CL		62.76		62.76
ROW-CL		1.00		1.00
VR-CL		255.63		255.63
Lathrop Gateway		303.97	62.79	366.76
CO-LG		68.17		68.17
LI-LG		184.34		184.34
ROW-LG		13.41	7.02	20.43
SC-LG		38.05	55.77	93.82

2.0 PROJECT DESCRIPTION

South Lathrop		301.83		301.83
CO-SL		15.56		15.56
LI-SL		240.13		240.13
OS-SL		12.79		12.79
P/QP-SL		18.40		18.40
ROW-SL		14.94		14.94
River Islands		4,412.46		4,412.46
MU-RI		332.68		332.68
OS/P-RI		379.24		379.24
RCO/OS-RI		694.07		694.07
RC-RI		304.88		304.88
RH-RI		30.51		30.51
RL-RI		2,151.86		2,151.86
RM-RI		222.32		222.32
ROW-RI		170.45		170.45
TOD-RI		126.45		126.45
Stewart Tract		737.11		737.11
RCO-ST		181.37		181.37
RC-ST		67.40		67.40
ROW-ST		44.50		58.10
R-ST		13.59		13.59
UR-ST		430.25		430.25
AOI – North/South	2,554.68			2,122.16
AOI-N	2,122.16			2,122.16
AOI-S	432.52			
Grand Total	2,554.68	11,648.75	183.28	14,386.70

SOURCE: DE NOVO PLANNING GROUP, 2021. NOTE: ROUNDING MAY IMPACT TOTALS

2.5 GENERAL PLAN BUILDOUT ANALYSIS

Table 2.0-2 includes a comparison overview of existing conditions, the current General Plan Land Use Map, and the proposed General Plan Land Use Map in terms of population, housing units, nonresidential development square footage, jobs, and the jobs-to-housing ratio.

Growth projections shown in Table 2.0-2 represent an estimate of new growth potential under the existing General Plan and the proposed General Plan, and are based on several factors, including the availability of vacant and underutilized parcels and historical growth trends. Given that actual development rates and growth rates are likely to be significantly lower than the maximum allowed development under the General Plan (if every parcel in the City developed or redeveloped to its full potential) over a 20-year planning horizon, these projections likely overestimate potential growth. However, these growth projections are intended to provide a meaningful estimate of the level of growth that could potentially occur.

Growth projections should not be considered a prediction for growth, as the actual amount of development that will occur throughout the 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. New development and growth are largely dictated by existing development conditions, market conditions, and land turnover rates. Very few communities in California actually develop to the full potential allowed in their respective General Plans during the planning horizon.

While no specific development projects are proposed as part of the Lathrop General Plan Update, the General Plan will accommodate future growth in Lathrop, including new businesses, expansion of existing businesses, and new residential uses. The buildout analysis assumes an approximate 20-year horizon, and 2040 is assumed to be the buildout year of the General Plan.

2.0 PROJECT DESCRIPTION

TABLE 2.0-2: COMPARATIVE GROWTH PROJECTIONS, EXISTING GENERAL PLAN LAND USE MAP AND PROPOSED LAND USE MAP

	POPULATION	DWELLING UNITS	NONRESIDENTIAL SQUARE FOOTAGE	JOBS	JOBS PER HOUSING UNIT
EXISTING CONDITIONS					
	28,503	7,747	13,327,713	9,153	1.18
NEW GROWTH POTENTIAL					
Existing General Plan	72,954	19,048	23,812,822	43,459	2.28
Proposed General Plan	66,562	17,379	30,630,722	49,250	2.83
TOTAL GROWTH: EXISTING PLUS NEW GROWTH POTENTIAL					
Existing General Plan	101,457	26,795	37,140,535	52,612	1.96
Proposed General Plan	95,065	25,126	43,958,435	58,403	2.32

SOURCES: SAN JOAQUIN COUNTY ASSESSOR 2021; CALIFORNIA DEPARTMENT OF FINANCE 2021; U.S CENSUS ONTHEMAP; ESRI 2020, DE NOVO PLANNING GROUP 2021.

As shown in Table 2.0-2, buildout of the proposed General Plan could lead to new growth that yields 17,379 housing units, and 66,562 in additional population, 30,630,722 square feet of non-residential building square footage, and 49,250 jobs within the Planning Area. As shown in Table 2.0-3, this represents development growth over the existing general plan in terms of jobs and nonresidential square footage.

The proposed General Plan accommodates an additional 17,379 dwelling units including 7,454 single-family units and 9,925 multi-family units, while the existing General Plan accommodates more single-family units (10,951), but a reduced amount of multifamily units (8,097).

GENERAL PLAN BUILDOUT BY TYPE OF GROWTH

Table 2.0-3 identifies growth accommodated by the proposed General Plan grouped into categories by unit type as well as broad categories of non-residential development. As shown in table 2.0-3 buildout of the proposed General Plan may yield 17,379 dwelling units, and 49,250 jobs.

TABLE 2.0-3: GROWTH ACCOMMODATED UNDER THE PROPOSED GENERAL PLAN BASED ADDITIONAL DEVELOPMENT PROJECTS

LAND USE TYPE	DEVELOPMENT	
RESIDENTIAL DEVELOPMENT	UNITS	
Single Family Units	7,454	
Multifamily Units	9,925	
Total Housing Units	17,379	
NON-RESIDENTIAL DEVELOPMENT	TOTAL KSF	TOTAL EMPLOYEES
Commercial	2,476	5,670
Industrial	20,778	22,045
Office	5,219	15,750
Office/Commercial (Mixed)	2,159	5,785
Total Non-Residential Square Feet and Employees	30,631	49,250

SOURCES: SAN JOAQUIN COUNTY ASSESSOR 2021; ESRI 2020, DE NOVO PLANNING GROUP 2021.

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 LATHROP

The City of Lathrop is the lead agency for the proposed Project. The updated Lathrop General Plan 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 Lathrop 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 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 Lathrop 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;
- Revision to the Lathrop Zoning Ordinance & updates to Specific Plans/Design Guidelines to be consistent with GP?;
- 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;
- Issuance of permits and other approvals necessary for implementation of the General Plan;
- Sphere of Influence (SOI) updates prepared by LAFCO; and
- Annexations processed by LAFCO.

2.0 PROJECT DESCRIPTION

OTHER GOVERNMENTAL AGENCY APPROVALS

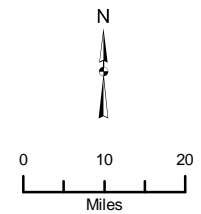
City approval of the proposed project would not require any actions or approvals by other public agencies. Subsequent projects and other actions to support implementation of the proposed project would require actions, including permits and approvals, by other public agencies that may include, but are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

- California Department of 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.
- San Joaquin County Local Agency Formation Commission (LAFCO) approvals for annexation of any lands into the boundaries of the City of Lathrop.
- San Joaquin Council of Governments. San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP).
- 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.
- 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.
- SJVAPCD
- ALUC



Lathrop General Plan Update

Figure 2.0-1: Regional Location Map



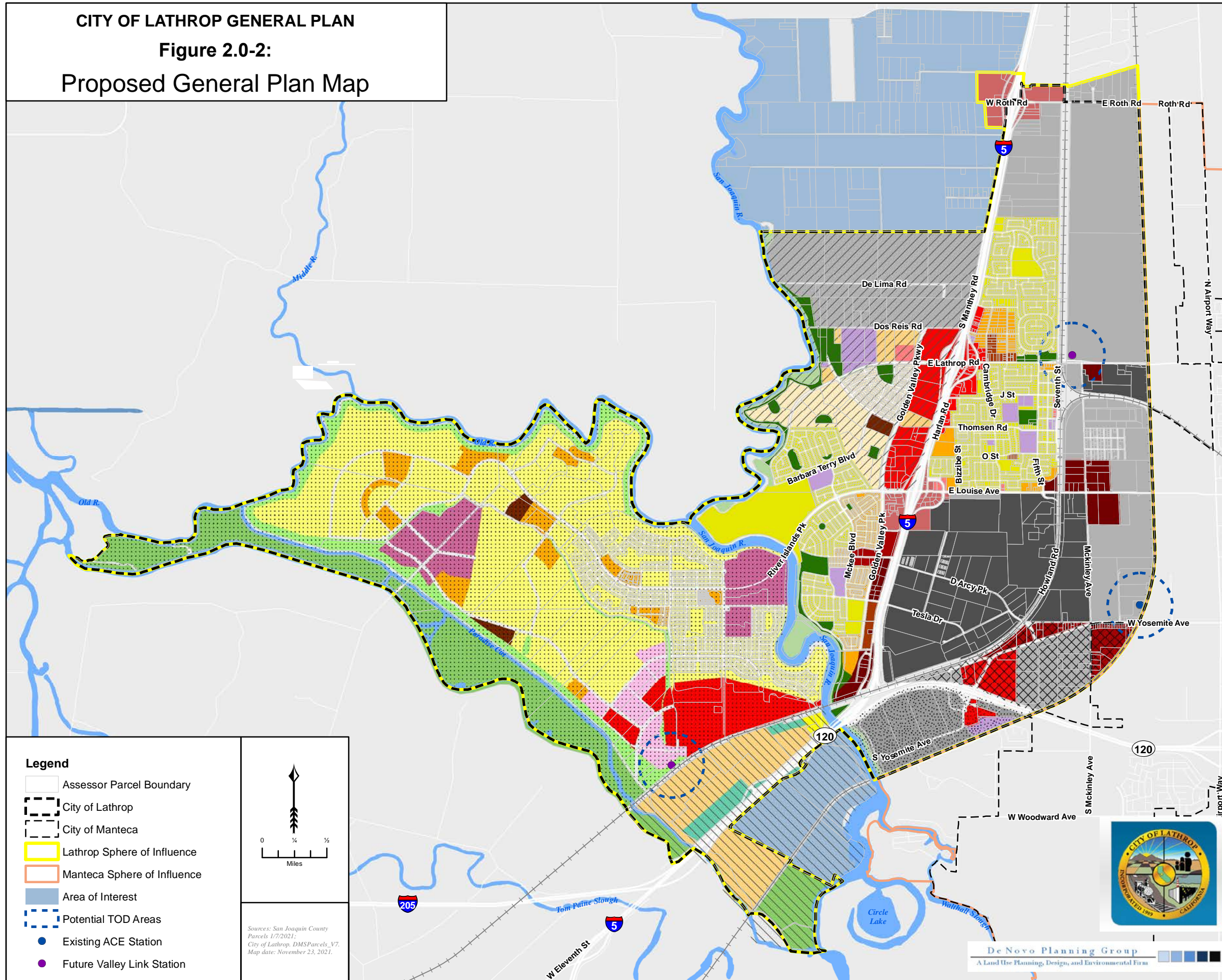
1:1,500,000

Data source: California Spatial Information Library.

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CITY OF LATHROP GENERAL PLAN

Figure 2.0-2:
Proposed General Plan Map

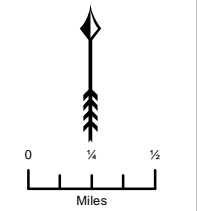


Land Use Designations

	LD: Low Density Residential (1-7 du/A)
	MD: Medium Density Residential (8-15 du/A)
	HD: High Density Residential (16-25 du/A)
	NC: Neighborhood Commercial
	VC: Village Center
	CC: Community Center
	SC: Service Commercial
	FC: Freeway Commercial
	LI: Limited Industrial
	GI: General Industrial
	P/QP: Public/Quasi-Public
	P: Park
	OS: Open Space
City Proper	
	VR-CL: Variable Density Residential (3-16 du/A)
	HR-CL: High Density Residential (15-49 du/A)
	R/MU-CL: Residential Mixed Use (10-40 du/A)
	OC-CL: Office Commercial
	NC-CL: Neighborhood Commercial
	LI-CL: Limited Industrial
	P/QP-CL: Public/Quasi-Public
	P-CL: Park
	OS-CL: Open Space
Central Lathrop	
	CO-LG: Commercial Office
	SC-LG: Service Commercial
	LI-LG: Limited Industrial
Lathrop Gateway	
	CO-SL: Commercial Office
	LI-SL: Limited Industrial
	P/QP-SL: Public/Quasi-Public
	OS-SL: Open Space River/Levee Park
South Lathrop Specific Plan	
	RL-RI: Residential Low (3-9 du/A)
	RM-RI: Residential Medium (6-20 du/A)
	RH-RI: Residential High (15-40 du/A)
	RC-RI: Regional Commercial
	TOD-RI: Transit-Oriented Development
	MU-RI: Mixed Use
	RCO/OS-RI: Resource Conservation/Open Space
	OS/P-RI: Open Space/Public Uses
River Islands	
	R-ST: Residential
	RC-ST: Recreation Commercial
	RCO-ST: Resource Conservation
	UR-ST: Urban Reserve
Stewart Tract	

Legend

- Assessor Parcel Boundary
- City of Lathrop
- City of Manteca
- Lathrop Sphere of Influence
- Manteca Sphere of Influence
- Area of Interest
- Potential TOD Areas
- Existing ACE Station
- Future Valley Link Station



Sources: San Joaquin County
Parcels 1/7/2021;
City of Lathrop, DMSParcels_V7.
Map date: November 23, 2021.



De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

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The City of Lathrop and the surrounding areas possess numerous scenic resources, many of which are found in the natural areas within the unincorporated areas of San Joaquin County and along the San Joaquin River corridor. Visual resources enhance the quality of life for residents, and provide for outdoor recreational, agricultural, and tourist-generating 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 Lathrop and the surrounding areas in San Joaquin County. Additional sources of information included the California Department of Transportation's (Caltrans) Designated Scenic Route map for San Joaquin County.

This section provides a background discussion of resources including scenic highways and corridors, and natural scenic resources such as open space areas, and prominent visual features found in the Lathrop 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.
- 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 San Joaquin County is listed as a Designated Scenic Highway by the Caltrans Scenic Highway Mapping System; the segment of Interstate 580 from Interstate 5 to State Route 205 (generally located southwest of the City of Tracy). This route traverses the edge of the Coast Range to the west and Central Valley to the east. The City of Lathrop is not visible from this roadway segment.

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 Lathrop General Plan does not designate any scenic corridors or viewsheds. As identified in the Open Space Element of the San Joaquin County General Plan, designated scenic routes in the county include Interstate 5 from the Sacramento County line south to Stockton. The City of Lathrop is located south of Stockton, and Lathrop is not visible from this segment of Interstate 5.

Visual Character and Other Scenic Resources Areas

The City of Lathrop's visual character is defined by its agricultural heritage and suburban development pattern. The city is a mixture of urbanized areas with commercial, residential, and industrial uses concentrated along the Interstate 5 corridor and other major roadway corridors, including S. Harlan Road, Golden Valley Parkway, Lathrop Road and Louise Avenue. Residential neighborhoods, including parks and schools, occupy the remainder of the city's urbanized area east of Interstate 5 with more recent residential patterns emerging west of Interstate 5. Much of

the undeveloped land within the Planning Area surrounding the developed portion of Lathrop is predominantly farmland, including alfalfa, orchards, row crops, and pasture, and rural residential uses.

Farmland and open space, interspersed with rural residential, agricultural, and industrial uses, generally border the city to the north, south, and west. To the west, the city is bordered by agricultural land and the San Joaquin River. The City of Stockton lies to the north and the City of Manteca to the east.

Much of the undeveloped land within the City Limits, Sphere of Influence (SOI), Planning Area, and areas surrounding the urbanized portion of Lathrop is predominantly farmland, including alfalfa, orchards, row crops, and pasture. Agricultural lands have become important visual resources that contribute to the community identity of Lathrop, and the Central Valley region. Agricultural lands provide for visual relief from urbanized areas and act as green space to nearby urban areas.

Water resources are important visual resources that draw tourists to the area for recreational opportunities, provide critical habitat, and provide for scenic areas within and surrounding urban areas. The most visually significant water body in the region is the San Joaquin River and the Old River located along the western and southern borders of the city and the Planning Area.

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 headlamp 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. Areas to the north, east and south, outside of the city limits and near the fringes of the Planning Area, are characterized primarily by open spaces, agricultural and lower intensity residential development, and generally have lower levels of ambient nighttime lighting and daytime glare. However, areas along the Interstate 5 corridor of the city generally have more sources of glare.

Sources of glare in urbanized portions of the Planning Area come from light reflecting off surfaces, including glass, and certain siding and paving materials, as well as metal roofing. The urbanized areas of Lathrop contain sidewalks and paved parking areas which reflect street and vehicle lights. The existing light environment found in the Planning Area is considered typical of a developing suburban area.

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 existing developments in and around the city, a number of existing light sources affect residential areas and illuminate the night sky. Isolating individual impacts of particular sources of light or glare is therefore not appropriate or feasible for the Project at the plan level however, individual development projects are reviewed for potential light and glare impacts.

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. As previously described, there are no scenic highways in the Planning Area or with views of the Planning Area.

LOCAL

City of Lathrop Zoning Ordinance

Chapter 17.92, Landscaping and Screening Standards, of the City Zoning Ordinance contains several sections that regulate aesthetic or visual standards for development in the city. These include standards for landscaping of commercial and industrial developments; requirements for the contents of landscape plans; street, road, and parkway landscaping standards; requirements for a tree and shrub schedule; and planting and maintenance standards. Some of these standards would be applicable to the proposed Project, including the following:

- A landscape plan is required for all new residential, commercial, and industrial developments. These plans would include landscape materials, trees, shrubs, groundcover, etc.
- Parking lots located on the proposed project site shall include a landscape strip buffer installed continuously along the property line.
- All outside storage areas shall be screened so as not to be visible from adjacent properties and public rights-of-way. Screening shall be a minimum of six feet in height, and consist of a solid material. Outside storage is not permitted in front or street side yards, or in front of structures.

- Roof mounted mechanical equipment, tanks, ventilating fans and similar equipment shall be screened from the view of adjacent properties and public rights-of-way at grade. The required screens shall be architecturally compatible with the building or structure on which they are used. All streets, roads, and parkways within the city shall meet the following standards:
- In residential, commercial and industrial zones, trees shall be planted in accordance with the landscape and screening standards.

City of Lathrop Specific Plans and Development Plans

The City of Lathrop currently has seven approved Specific Plans and Development Plans: Central Lathrop Specific Plan, West Lathrop Specific Plan, South Lathrop Specific Plan, River Islands at Lathrop, Mossdale Village, Lathrop Gateway Business Park, and Crossroads Industrial Park. Each of these plans contains design elements approved by the City of Lathrop. Guidelines related to lighting and glare, signage, streetscapes and gateways all identify design elements which preserve the aesthetics and character of the City of Lathrop. Any project proposed within the City of Lathrop and the Specific Plan areas are subject to design review to ensure that these projects maintain and enhance the overall aesthetic of the City of Lathrop.

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;
- 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 Lathrop Planning Area contains areas and viewsheds with scenic characteristics, such as views of open space and agricultural land, there are no officially designated scenic vista points in the Planning Area. Additionally, as described above, there are no officially designated scenic highways located in the vicinity of Lathrop. The most significant visual features within or adjacent to the Lathrop Planning Area are the San Joaquin River located to the west of the city and agricultural land and open space located in undeveloped areas within and around the city.

The city is mostly urbanized with commercial, residential, and industrial uses concentrated along the Interstate 5 corridor and other major roadway corridors, including S. Harlan Road, Golden Valley Parkway, Lathrop Road, and Louise Avenue and residential neighborhoods occupying most other developed areas. Much of the undeveloped land within the Planning Area surrounding the urbanized portion of Lathrop is predominantly farmland, including alfalfa, orchards, row crops, and pasture, and rural residential uses.

Implementation of the proposed General Plan will lead to new and expanded urban and suburban development throughout the city and Planning Area, particularly in areas designated for residential, commercial, professional, industrial, mixed use, and public/quasi-public uses by the Land Use Map (Figure 2.0-2). Future development would be required to be consistent with the proposed General Plan. A central theme of the General Plan is to preserve and protect the city's natural resources and scenic resources, including designating open space lands along the Old River and San Joaquin River in the western and southwestern portion of the Planning Area. Other General Plan policies promote open space within the Planning Area, maintenance of the existing open space within the city, and visually-appropriate on-site design and amenities, such as design and maintenance standards for City amenities. Moreover, other policies promote the installation of specific visual features, such as context planning and design integration. Other policies are directed more generally at integrating land uses and visual quality between land uses, such as major corridors, walkability, massing, and connectivity.

The Lathrop General Plan has been developed to preserve areas of open space and to ensure that new development is located in and around existing and planned urbanized areas, thus ensuring that new development is primarily an extension of the existing urban landscape, and minimizes interruption of views of nearby visual features.

Additionally, the General Plan includes policies that seek to ensure that new development fits within the existing community setting and is compatible with surrounding uses, supports the preservation and protection of the city's existing neighborhoods, maintain homes, structures, and property at high standards, and promote the city visually through design and physical features.

The implementation of the policies and actions contained in the General Plan listed below would ensure open space uses are preserved consistent with the General Plan Land Use Map, that new development in the Lathrop Planning Area is compatible with nearby agricultural and other open

space resources. Additionally, the implementation of the policies and actions contained in the Land Use Element would further ensure that new development is designed in a way that enhances the visual quality of the community, compliments the visual character of the city, and that adverse effects on public views are minimized. Additionally, as described previously there are no designated scenic vistas or viewpoint within the city. Therefore, the impact on scenic vistas would be **less than significant**.

GENERAL PLAN GOALS, POLICIES, AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

GOALS

Goal RR-2: Protect and manage natural open space areas to provide scenic beauty and community enjoyment.

POLICIES

- RR-1.6 Design and Maintenance. Promote implementation of established design, construction, and facility maintenance standards to ensure that existing and future parks, recreational facilities, open space, and trails are of high quality in regard to safety, utility, environmental stewardship, and aesthetic quality.
- RR-2.1 Open Space Boundaries. Maintain existing open space lands within the city by carefully considering the impact of new development in established open space areas.
- RR-2.2 Regional Partners. Coordinate with regional partners to maintain and preserve open space areas under overlapping jurisdiction or within nearby communities to protect all local and regional opportunities for recreation available to Lathrop residents.
- RR-2.3 Scenic Resources. Protect the city's scenic resources, including scenic corridors along roads and views of the hillsides, waterways, and other significant natural features, to the extent practical.
- RR-2.4 Education. Work with state, federal, and community partners to develop educational and other materials that promote the preservation and conservation of the city's natural resources.
- RR-4.4 Natural Water Bodies and Drainage Systems. Limit the disturbance of natural water bodies and drainage systems in Lathrop by conserving natural open space areas, protecting channels, and minimizing the impacts from stormwater and urban runoff.
- LU-5.1 Require new development to be compatible and complementary to existing development. Where appropriate and feasible, promote connections between neighborhoods and services and facilities.
- LU-5.3 Require that new residential development be designed to protect residents from potential conflicts with adjacent land uses, and other features including rail corridors, and high-volume roadways.

- LU-7.1 Encourage San Joaquin County to retain existing agricultural land use designations in areas outside of the Lathrop SOI.
- LU-7.2 Support the continuation of agricultural operations and activities on lands adjacent to the SOI and within the City's Area of Influence.
- LU-7.3 Allow and support the continuation of agricultural operations on lands within the City limits which are designed for urban uses until such time as urban development is proposed for the land.
- LU-7.4 Ensure that new urban uses which are proposed adjacent to lands designated for agricultural uses include adequate buffers to reduce potential land use conflicts and nuisance impacts to sensitive receptors.

IMPLEMENTATION ACTIONS

- RR-2a Prepare and distribute in electronic and hard-copy format resource guides regarding public access to regional and local open space.
- RR-2b Periodically coordinate with neighboring jurisdictions to share plans regarding open space protection and access.
- LU-5.a Through the development review process, screen development proposals for land use and transportation network compatibility with existing surrounding or abutting development or neighborhoods.
- LU-5.b Through the development review process, analyze land use compatibility and require adequate buffers and/or architectural enhancements to protect sensitive receptors from intrusion of development activities that may cause unwanted nuisances and health risks.
- LU-7.a Continue to implement the City's Agricultural Land Preservation Ordinance in order to protect existing agricultural operations from nuisance complaints, and to reduce impacts to future sensitive receptors proposed in close proximity to agricultural operations.
- LU-7.b Consider requiring buffering features between new urban uses and commercial agricultural uses, including but not limited to, landscaping, trails, gardens, solar arrays, and open spaces.

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 Lathrop. Only one highway section in San Joaquin County is listed as a Designated Scenic Highway by the Caltrans Scenic Highway Mapping System; the segment of Interstate 580 from Interstate 5 to Interstate 205 (generally located southwest of the City of Tracy). This route traverses the edge of the Coast Range to the west and Central Valley to the east. However, this officially designated scenic highway does not provide views of Lathrop or the immediate surrounding areas, and there are no sections of highway in the Lathrop vicinity eligible for Scenic Highway designation.

As previously described, the County has designated one scenic route, which is Interstate 5 from the Sacramento County line south to Stockton and does not provide views of the Planning Area.

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. The Planning Area consists of the City of Lathrop, which is an urbanized area, as well as various rural residential, agricultural, industrial, and open space uses located in the unincorporated and non-urbanized portion of the Planning Area.

As described under Impact 3.1-3, the city is largely developed with commercial, residential, and industrial uses concentrated along the Interstate 5 corridor and other major roadway corridors, including S. Harlan Road, Golden Valley Parkway, Lathrop Road, and Louise Avenue and residential neighborhoods occupying most other developed areas. Much of the undeveloped land within the Planning Area surrounding the urbanized portion of Lathrop is predominantly farmland, including alfalfa, orchards, row crops, and pasture, and rural residential uses.

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, professional, industrial, mixed use, and public/quasi-public uses by the Land Use Map (Figure 2.0-2).

Policies in the proposed General Plan are intended to complement and further the intent of these provisions regulating 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 Lathrop Municipal Code. The General Plan includes policies and actions to promote land use compatibility, ensure that new development is consistent with design guidelines and compatible with surrounding uses, protect and conserve open space, agricultural, riparian habitats, and other scenic and natural resources, ensure that in-fill development is designed to be sensitive to surrounding uses, and to strengthen the qualities of the city's neighborhoods, districts, and downtown. The City's Zoning Ordinance (City of Lathrop Municipal Code Title 17) is the primary tool meant to implement the General Plan. It consists of a zoning map defining the location of districts and code sections detailing requirements for each district. The Zoning Ordinance establishes specific, enforceable standards with which development must comply such as minimum lot size, maximum building height, minimum building setback, and a list of allowable uses. Zoning applies lot-by-lot, whereas the General Plan has a community-wide perspective. Provisions pertaining to visual resources such as site-specific design standards, preservation of open space, landscaping, trees, and signs, are addressed. State law requires the City's Zoning Code to be consistent with the General Plan. Development as a result of the proposed General Plan will be required to be consistent with the zoning code. The proposed General Plan would therefore not substantially degrade the existing visual character or quality of public views of the SOI and its surroundings. Scenic quality-related impacts associated with the

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 the following policies and actions in the General Plan.

GENERAL PLAN GOALS, POLICIES, AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

GOALS

Goal LU-5: Ensure that new development is compatible with existing development,

Goal RR-2: Protect and manage natural open space areas to provide scenic beauty and community enjoyment.

POLICIES

LU-5.1 Require new development to be compatible and complementary to existing development. Where appropriate and feasible, promote connections between neighborhoods and services and facilities.

LU-5.3 Require that new residential development be designed to protect residents from potential conflicts with adjacent land uses, and other features including rail corridors, and high-volume roadways.

LU-5.6 In considering land use change requests, consider factors such as compatibility with surrounding uses in terms of privacy, noise, and changes in traffic levels.

RR-1.6 Design and Maintenance. Promote implementation of established design, construction, and facility maintenance standards to ensure that existing and future parks, recreational facilities, open space, and trails are of high quality in regard to safety, utility, environmental stewardship, and aesthetic quality.

RR-2.1 Open Space Boundaries. Maintain existing open space lands within the city by carefully considering the impact of new development in established open space areas.

RR-2.2 Regional Partners. Coordinate with regional partners to maintain and preserve open space areas under overlapping jurisdiction or within nearby communities to protect all local and regional opportunities for recreation available to Lathrop residents.

RR-2.3 Scenic Resources. Protect the city's scenic resources, including scenic corridors along roads and views of the hillsides, waterways, and other significant natural features, to the extent practical.

RR-2.4 Education. Work with state, federal, and community partners to develop educational and other materials that promote the preservation and conservation of the city's natural resources.

RR-4.4 Natural Water Bodies and Drainage Systems. Limit the disturbance of natural water bodies and drainage systems in Lathrop by conserving natural open space areas, protecting channels, and minimizing the impacts from stormwater and urban runoff.

IMPLEMENTATION ACTIONS

- LU-5.a Through the development review process, screen development proposals for land use and transportation network compatibility with existing surrounding or abutting development or neighborhoods.
- LU-5.b Through the development review process, analyze land use compatibility and require adequate buffers and/or architectural enhancements to protect sensitive receptors from intrusion of development activities that may cause unwanted nuisances and health risks.

Impact 3.1-4: General Plan implementation could result in the creation of new sources of substantial light or glare which would adversely affect day or nighttime views in the area (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 undeveloped 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 areas of the city that have not been previously disturbed, including 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 Lathrop.

Future development would be required to be consistent with the General Plan, as well as lighting and design requirements in the City of Lathrop Municipal Code Title 17. Additionally, improvements such as landscape and street lighting, are subject to Site Plan and Architectural Design Review. Design Review procedures will be conducted for future development projects in compliance with 17.100 and 17.104 of the Lathrop Municipal Code. The proposed General Plan contains policies and actions, listed below, related to the regulation and reduction of daytime glare and nighttime lighting, including policies and actions related to compatible land uses and review requirements that will ensure future development projects are reviewed and required to limit potential impacts related to light and glare. Policy LU-5.1 requires new development to be compatible, complementary and, where appropriate, well integrated with existing residential areas. Policy LU-5.3 requires that new residential development be designed to protect residents from potential conflicts with adjacent land uses, and other features including rail corridors, and high-volume roadways.

Through the implementation of policies and actions, contained in the General Plan, and adherence to zoning and review requirements during the development review process, the City can ensure that adverse impacts associated with daytime glare and nighttime lighting would be **less than significant**.

GENERAL PLAN GOALS, POLICIES, AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

Goal LU-5: Ensure that new development is compatible with existing development

POLICIES

- LU-5.1 Require new development to be compatible and complementary to existing development. Where appropriate and feasible, promote connections between neighborhoods and services and facilities.
- LU-5.2 Prohibit the establishment or encroachment of incompatible uses into industrial-designated lands. Examples include, but are not limited to, new residential uses in areas designated for industrial development, which may be subject to existing and future nuisance impacts associated with industrial operations and associated activities.
- LU-5.3 Require that new residential development be designed to protect residents from potential conflicts with adjacent land uses, and other features including rail corridors, and high-volume roadways.
- LU-5.4 In industrial areas located within 1,000 feet of existing and planned sensitive receptors, promote industrial uses that are environmentally sustainable with limited potential to create nuisances such as noise and odors.
- LU-5.5 Ensure that industrial development projects, including warehouse, distribution, logistics, and fulfillment projects, mitigate adverse impacts (including health risks and nuisances) to nearby residential land uses and other existing and planned sensitive receptors.
- LU-5.6 In considering land use change requests, consider factors such as compatibility with surrounding uses in terms of privacy, noise, and changes in traffic levels.

3.1 AESTHETICS AND VISUAL RESOURCES

IMPLEMENTATION ACTIONS

- LU-5.a Through the development review process, screen development proposals for land use and transportation network compatibility with existing surrounding or abutting development or neighborhoods.
- LU-5.b Through the development review process, analyze land use compatibility and require adequate buffers and/or architectural enhancements to protect sensitive receptors from intrusion of development activities that may cause unwanted nuisances and health risks.

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

One comment on this environmental topic were received during the NOP comment period from the California Department of Conservation.

The Department recommends discussion of the following issues:

- Type, amount, and location of farmland conversion resulting directly and indirectly from implementation of the proposed Project.
- Impacts on any current and future agricultural operations in the vicinity; e.g., land-use conflicts, increases in land values and taxes, loss of agricultural support infrastructure such as processing facilities, etc.
- Incremental impacts leading to cumulative impacts on agricultural land. This would include impacts from the proposed Project, as well as impacts from past, current, and likely future projects.
- Proposed mitigation measures for all impacted agricultural lands within the proposed Project area.
- Projects compatibility with lands within an agricultural preserve and/or enrolled in a Williamson Act contract.
- If applicable, notification of Williamson Act contract non-renewal and/or cancellation.

All comments received during the NOP comment period are included in Appendix A.

3.2.1 ENVIRONMENTAL SETTING

AGRICULTURAL RESOURCES

San Joaquin County occupies a central location in California's vast agricultural heartland, the San Joaquin Valley. The County's Agricultural Commissioner's most recent published Agricultural Reports (2017 and 2018) contains the following information relating to agriculture in the county.

San Joaquin County has a total land area of 1,391 square miles. The total acreage of crop land in the county is approximately 784,800. The gross value of agricultural production in San Joaquin County for 2018 was \$2,594,246,000 which represents a 2.6 percent increase from 2017 when gross production value totaled \$2,527,989,000. Table 3.2-1 lists the top eight commodities in San Joaquin County in 2017 and 2018.

3.2 AGRICULTURAL AND FOREST RESOURCES

TABLE 3.2-1: SUMMARY COMPARISON OF CROP VALUES

<i>PRODUCT TYPE</i>	<i>2017 VALUE IN DOLLARS</i>	<i>2018 VALUE IN DOLLARS</i>
Field Crops	\$208,839,000.00	\$200,369,000
Vegetable Crops	\$255,928,000.00	\$245,902,000
Fruit and Nut Crops	\$1,362,531,000.00	\$1,403,768,000
Nursery Products	\$117,294,000.00	\$120,004,000
Livestock and Poultry	\$122,270,000.00	\$120,100,000
Livestock and Poultry Products	\$429,910,000.00	\$467,289,000
Seed Crops	\$4,671,000.00	\$3,904,000
Apiary Products	\$26,546,000.00	\$32,910,000

SOURCE: SAN JOAQUIN COUNTY AGRICULTURAL REPORT, 2017 AND 2018.

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.

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 3.6-3.

TABLE 3.2-2: SOIL CAPABILITY CLASSIFICATION

<i>CLASS</i>	<i>DEFINITION</i>
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

<i>NAME</i>	<i>ACRES</i>	<i>PERCENT OF PLANNING AREA</i>	<i>CAPABILITY CLASSIFICATION*</i>
Bisgani loamy coarse sand, partially drained, 0 to 2 percent slopes	162.1	1.2%	3-4
Boggiano clay loam, 0 to 2 percent slopes	5.4	0.0%	2-4
Columbia fine sandy loam, channeled, partially drained, 0 to 2 percent slopes, frequently flooded	79.8	0.6%	2-4
Columbia fine sandy loam, clayey substratum, partially drained, 0 to 2 percent slopes	1,385.8	10.2%	2-4
Columbia fine sandy loam, drained, 0 to 2 percent slopes	127.0	0.9%	4-4
Columbia fine sandy loam, partially drained, 0 to 2 percent slopes, occasionally flooded	328.7	2.4%	2-4
Delhi loamy sand, 0 to 2 percent slopes, MLRA 17	226.3	1.7%	3-4
Dello clay loam, drained, 0 to 2 percent slopes, overwashed	109.3	0.8%	3-4
Dello loamy sand, drained, 0 to 2 percent slopes	50.5	0.4%	3-4
Dello sand, partially drained, 0 to 2 percent slopes, occasionally flooded	14.5	0.1%	3-4
Dello sandy loam, clayey substratum, drained, 0 to 2 percent slopes	267.5	2.0%	3-4
Egbert silty clay loam, partially drained, 0 to 2 percent slopes	2,356.8	17.4%	2-4
Grangeville clay loam, partially drained, 0 to 2 percent slopes	330.5	2.4%	2-4
Grangeville fine sandy loam, partially drained, 0 to 2 percent slopes	333.1	2.5%	2-4
Guard clay loam, drained, 0 to 2 percent slopes	148.9	1.1%	2-4
Honcut sandy loam, 0 to 2 percent slopes	17.1	0.1%	2-4
Manteca fine sandy loam, 0 to 2 percent slopes	653.2	4.8%	3-4
Merritt silty clay loam, partially drained, 0 to 2 percent slopes	1,266.0	9.3%	2-4

3.2 AGRICULTURAL AND FOREST RESOURCES

<i>NAME</i>	<i>ACRES</i>	<i>PERCENT OF PLANNING AREA</i>	<i>CAPABILITY CLASSIFICATION*</i>
Merritt silty clay loam, partially drained, 0 to 2 percent slopes, occasionally flooded	307.7	2.3%	2-4
Scribner clay loam, partially drained, 0 to 2 percent slopes	121.0	0.9%	2-3
Timor loamy sand, 0 to 2 percent slopes	471.9	3.5%	3-4
Tinnin loamy coarse sand, 0 to 2 percent slopes	1,588.5	11.7%	3-4
Urban land	1,164.7	8.6%	8-8
Valdez silt loam, organic substratum, partially drained, 0 to 2 percent slopes	66.5	0.5%	3-4
Veritas fine sandy loam, 0 to 2 percent slopes	1,560.8	11.5%	2-4
Water	433.7	3.2%	--
Total	13,577.3	100.0%	

* DEPICTS IRRIGATED VS NON IRRIGATED CAPABILITY RATING

SOURCE: NRCS CUSTOM WEB SOIL SURVEY, 2018.

Important Farmlands

The California Department of Conservation (DOC), as part of its Farmland Mapping and Monitoring Program (FMMP), prepares Important Farmland Maps indicating the potential value of land for agricultural production. The San Joaquin County Important Farmland Map identifies five agriculture-related categories and three non-agricultural categories:

Prime Farmland: Prime farmland is land with the best combination of physical and chemical features able to sustain long term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. The land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

Farmland of Statewide Importance: Farmland of statewide importance is farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. The land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

Unique Farmland: Unique farmland is farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include nonirrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.

Farmland of Local Importance: Farmland of local importance is considered land important to the local agricultural economy but does not meet the criteria of Prime Farmland, Farmland of Statewide Importance, or Unique Farmland. This includes land that is or has been used for irrigated pasture, dryland farming, confined livestock or dairy facilities, aquaculture, poultry facilities, and dry grazing. It also includes soils previously designated by soil characteristics as "Prime Farmland," "Farmland of Statewide Importance," and "Unique Farmland" that has since become idle.

Grazing Land: Grazing land is land on which the existing vegetation is suitable for the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities. The minimum mapping unit for this category is 40 acres.

Important Farmlands in Planning Area

The State of California Department of Conservation Farmland Mapping and Monitoring Program and San Joaquin County GIS data were used to illustrate the farmland characteristics for the Planning Area. Farmlands in the Planning Area are identified in Table 3.2-4 and are shown on Figure 3.2-1. The farmland classifications for the site and surrounding area are described below.

TABLE 3.2-4: FARMLAND CLASSIFICATION

<i>LAND CLASSIFICATION</i>	<i>CITY</i>	<i>SOI</i>	<i>TOTAL</i>	<i>% OF TOTAL</i>
D - Urban/Built Up Land	4,220.8	221.7	4,442.50	33%
L - Farmland of Local Importance	2,612.1	182.1	2,794.20	21%
NV – Nonagricultural or Natural Vegetation	276.5	2.3	278.80	2%
P – Prime Farmland	4,179.5	104.4	4,283.90	32%
R – Rural Residential	66.5	9.8	76.30	1%
S – Farmland of Statewide Importance	823.9	85.3	909.20	7%
U - Unique Farmland	172.4	1.1	173.50	1%
sAC - Semi-agricultural and Rural Commercial Land	261.8	51.6	313.40	2%
V - Vacant or Disturbed Land	270.1	30.0	300.10	2%

SOURCE: CALIFORNIA DEPARTMENT OF CONSERVATION; NRCS CUSTOM WEB SOIL SURVEY, 2018.

Prime Farmland is farmland with the best combination of physical and chemical features able to sustain long term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date. Approximately 4,283.90 acres of Prime Farmland is located within the Planning Area.

Farmland of Statewide Importance is farmland with characteristics similar to those of prime farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date. Approximately 909.20 acres of Farmland of Statewide Importance is located within the Planning Area.

Unique Farmland is land which does not meet the criteria for Prime Farmland or Farmland of Statewide Importance, that has been used for the production of specific high economic value crops at some time during the two update cycles prior to the mapping date. It has the special combination of soil quality, location, growing season, and moisture supply needed to produce sustained high quality and/or high yields of a specific crop when treated and managed according to current farming methods. Examples of such crops may include oranges, olives, avocados, rice, grapes, and cut flowers. It does not include publicly owned lands for which there is an adopted policy preventing agricultural use. Approximately 173.50 acres of Unique Farmland is located within the Planning Area.

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. Approximately 2,794.20 acres of Farmland of Local Importance is located within the Planning Area.

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. Approximately 4,442.50 acres of Urban and Built-Up Land is located within the Planning Area.

Rural Residential Land has a building density of less than 1 structure per 1.5 acres, but with at least one structure per 10 acres. Approximately 76.30 acres of Rural Residential Land is located within the Planning Area.

Vacant or Disturbed Land consists of open field areas that do not qualify for an agricultural category, mineral and oil extraction areas, and rural freeway interchanges. Approximately 300.10 acres of Vacant or Disturbed Land is located within the Planning Area.

Nonagricultural and Natural Vegetation covers heavily wooded, rocky or barren areas, riparian and wetland areas, grassland areas which do not qualify for Grazing Land due to their size or land management restrictions, and small water bodies. Constructed wetlands are also included in this category. Approximately 278.80 acres of Nonagricultural and Natural Vegetation Land is located within the Planning Area.

Semi-Agricultural and Rural Commercial Land includes farmsteads, agricultural storage and packing sheds, unpaved parking areas, composting facilities, equine facilities, firewood lots, and campgrounds. Approximately 313.40 acres of Semi-Agricultural and Rural Commercial Land is located within the Planning Area.

Farmland Conversion

Data from the Department of Conservation indicates that approximately 762 acres of Prime Farmland in the County was developed for other uses between 2014 and 2016, resulting in an existing total of 382,879 acres of Prime Farmland (42 percent of agricultural land). The remaining agricultural land is comprised of Farmland of Statewide Importance (9 percent), Unique Farmland (9 percent), Farmland of Local Importance (8 percent), and Grazing Land (14 percent). The types and acreages of farmland in 2014 and 2016 are shown below in Table 3.2-5.

TABLE 3.2-5: SAN JOAQUIN COUNTY FARMLANDS SUMMARY AND CHANGE BY LAND USE CATEGORY

LAND USE CATEGORY	2014-2016 ACREAGE CHANGES							
	TOTAL ACREAGE INVENTORIED				ACRES LOST	ACRES GAINED	TOTAL	NET
	2014		2016		(-)	(+)	ACREAGE CHANGED	ACREAGE CHANGED
	Acres	Percent	Acres	Percent				
Prime Farmland	382,879	42%	381,634	42%	4,338	3,093	7,431	-1,245
Farmland of Statewide Importance	82,271	9%	82,618	9%	1,189	1,536	2,725	347
Unique Farmland	76,415	8%	81,920	9%	830	6,335	7,165	5,505
Farmland of Local Importance	73,429	8%	68,903	8%	9,150	4,624	13,774	-4,526
IMPORTANT FARMLAND SUBTOTAL	614,994	67%	615,075	67%	15,507	15,588	31,095	81
Grazing Land	132,950	15%	129,760	14%	3,385	195	3,580	-3,190
AGRICULTURAL LAND SUBTOTAL	747,944	82%	744,835	82%	18,892	15,783	34,675	-3,109
Urban and Built-up Land	93,888	10%	95,329	10%	365	1,806	2,171	1,441
Other Land	59,004	6%	60,602	7%	1,482	3,080	4,562	1,598
Water Area	11,766	1%	11,836	1%	235	305	540	70
TOTAL AREA INVENTORIED	912,602	100%	912,602	100%	20,974	20,974	41,948	0

SOURCE: CA DEPARTMENT OF CONSERVATION, DIVISION OF LAND RESOURCE PROTECTION TABLE A-30, 2016.

Farmland Preservation

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.

Table 3.2-6 shows lands within the city and SOI that are under a Williamson Act contract and the status of the contract. Figure 3.2-2 shows Williamson Act Contracts within the city and Planning Area.

TABLE 3.2-6: SUMMARY OF WILLIAMSON ACT CONTRACTS (CITY LIMITS AND SOI)

CONTRACT LOCATION AND TYPE	TOTAL ACRES
WA-Non-Prime	228.9
Total	228.9

SOURCE: CALIFORNIA DEPARTMENT OF CONSERVATION, SAN JOAQUIN COUNTY, WILLIAMSON ACT

Agricultural Zoning

No lands within the City of Lathrop are designated or zoned exclusively for agricultural uses. However, Land within the city are designated for Reserve Conservation and Open Space District

3.2 AGRICULTURAL AND FOREST RESOURCES

(RCO). This district is intended to provide for permanent open spaces in areas of the community which exhibit significant vegetation or wildlife, wetlands, bodies of water or water courses, mineral resources, scenic qualities or recreation potential, and which are designated as open space, school or college sites or as agriculture by the general plan. This district is further intended to be applied to lands within the city which are subject to an agricultural land conservation contract under provisions of the Williamson Act. (Prior code § 173.01)

Lands zoned for agricultural use by San Joaquin County are included within portions of the SOI. Further, there are lands adjacent the Planning Area that are zoned for agricultural use. These include lands that are designated as General Agriculture by the San Joaquin General Plan and zoned for Agriculture with minimum parcel size of 40 acres (AG-40).

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 Lathrop 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 (WAEPP), 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 WAEPP. 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.

Delta Reform Act

The California Legislature passed the Johnston-Baker-Andal-Boatwright Delta Protection Act of 1992 (Delta Protection Act) on September 23, 1992 and it was updated in 2009 and renamed the Delta Reform Act. The Act provided the means to prepare the Land Use and Resource Management Plan (2010) for the Primary Zone of the Delta. The Management Plan includes policies and recommendations with the overall goal to "protect, maintain, and where possible, enhance and restore the overall quality of the Delta environment, including but not limited to agriculture, wildlife habitat, and recreational activities." The following are the applicable policies with relation to agriculture:

Policy P-3. New non-agriculturally oriented residential, recreational, commercial, habitat, restoration or industrial development shall ensure that appropriate buffer areas are provided by those proposing new development to prevent conflicts between any proposed use and existing adjacent agricultural parcels. Buffers shall adequately protect the integrity of land for existing and future agricultural uses and shall not include uses that conflict with agricultural operations on adjacent agricultural lands. Appropriate buffer setbacks shall be determined in consultation with local Agricultural Commissioners, and shall be based on applicable general plan policies and criteria included in Right-to-Farm Ordinances adopted by local jurisdictions.

California Government Code Section 56064

This section of the Government Codes defines “Prime agricultural land” as follows:

- Prime agricultural land means an area of land, whether a single parcel or contiguous parcels, that has not been developed for a use other than an agricultural use and that meets any of the following qualifications:
 - Land that qualifies, if irrigated, for rating as class I or class II in the USDA Natural Resources Conservation Service land use capability classification, whether or not land is actually irrigated, provided that irrigation is feasible.
 - Land that qualifies for rating 80 through 100 Storie Index Rating.
 - Land that supports livestock used for the production of food and fiber and that has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture in the National Range and Pasture Handbook, Revision 1, December 2003.
 - Land planted with fruit or nut-bearing trees, vines, bushes, or crops that have a nonbearing period of less than five years and that will re-turn during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than four hundred dollars (\$400) per acre.
 - Land that has returned from the production of unprocessed agricultural plant products an annual gross value of not less than four hundred dollars (\$400) per acre for three of the previous five calendar years.

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

City of Lathrop Municipal Code-Agricultural Land Preservation (Chapter 15.48)

The City's Agricultural Land Preservation Chapter (15.48.), was adopted to conserve and protect agricultural land in the city and protect agricultural landowners from nuisance complaints related to cultivation, irrigation, spraying, fertilizing, and other activities related to normal agricultural operations. Per Section 15.48.040, a disclosure statement is required whenever adjacent property is sold or building permit application is submitted, notifying the prospective buyer/applicant of adjacent agricultural land and possible discomforts and nuisance factors related to agricultural operations. The focus of the ordinance is to reduce the loss of agricultural resources in the city by clarifying the circumstances under which agricultural operations may be considered a nuisance.

California Farmland Trust

The California Farmland Trust is a private, non-profit, regional land trust working in Sacramento, San Joaquin, Stanislaus and Merced Counties of California. The organization works to preserve farmland through the purchase of agricultural conservation easements from willing landowners.

City of Lathrop Agricultural Mitigation

The City of Lathrop adopted an agricultural mitigation program in 2005, as a result of the settlement of a water transfer lawsuit against the cities of Lathrop, Manteca, and Tracy by the Sierra Club. The mitigation program adopted by the City of Lathrop required that future development pay \$2,000/acre for agricultural mitigation. Half of the mitigation (\$1,000/acre) will be paid to the California Farmland Trust. The other \$1,000/acre will be collected by the City of Lathrop and may be passed to the CVFT or other trust, or may be retained by the City of Lathrop to be applied to local easements or other agricultural mitigation. This fee structure included an automatic escalator, so the fee as of March 2022 is \$3,183 per gross acre. Since 2005 several developments entered into separate Settlement Agreements related to Agricultural Mitigation which is summarized below (adjusted to 2022 fee):

1. River Islands was required to pay \$3,501 per acre.
2. Central Lathrop Specific Plan (CLSP) was required to pay \$4,774 per acre.
3. All other developments in the city are required to pay \$3,183 per acre.

These Agricultural Mitigation amounts discussed above are in addition to fees imposed as part of the San Joaquin Multi-Species Conservation Plan (SJMSCP). The adopted SJMSCP includes a commitment to spend 75% of the dollars collected on lands which would benefit agricultural resources. The SJMSCP fees are considered a separate Mitigation Fee obligation from the Agricultural Mitigation fees, but in many cases serve the same purpose. The SJMSCP is a voluntary program in lieu of conducting independent biological assessments. Most development proponents chose to comply with the SJMSCP.

Local Agency Formation Commission Boundary Controls

The San Joaquin Local Agency Formation Commission (LAFCO) is responsible for coordinating orderly amendments to local jurisdictional boundaries, including annexations. Annexation to the City of Lathrop 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.

San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP)

The SJMSCP provides comprehensive measures for compensation and avoidance of impacts on various biological resources, which includes ancillary benefits to agricultural resources. For instance, many of the habitat easements that are purchased or facilitated by the SJMSCP program are targeted for the protection of Swainson's hawk or other sensitive species habitat that are dependent on agricultural lands. The biological mitigation for these species through the SJMSCP includes the purchase of certain conservation easements for habitat purposes; however, the conservation easements are placed over agricultural land, such as alfalfa and row crops (not vines or orchards). As such, SJMSCP fees paid to SJCOG as administrator of the SJMSCP will result in the preservation of agricultural lands in perpetuity.

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));
- 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 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 result in the conversion of farmlands, including Prime Farmland, Unique Farmland, and Farmland of Statewide Importance, to non-agricultural use (Significant and Unavoidable)

As shown in Table 3.2-4, there are approximately 7,800 acres of Important Farmlands located within the city, including approximately 4,180 acres of Prime Farmland, 824 acres of Statewide Important Farmland and 2,612 acres of locally important farmland. As shown on Figure 3.2-1, the Planning Area includes approximately 4,221 acres designated as Urban and Built-Up.

While the proposed General Plan Land Use Map specifically identifies a range of land use designations that would not result in urban development or the future conversion of prime farmlands, including Urban Reserve, Resource Conservation, and Open Space, it also designates a range of residential, commercial, industrial, public/quasi-public, and other uses that would convert identified prime farmland to urban and built up land. Therefore, the proposed Lathrop General Plan has the potential to convert farmland to non-agricultural uses.

It is important to note that there are no designated agricultural land uses within the Lathrop City Limits, and that nearly all of the land within the Lathrop 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 largely of agricultural lands and other similar non-urban land uses, none of which are proposed for designation as a non-agricultural use.

The Planning Area does contain prime soils 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.

Conversion of farmland as a result of Plan implementation is considered a significant impact. The proposed General Plan includes policies and action, identified below, that are intended to reduce the impacts to farmlands, including Prime Farmland, Unique Farmland, and Farmland of Statewide Importance. These include policies that discourage the conversion of agricultural lands surrounding the city (within the unincorporated areas of San Joaquin County) and ensuring 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 Lathrop as development continues to occur within the Planning Area.

In addition to the proposed General Plan's policies and actions, the City implements other programs and regulations aimed at protecting agricultural lands throughout the Planning Area. For example, as described previously the City of Lathrop adopted an agricultural mitigation program that includes the City's agricultural land mitigation requirements. In order to mitigate and offset the loss of valuable farmland resources, the City requires an agricultural mitigation fee for projects that permanently change agricultural land over one acre in size within the City's jurisdiction to non-agricultural uses. The in lieu fee, paid to the City, is placed in a trust account and used for farmland mitigation purposes. Additionally, the SJMSCP provides for the preservation of productive agriculture and is administered by the San Joaquin Council of Governments (SJCOG). In conformance with the SJMSCP, the General Plan recognizes that agricultural use of the Plan Area would be phased out as the Plan Area develops with residential, governmental, industrial and commercial uses and requires that project applicants pay fees to SJCOG on a per-acre basis for designated agricultural lands that are converted to urban use. SJCOG will then use these funds to purchase conservation easements on agricultural and habitat lands in the project vicinity.

The proposed General Plan would accommodate development that would result in the conversion of farmlands within the Planning Area to non-agricultural uses. The conversion of these farmlands requires mitigation through the City of Lathrop agricultural mitigation program, as described previously. While the above-identified impact would be reduced through preservation of agricultural land through complacence with the City's' mitigation program and SJMSCP requirements, the impact would not be reduced to a less-than-significant level due to the fact that active agricultural land would still be permanently converted to urban uses. Policies and actions included within the proposed General Plan would reduce impacts to agricultural operations by supporting agricultural uses, reducing land use conflicts, and collecting development impacts fees for the conversions of Farmlands. The proposed General Plan Land Use Map does not designate any new areas of the city or planning area for urban development that were not already identified and designated for developed uses. Therefore, impacts to the conversion of agricultural lands would remain. Therefore, the impact would remain ***significant and unavoidable***.

3.2 AGRICULTURAL AND FOREST RESOURCES

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

POLICIES

- LU-7.1 Encourage San Joaquin County to retain existing agricultural land use designations in areas outside of the Lathrop SOI.
- LU-7.2 Support the continuation of agricultural operations and activities on lands adjacent to the SOI and within the City's Area of Influence.
- LU-7.3 Allow and support the continuation of agricultural operations on lands within the City limits which are designed for urban uses until such time as urban development is proposed for the land.
- LU-7.4 Ensure that new urban uses which are proposed adjacent to lands designated for agricultural uses include adequate buffers to reduce potential land use conflicts and nuisance impacts to sensitive receptors.

IMPLEMENTATION ACTIONS

- LU-7.a Continue to implement the City's Agricultural Land Preservation Ordinance in order to protect existing agricultural operations from nuisance complaints, and to reduce impacts to future sensitive receptors proposed in close proximity to agricultural operations.
- LU-7.b Consider requiring buffering features between new urban uses and commercial agricultural uses, including but not limited to, landscaping, trails, gardens, solar arrays, and open spaces.

Impact 3.2-2: General Plan Implementation would conflict with existing zoning for agricultural use, or a Williamson Act Contract (Significant and Unavoidable)

While lands within the city are not zoned for agricultural use, areas adjacent to the city include lands zoned for agricultural use by San Joaquin County. These include lands that are designated as General Agriculture by the San Joaquin General Plan and zoned for Agriculture uses. Therefore, implementation of the General Plan may 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 229 acres of Williamson Act Contract land are proposed for residential land uses. Therefore, the implementation of the proposed General Plan could conflict with existing Williamson Act Contracts because non-agricultural uses are allowed on the existing Contract land. As a result, the proposed Project could result in a 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 conflicts 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.

While the potential for conflicts between agricultural uses and non-agricultural uses would be minimized through the policies, actions, and requirements described previously, the General Plan

would allow the conversion of approximately 229 acres of properties with Williamson Act Contracts to be developed with non-agricultural uses. This is considered a ***significant and unavoidable*** 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 not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use (Less than Significant)

As discussed in Impact 3.2-1, future development in accordance with the proposed General Plan would result in the conversion of farmland to a non-agricultural use. The proposed General Plan would allow new urban uses that have the potential to conflict with existing agricultural operations. 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 Lathrop while supporting the continuation of agricultural operations and activities on lands adjacent to the SOI and with the City's Area of Influence, and within the city.

Adherence to the policies and actions stated above would ensure that projects include adequate measures to buffer project uses from adjacent agricultural uses and would reduce adverse effects on neighboring agricultural uses, while supporting ongoing agricultural operations in areas within and surrounding the city. Additionally, the City, through the proposed Land Use Map, has ensured that all future growth within Lathrop would occur within the existing city footprint and in areas that are currently designated for developed uses. This inward growth strategy aims to preserve surrounding lands and conservation areas. Therefore, the proposed General Plan would result in a ***less than significant*** impact involving other changes in the existing environment that could result in the conversion of farmland.

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CITY OF LATHROP GENERAL PLAN UPDATE

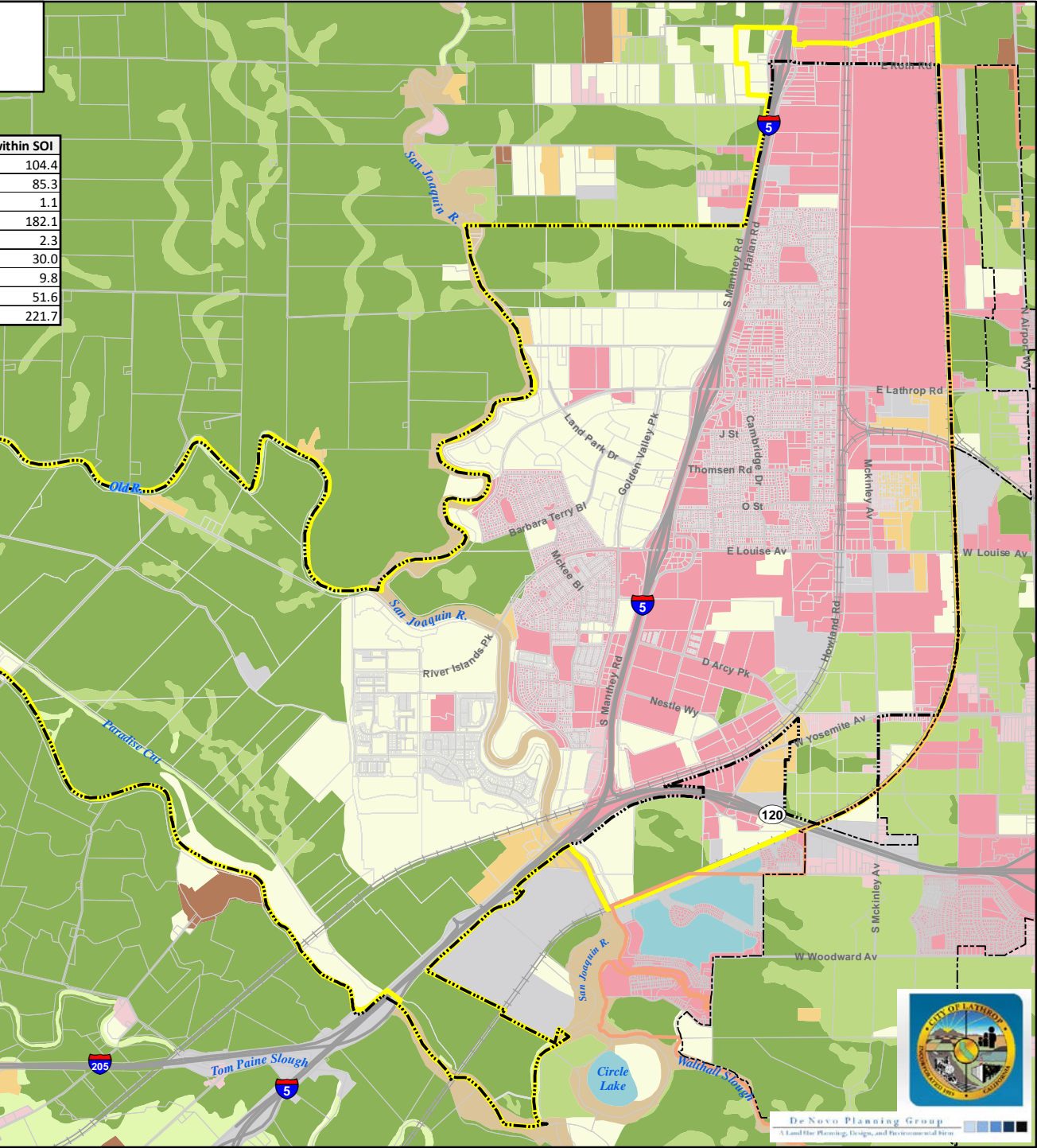
Figure 3.2-1. Important Farmlands

Important Farmland Type	Acres within City	Acres within SOI
Prime Farmland	4,179.5	104.4
Farmland of Statewide Importance	823.9	85.3
Unique Farmland	172.4	1.1
Farmland of Local Importance	2,612.1	182.1
Nonagricultural or Natural Vegetation	276.5	2.3
Vacant or Disturbed Land	270.1	30.0
Rural Residential Land	66.5	9.8
Semi-agricultural and Rural Commercial Land	261.8	51.6
Urban and Built-Up Land	4,220.8	221.7

Legend

- Lathrop City Boundary
- Manteca City Boundary
- Lathrop Sphere of Influence
- Prime Farmland
- Farmland of Statewide Importance
- Unique Farmland
- Farmland of Local Importance
- Confined Animal Agriculture
- Nonagricultural or Natural Vegetation
- Vacant or Disturbed Land
- Rural Residential Land
- Semi-agricultural and Rural Commercial Land
- Urban and Built-Up Land
- Water Area

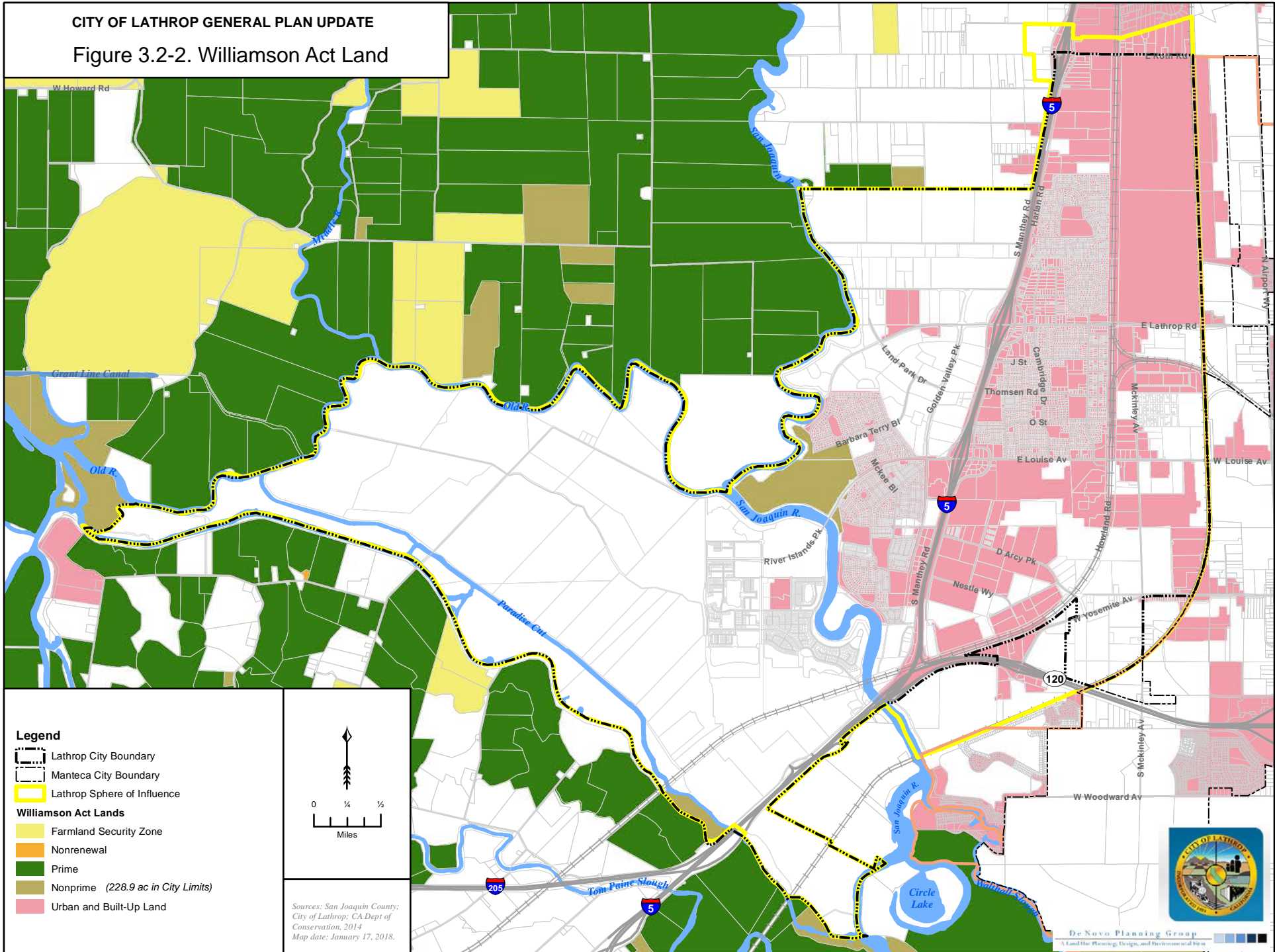
Sources: San Joaquin County;
City of Lathrop; CA Dept of
Conservation, 2014
Map date: January 17, 2018.



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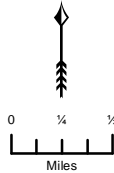
CITY OF LATHROP GENERAL PLAN UPDATE

Figure 3.2-2. Williamson Act Land



Legend

- Lathrop City Boundary
- Manteca City Boundary
- Lathrop Sphere of Influence
- Williamson Act Lands**
- Farmland Security Zone
- Nonrenewal
- Prime
- Nonprime (228.9 ac in City Limits)
- Urban and Built-Up Land



Sources: San Joaquin County;
City of Lathrop; CA Dept of
Conservation, 2014
Map date: January 17, 2018.



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A Land Use Planning, Design, and Professional Firm

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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 the proposed Project's implementation.

There was one comment letter (San Joaquin Valley Unified Air Pollution Control District–November 2, 2021), and one Notice of Preparation Meeting comment (Mary Meninga/Adriana Lopez) related to this environmental topic during the NOP comment period. All comments received during the NOP comment period are included in Appendix A.

3.3.1 ENVIRONMENTAL SETTING

SAN JOAQUIN VALLEY AIR BASIN

The City of Lathrop (City) is in the southern portion of the San Joaquin Air Basin (SJVAB). The SJVAB consists of eight counties: Fresno, Kern (western and central), Kings, Tulare, Madera, Merced, San Joaquin, and Stanislaus. Air pollution from significant activities in the SJVAB includes a variety of industrial-based sources as well as on- and off-road mobile sources. These sources, coupled with geographical and meteorological conditions unique to the area, stimulate the formation of unhealthy air.

The SJVAB is approximately 250 miles long and an average of 35 miles wide. It is bordered by the Sierra Nevada in the east, the Coast Ranges in the west, and the Tehachapi mountains in the south. There is a slight downward elevation gradient from Bakersfield in the southeast end (elevation 408 feet) to sea level at the northwest end where the valley opens to the San Francisco Bay at the Carquinez Straits. At its northern end is the Sacramento Valley, which comprises the northern half of California's Central Valley. The bowl-shaped topography inhibits movement of pollutants out of the valley (San Joaquin Valley Air Pollution Control District (SJVAPCD), 2015).

Climate

The SJVAB is in a Mediterranean climate zone and is influenced by a subtropical high-pressure cell most of the year. Mediterranean climates are characterized by sparse rainfall, which occurs mainly in winter. Summers are hot and dry. Summertime maximum temperatures often exceed 100°F in the valley.

The subtropical high-pressure cell is strongest during spring, summer, and fall and produces subsiding air, which can result in temperature inversions in the valley. A temperature inversion can act like a lid, inhibiting vertical mixing of the air mass at the surface. Any emissions of pollutants can be trapped below the inversion. Most of the surrounding mountains are above the normal height of summer inversions (1,500 to 3,000 feet).

Winter-time high pressure events can often last many weeks, with surface temperatures often lowering into the 30°F. During these events, fog can be present and inversions are extremely strong. These wintertime inversions can inhibit vertical mixing of pollutants to a few hundred feet (SJVAPCD, 2015).

Wind Patterns

Wind speed and direction play an important role in dispersion and transport of air pollutants. Wind at the surface and aloft can disperse pollution by mixing and transporting it to other locations.

Especially in summer, winds in the San Joaquin Valley most frequently blow from the northwest. The region's topographic features restrict air movement and channel the air mass towards the southeastern end of the valley. Marine air can flow into the basin from the San Joaquin River Delta and over Altamont Pass and Pacheco Pass, where it can flow along the axis of the valley, over the Tehachapi pass, into the Southeast Desert Air Basin. This wind pattern contributes to transporting pollutants from the Sacramento Valley and the Bay Area into the SJVAB. Approximately 27 percent of the total emissions in the northern portion, 11 percent of total emissions in the central region, and 7 percent of total emission in the south valley of the SJVAB are attributed to air pollution transported from these two areas.¹ The Coastal Range is a barrier to air movement to the west and the high Sierra Nevada range is a significant barrier to the east (the highest peaks in the southern Sierra Nevada reach almost halfway through the Earth's atmosphere). Many days in the winter are marked by stagnation events where winds are very weak. Transport of pollutants during winter can be very limited. A secondary but significant summer wind pattern is from the southeast and can be associated with nighttime drainage winds, prefrontal conditions, and summer monsoons.

Two significant diurnal wind cycles that occur frequently in the valley are the sea breeze and mountain-valley upslope and drainage flows. The sea breeze can accentuate the northwest wind flow, especially on summer afternoons. Nighttime drainage flows can accentuate the southeast movement of air down the valley. In the mountains during periods of weak synoptic scale winds, winds tend to be upslope during the day and downslope at night. Nighttime and drainage flows are especially pronounced during the winter when flow from the easterly direction is enhanced by nighttime cooling in the Sierra Nevada. Eddies can form in the valley wind flow and can recirculate a polluted air mass for an extended period.

Temperature

Solar radiation and temperature are particularly important in the chemistry of ozone formation. The SJVAB averages over 260 sunny days per year. Photochemical air pollution (primarily ozone) is produced by the atmospheric reaction of organic substances (such as volatile organic compounds) and nitrogen dioxide under the influence of sunlight. Ozone concentrations are very dependent on the amount of solar radiation, especially during late spring, summer, and early fall. Ozone levels typically peak in the afternoon. After the sun goes down, the chemical reaction between nitrous oxide and ozone begins to dominate. This reaction tends to scavenge and remove the ozone in the metropolitan areas through the early morning hours, resulting in the lowest ozone levels, possibly reaching zero at sunrise in areas with high nitrogen oxides emissions. At sunrise, nitrogen oxides

¹ SJVAPCD. Frequently Asked Questions, http://www.valleyair.org/general_info/frequently_asked_questions.htm#What%20is%20being%20done%20to%20improve%20air%20quality%20in%20the%20San%20Joaquin%20Valley, accessed March 3, 2020.

tend to peak, partly due to low levels of ozone at this time and also due to the morning commuter vehicle emissions of nitrogen oxides.

Generally, the higher the temperature, the more ozone formed, since reaction rates increase with temperature. However, extremely hot temperatures can “lift” or “break” the inversion layer. Typically, if the inversion layer does not lift to allow the buildup of contaminants to be dispersed, the ozone levels will peak in the late afternoon. If the inversion layer breaks and the resultant afternoon winds occur, the ozone will peak in the early afternoon and decrease in the late afternoon as the contaminants are dispersed or transported out of the SJVAB.

Ozone levels are low during winter periods when there is much less sunlight to drive the photochemical reaction (SJVAPCD, 2015).

Precipitation, Humidity, and Fog

Precipitation and fog may reduce or limit some pollutant concentrations. Ozone needs sunlight for its formation, and clouds and fog can block the required solar radiation. Wet fogs can cleanse the air during winter as moisture collects on particles and deposits them on the ground. Atmospheric moisture can also increase pollution levels. In fogs with less water content, the moisture acts to form secondary ammonium nitrate particulate matter. This ammonium nitrate is part of the valley’s PM_{2.5} and PM₁₀ problem. The winds and unstable air conditions experienced during the passage of winter storms result in periods of low pollutant concentrations and excellent visibility. Between winter storms, high pressure and light winds allow cold moist air to pool on the SJVAB floor. This creates strong low-level temperature inversions and very stable air conditions, which can lead to tule fog. Wintertime conditions favorable to fog formation are also conditions favorable to high concentrations of PM_{2.5} and PM₁₀ (SJVAPCD, 2015).

Inversions

The vertical dispersion of air pollutants in the San Joaquin Valley can be limited by persistent temperature inversions. Air temperature in the lowest layer of the atmosphere typically decreases with altitude. A reversal of this atmospheric state, where the air temperature increases with height, is termed an inversion. The height of the base of the inversion is known as the “mixing height.” This is the level to which pollutants can mix vertically. Mixing of air is minimized above and below the inversion base. The inversion base represents an abrupt density change where little air movement occurs.

Inversion layers are significant in determining pollutant concentrations. Concentration levels can be related to the amount of mixing space below the inversion. Temperature inversions that occur on the summer days are usually 2,000 to 2,500 feet above the valley floor. In winter months, overnight inversions occur 500 to 1,500 feet above the valley floor (SJVAPCD, 2015).

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

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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 ROGs 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.

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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

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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. EPA and the 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 State ambient air quality standards are summarized in Table 3.3-1 for important pollutants. The federal and State ambient standards were developed independently, 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 standards are more stringent. This is particularly true for ozone, PM_{2.5}, and PM₁₀. 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 (equivalent to the California state ambient air quality eight-hour standard for ozone).

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

<i>POLLUTANT</i>	<i>AVERAGING TIME</i>	<i>FEDERAL PRIMARY STANDARD</i>	<i>STATE STANDARD</i>
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, UG/M³ = MICROGRAMS PER CUBIC METER

SOURCE: CALIFORNIA AIR RESOURCES BOARD, 2019A.

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 existing PM₁₀ standards were 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 San Joaquin County and the entire air basin are 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, carbon monoxide, and nitrogen dioxide as “does not meet the primary standards,” “cannot be classified,” or “better than national standards.” For sulfur dioxide, 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.

San Joaquin County has a State designation Attainment or Unclassified for all criteria pollutants except for ozone, PM₁₀ and PM_{2.5}. San Joaquin County has a national designation of either Unclassified or Attainment for all criteria pollutants except for Ozone and PM_{2.5}. Table 3.3-2 presents the state and nation attainment status for San Joaquin County.

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TABLE 3.3-2: STATE AND NATIONAL ATTAINMENT STATUS IN SAN JOAQUIN COUNTY

CRITERIA POLLUTANTS	STATE DESIGNATIONS	NATIONAL DESIGNATIONS
Ozone (O ₃)	Nonattainment	Nonattainment
PM ₁₀	Nonattainment	Attainment
PM _{2.5}	Nonattainment	Nonattainment
Carbon Monoxide (CO)	Attainment	Unclassified/Attainment
Nitrogen Dioxide (NO ₂)	Attainment	Unclassified/Attainment
Sulfur Dioxide (SO ₂)	Attainment	Unclassified/Attainment
Sulfates	Attainment	
Lead	Attainment	Unclassified/Attainment
Hydrogen Sulfide	Unclassified	
Visibility Reducing Particles	Unclassified	

SOURCE: CALIFORNIA AIR RESOURCES BOARD, 2020.

San Joaquin County Air Quality Monitoring

The San Joaquin Valley Air Pollution District (SJVAPCD) and the CARB maintain air quality monitoring sites throughout San Joaquin County that collect data for ozone and PM_{2.5}. In addition, air quality monitoring sites for PM₁₀ are located throughout the San Joaquin Valley (though not in San Joaquin County). It is important to note that while the State retains the one-hour standard, the federal ozone 1-hour standard was revoked by the U.S. EPA and is no longer applicable for federal standards. Best available data obtained from the monitoring sites between 2017 and 2020 (latest year of data available) is shown in Table 3.3-3, Table 3.3-4, and Table 3.3-5.

TABLE 3.3-3 AMBIENT AIR QUALITY MONITORING DATA SUMMARY (SAN JOAQUIN COUNTY) - 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
2020	1	4	0	4	0.100	0.09	0.092	0.078	0.082	0.078	0.070	96	99
2019	2	4	0	4	0.098	0.09	0.092	0.08	0.082	0.079	0.073	91	99
2018	1	8	0	8	0.099	0.10	0.099	0.082	0.085	0.081	0.076	96	99
2017	0	8	0	6	0.093	0.10	0.105	0.082	0.086	0.082	0.077	84	95

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.

TABLE 3.3-4: AMBIENT AIR QUALITY MONITORING DATA SUMMARY (SAN JOAQUIN VALLEY) – PM₁₀

YEAR	EST. DAYS > STD.		ANNUAL AVERAGE		HIGH 24-HR AVERAGE		YEAR COVERAGE
	NAT'L	STATE	NAT'L	STATE	NAT'L	STATE	
2020	38.7	157.0	64.5	60.5	517.2	359.0	0 – 100
2019	16.2	129.7	55.6	55.6	652.2	664.2	0 – 100
2018	9.6	164.4	54.5	53.0	250.2	250.4	0 – 100
2017	7.7	145.5	55.3	48.4	298.4	210.0	0 – 100

NOTES: THE NATIONAL ANNUAL AVERAGE PM₁₀ STANDARD WAS REVOKED IN DECEMBER 2006 AND IS NO LONGER IN EFFECT. AN EXCEEDANCE IS NOT NECESSARILY A VIOLATION. STATISTICS MAY INCLUDE DATA THAT ARE RELATED TO AN EXCEPTIONAL EVENT. STATE AND NATIONAL STATISTICS MAY

DIFFER FOR THE FOLLOWING REASONS: STATE STATISTICS ARE BASED ON CALIFORNIA APPROVED SAMPLERS, WHEREAS NATIONAL STATISTICS ARE BASED ON SAMPLERS USING FEDERAL REFERENCE OR EQUIVALENT METHODS. STATE AND NATIONAL STATISTICS MAY THEREFORE BE BASED ON DIFFERENT SAMPLERS. NATIONAL STATISTICS ARE BASED ON STANDARD CONDITIONS. STATE CRITERIA FOR ENSURING THAT DATA ARE SUFFICIENTLY COMPLETE FOR CALCULATING VALID ANNUAL AVERAGES ARE MORE STRINGENT THAN THE NATIONAL CRITERIA. ND= THERE WAS INSUFFICIENT (OR NO) DATA AVAILABLE TO DETERMINE THE VALUE.

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

TABLE 3.3-5 AMBIENT AIR QUALITY MONITORING DATA SUMMARY (SAN JOAQUIN COUNTY) - PM_{2.5}

YEAR	EST. DAYS > NAT'L '06 STD.	ANNUAL AVERAGE		NAT'L ANN. STD. D.V. ¹	STATE ANNUAL D.V. ²	NAT'L '06 STD. 98TH PERCENTILE	NAT'L '06 24-HR STD. D.V. ¹	HIGH 24-HOUR AVERAGE		YEAR COVERAGE	
		NAT'L	STATE					NAT'L	STATE	MIN	MAX
2020	24.0	14.8	14.8	13.8	17	91.6	72	140.0	140.0	98	99
2019	6.4	9.3	6.2	13.0	17	32.9	56	50.1	50.1	75	95
2018	25.0	17.6	17.4	13.8	17	96.9	56	188.0	257.5	96	100
2017	16.9	12.1	11.0	12.2	13	44.2	39	53.7	53.7	94	99

NOTES: ALL CONCENTRATIONS EXPRESSED IN PARTS PER MILLION. STATE AND NATIONAL STATISTICS MAY DIFFER FOR THE FOLLOWING REASONS: STATE STATISTICS ARE BASED ON CALIFORNIA APPROVED SAMPLERS, WHEREAS NATIONAL STATISTICS ARE BASED ON SAMPLERS USING FEDERAL REFERENCE OR EQUIVALENT METHODS. STATE AND NATIONAL STATISTICS MAY THEREFORE BE BASED ON DIFFERENT SAMPLERS. STATE CRITERIA FOR ENSURING THAT DATA ARE SUFFICIENTLY COMPLETE FOR CALCULATING VALID ANNUAL AVERAGES ARE MORE STRINGENT THAN THE NATIONAL CRITERIA. 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.

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 sensitive receptors within the Planning Area include uses such as existing residences, schools, daycares, and elderly facilities.

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 U.S. EPA is responsible for administering the FCAA. The FCAA requires the U.S. 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 (with an adequate margin of safety, including for sensitive populations such as children, the elderly, and individuals suffering from respiratory diseases), and secondary standards, which protect the public welfare from non-health-related adverse effects such as visibility reduction.

NAAQS standards define clean air and represent the maximum amount of pollution that can be present in outdoor air without any harmful effects on people and the environment. Existing violations of the ozone and PM_{2.5} ambient air quality standards indicate that certain individuals exposed to these pollutants may experience certain health effects, including increased incidence of cardiovascular and respiratory ailments.

NAAQS standards have been designed to accurately reflect the latest scientific knowledge and are reviewed every five years by a Clean Air Scientific Advisory Committee (CASAC), consisting of seven members appointed by the U.S. EPA administrator. Reviewing NAAQS is a lengthy undertaking and

includes the following major phases: Planning, Integrated Science Assessment (ISA), Risk/Exposure Assessment (REA), Policy Assessment (PA), and Rulemaking. The process starts with a comprehensive review of the relevant scientific literature. The literature is summarized and conclusions are presented in the ISA. Based on the ISA, U.S. EPA staff perform a risk and exposure assessment, which is summarized in the REA document. The third document, the PA, integrates the findings and conclusions of the ISA and REA into a policy context, and provides lines of reasoning that could be used to support retention or revision of the existing NAAQS, as well as several alternative standards that could be supported by the review findings. Each of these three documents is released for public comment and public peer review by the CASAC. Members of CASAC are appointed by the U.S. EPA Administrator for their expertise in one or more of the subject areas covered in the ISA. The CASAC's role is to peer review the NAAQS documents, ensure that they reflect the thinking of the scientific community, and advise the Administrator on the technical and scientific aspects of standard setting. Each document goes through two to three drafts before CASAC deems it to be final.

Although there is some variability among the health effects of the NAAQS pollutants, each has been linked to multiple adverse health effects including, among others, premature death, hospitalizations and emergency department visits for exacerbated chronic disease, and increased symptoms such as coughing and wheezing. NAAQS standards were last revised for each of the six criteria pollutant as listed below, with detail on what aspects of NAAQS changed during the most recent update:

- Ozone: On October 1, 2015, the U.S. EPA lowered the national eight-hour standard from 0.075 ppm to 0.070 ppm, providing for a more stringent standards consistent with the current California state standard.
- CO: In 2011, the primary standards were retained from the original 1971 level, without revision. The secondary standards were revoked in 1985.
- NO₂: The national NO₂ standard was most recently revised in 2010 following an exhaustive review of new literature pointed to evidence for adverse effects in asthmatics at lower NO₂ concentrations than the existing national standard.
- SO₂: On June 2, 2010, a new 1-hour SO₂ standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb.
- PM: the national annual average PM_{2.5} standard was most recently revised in 2012 following an exhaustive review of new literature pointed to evidence for increased risk of premature mortality at lower PM_{2.5} concentrations than the existing standard.
- Lead: The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. In 2016, the primary and secondary standards were retained.

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 U.S. 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. The CARB is the state agency that is responsible for preparing the California SIP.

Transportation Conformity

Transportation conformity requirements were added to the FCAA in the 1990 amendments, and the U.S. EPA adopted implementing regulations in 1997. See §176 of the FCAA (42 U.S.C. §7506) and 40 CFR Part 93, Subpart A. Transportation conformity serves much the same purpose as general conformity: it ensures that transportation plans, transportation improvement programs, and projects that are developed, funded, or approved by the United States Department of Transportation or that are recipients of funds under the Federal Transit Act or from the Federal Highway Administration (FHWA), conform to the SIP as approved or promulgated by U.S. EPA.

Currently, transportation conformity applies in nonattainment areas and maintenance areas. Under transportation conformity, a determination of conformity with the applicable SIP must be made by the agency responsible for the project, such as the Metropolitan Planning Organization, the Council of Governments, or a federal agency. The agency making the determination is also responsible for all the requirements relating to public participation. Generally, a project will be considered in conformance if it is in the transportation improvement plan and the transportation improvement plan is incorporated in the SIP. If an action is covered under transportation conformity, it does not need to be separately evaluated under general conformity.

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.

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 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 require 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. The CARB is the agency responsible for administering the CCAA. The 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.

California Air Quality Standards

Although NAAQS are determined by the U.S. EPA, 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, suspended particulates and lead. In addition, California has created standards for pollutants that are not covered by federal standards. Although there is some variability among the health effects of the CAAQS pollutants, each has been linked to multiple adverse health effects including, among others, premature death, hospitalizations and emergency department visits for exacerbated chronic disease, and increased symptoms such as coughing and wheezing. The existing state and federal primary standards for major pollutants are shown in Table 3.3-1.

Air quality standard setting in California commences with a critical review of all relevant peer reviewed scientific literature. The Office of Environmental Health Hazard Assessment (OEHHA) uses the review of health literature to develop a recommendation for the standard. The recommendation can be for no change, or can recommend a new standard. The review, including the OEHHA recommendation, is summarized in a document called the draft Initial Statement of Reasons (ISOR), which is released for comment by the public, and also for public peer review by the Air Quality Advisory Committee (AQAC). AQAC members are appointed by the President of the University of California for their expertise in the range of subjects covered in the ISOR, including health, exposure, air quality monitoring, atmospheric chemistry and physics, and effects on plants, trees, materials, and ecosystems. The Committee provides written comments on the draft ISOR. The ARB staff next revises the ISOR based on comments from AQAC and the public. The revised ISOR is then released for a 45-day public comment period prior to consideration by the Board at a regularly scheduled Board hearing.

In June of 2002, the CARB adopted revisions to the PM₁₀ standard and established a new PM_{2.5} annual standard. The new standards became effective in June 2003. Subsequently, staff reviewed the published scientific literature on ground-level ozone and nitrogen dioxide and the CARB adopted revisions to the standards for these two pollutants. Revised standards for ozone and nitrogen dioxide went into effect on May 17, 2006 and March 20, 2008, respectively. These revisions reflect the most recent changes to the CAAQS.

Tanner Air Toxics Act (TACs)

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 CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before CARB can designate a substance as a TAC. To date, CARB has identified more than 21 TACs and has adopted U.S. EPA's list of HAPs as TACs. Most recently, diesel PM was added to the CARB list of TACs. Once a TAC is identified, CARB 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 Best Available Control Technologies (BACT) to minimize emissions.

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. CARB 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, CARB 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.

Omnibus Low-NOx Rule

The CARB approved the Omnibus Low-NOx Rule on August 28, 2020, which will require engine NOx emissions to be cut to approximately 75% below current standards beginning in 2024, and 90% below current standards in 2027. The rule also places nine additional regulatory requirements on new heavy-duty truck engines. Those additional requirements include a 50% reduction in particulate matter emissions, stringent new low-load and idle standards, a new in-use testing protocol, extended deterioration requirements, a new California-only credit program, and extended mandatory warranty requirements. The regulatory requirements in the Omnibus Low-NOx Rule will first become effective in 2024, at the same time as the Advanced Clean Trucks regulations that CARB approved that mandates manufacturers convert increasing percentages of their heavy-duty trucks sold in California to zero-emission vehicles.

Assembly Bill 170

Assembly Bill 170, Reyes (AB 170), was adopted by state lawmakers in 2003, creating Government Code Section 65302.1, which requires cities and counties in the San Joaquin Valley to amend their general plans to include data and analysis, comprehensive goals, policies, and feasible implementation strategies designed to improve air quality. The elements to be amended include, but are not limited to, those elements dealing with land use, circulation, housing, conservation,

and open space. Section 65302.1.c identifies four areas of air quality discussion required in these amendments:

- A report describing local air quality conditions, attainment status, and state and federal air quality and transportation plans;
- A summary of local, district, state, and federal policies, programs, and regulations to improve air quality;
- A comprehensive set of goals, policies, and objectives to improve air quality; and
- Feasible implementation measures designed to achieve these goals.

LOCAL

San Joaquin Valley Air Pollution Control District

The primary role of SJVAPCD is to develop plans and implement control measures in the SJVAB to control air pollution. These controls primarily affect stationary sources such as industry and power plants. Rules and regulations have been developed by SJVAPCD to control air pollution from a wide range of air pollution sources. SJVAPCD also provides uniform procedures for assessing potential air quality impacts of proposed projects and for preparing the air quality section of environmental documents.

AIR QUALITY PLANNING

The U.S. EPA requires states that have areas that do not meet the National AAQS to prepare and submit air quality plans showing how the National AAQS will be met. If the states cannot show how the National AAQS will be met, then the states must show progress toward meeting the National AAQS. These plans are referred to as the State Implementation Plans (SIP). California's adopted 2007 State Strategy was submitted to the U.S. EPA as a revision to its SIP in November 2007.² More recently, in October 2018, the CARB adopted the 2018 Updates to the California State Implementation Plan.

In addition, the CARB requires regions that do not meet California AAQS for ozone to submit clean air plans (CAPs) that describe measures to attain the standard or show progress toward attainment. To ensure federal CAA compliance, SJVAPCD is currently developing plans for meeting new National AAQS for ozone and PM_{2.5} and the California AAQS for PM₁₀ in the SJVAB (for California CAA compliance)³ The following describes the air plans prepared by the SJVAPCD, which are incorporated by reference per CEQA Guidelines Section 15150.

1-HOUR OZONE PLAN

Although U.S. EPA revoked its 1979 1-hour ozone standard in June 2005, many planning requirements remain in place, and SJVAPCD must still attain this standard before it can rescind CAA Section 185 fees. The SJVAPCD's most recent 1-hour ozone plan, the 2013 Plan for the

² Note that the plan was adopted by CARB on September 27, 2007; California Air Resources Board. 2007. California Air Resources Board's Proposed State Strategy for California's 2007 State Implementation Plan.

³ SJVAPCD, 2012. 2012 PM_{2.5} Plan, December 20.

Revoked 1-hour Ozone Standard, demonstrated attainment of the 1-hour ozone standard by 2017. However, on July 18, 2016, the U.S. EPA published in the Federal Register a final action determining that SJVAB has attained the 1-hour ozone NAAQS based on the 2012 to 2014 three-year period allowing nonattainment penalties to be lifted under federal Clean Air Act section 179b (SJVAPCD, 2015).

8-HOUR OZONE PLAN

The SJVAPCD's Governing Board adopted the 2007 Ozone Plan on April 30, 2007. This far-reaching plan, with innovative measures and a "dual path" strategy, assures expeditious attainment of the federal 8-hour ozone standard as set by U.S. EPA in 1997. The plan projects that the valley will achieve the 8-hour ozone standard for all areas of the SJVAB no later than 2023. The CARB approved the plan on June 14, 2007. The U.S. EPA approved the 2007 Ozone Plan effective April 30, 2012. SJVAPCD adopted the 2016 Ozone Plan to address the federal 2008 8-hour ozone standard, which must be attained by end of 2031.^{4,5}

PM₁₀ PLAN

Based on PM₁₀ measurements from 2003 to 2006, the U.S. EPA found that the SJVAB has reached federal PM₁₀ standards. On September 21, 2007, the SJVAPCD's Governing Board adopted the 2007 PM₁₀ Maintenance Plan and Request for Redesignation. This plan demonstrates that the valley will continue to meet the PM₁₀ standard. U.S. EPA approved the document and on September 25, 2008, the SJVAB was redesignated to attainment/maintenance (SJVAPCD, 2015).

PM_{2.5} PLAN

The SJVAPCD adopted the 2018 Plan for the 1997, 2006, and 2012 PM_{2.5} Standards on November 15, 2018.⁶ This plan addresses the U.S. EPA federal 1997 annual PM_{2.5} standard of 15 µg/m³ and 24-hour PM_{2.5} standard of 65 µg/m³; the 2006 24-hour PM_{2.5} standard of 35 µg/m³; and the 2012 annual PM_{2.5} standard of 12 µg/m³. This plan demonstrates attainment of the federal PM_{2.5} standards as expeditiously as practicable (SJVAPCD, 2020).

All of the above-referenced plans include measures (i.e., federal, state, and local) that would be implemented through rule making or program funding to reduce air pollutant emissions in the SJVAB. Transportation control measures are part of these plans.

SJVAPCD RULES AND REGULATIONS

SJVAPCD Indirect Source Review

On December 15, 2005, SJVAPCD adopted the Indirect Source Review Rule (ISR or Rule 9510) to reduce ozone precursors (i.e., ROG and NOx) and PM₁₀ emissions from new land use development projects. Specifically, Rule 9510 targets the indirect emissions from vehicles and construction

⁴ SJVAPCD. Ozone Plans. http://www.valleyair.org/Air_Quality_Plans/Ozone_Plans.htm, accessed March 3, 2020.

⁵ SJVAPCD. 2016 Plan for the 2008 8-Hour Ozone Standard, http://www.valleyair.org/Air_Quality_Plans/Ozone-Plan-2016.htm, accessed March 3, 2020.

⁶ SJVAPCD. Particulate Matter Plans. http://valleyair.org/Air_Quality_Plans/PM_Plans.htm, accessed March 9, 2020.

equipment associated with these projects and applies to both construction and operational-related impacts. The rule applies to any applicant that seeks to gain a final discretionary approval for a development project, or any portion thereof, which upon full buildout would include any one of the following:

- 50 residential units.
- 2,000 square feet of commercial space.
- 25,000 square feet of light industrial space.
- 100,000 square feet of heavy industrial space.
- 20,000 square feet of medical office space.
- 39,000 square feet of general office space.
- 9,000 square feet of educational space.
- 10,000 square feet of government space.
- 20,000 square feet of recreational space.
- 9,000 square feet of space not identified above.
- Transportation/transit projects with construction exhaust emissions of two or more tons of NO_x or two or more tons of PM₁₀.
- Residential projects on contiguous or adjacent property under common ownership of a single entity in whole or in part, that is designated and zoned for the same development density and land use, regardless of the number of tract maps, and has the capability of accommodating more than 50 residential units.
- Nonresidential projects on contiguous or adjacent property under common ownership of a single entity in whole or in part, that is designated and zoned for the same development density and land use, and has the capability of accommodating development projects that emit two or more tons per year of NO_x or PM₁₀ during project operations.

The rule requires all subject, nonexempt projects to mitigate both construction and operational period emissions by (1) applying feasible SJVAPCD-approved mitigation measures, or (2) paying any applicable fees to support programs that reduce emissions. Off-site emissions reduction fees (off-site fee) are required for projects that do not achieve the required emissions reductions through on-site emission reduction measures. Phased projects can defer payment of fees in accordance with an Off-site Emissions Reduction Fee Deferral Schedule (FDS) approved by the SJVAPCD.

To determine how an individual project would satisfy Rule 9510, each project would submit an air quality impact assessment (AIA) to the SJVAPCD as early as possible, but no later than prior to the project's final discretionary approval, to identify the project's baseline unmitigated emissions inventory for indirect sources: on-site exhaust emissions from construction activities and operational activities from mobile and area sources of emissions (excludes fugitive dust and permitted sources).²⁸ Rule 9510 requires the following reductions, which are levels that the SJVAPCD has identified as necessary, based on their air quality management plans, to reach attainment for ozone and particulate matter:

Construction Equipment Emissions

The exhaust emissions for construction equipment greater than 50 horsepower (hp) used or associated with the development project shall be reduced by the following amounts from the statewide average as estimated by CARB:

- 20 percent of the total NO_x emissions
- 45 percent of the total PM₁₀ exhaust emissions

Mitigation measures may include those that reduce construction emissions on-site by using less polluting construction equipment, which can be achieved by utilizing add-on controls, cleaner fuels, or newer, lower emitting equipment.

Operational Emissions

- NO_x Emissions. Applicants shall reduce 33.3 percent of the project's operational baseline NO_x emissions over a period of 10 years as quantified in the approved AIA.
- PM₁₀ Emissions. Applicants shall reduce of 50 percent of the project's operational baseline PM₁₀ emissions over a period of 10 years as quantified in the approved AIA.

These requirements listed above can be met through any combination of on-site emission reduction measures. In the event that a project cannot achieve the above standards through imposition of mitigation measures, then the project would be required to pay the applicable off-site fees. These fees are used to fund various incentive programs that cover the purchase of new equipment, engine retrofit, and education and outreach.

Fugitive PM₁₀ Prohibitions

SJVAPCD controls fugitive PM₁₀ through Regulation VIII, Fugitive PM₁₀ Prohibitions. The purpose of this regulation is to reduce ambient concentrations of PM₁₀ and PM_{2.5} by requiring actions to prevent, reduce, or mitigate anthropogenic (human caused) fugitive dust emissions.

- Regulation VIII, Rule 8021 applies to any construction, demolition, excavation, extraction, and other earthmoving activities, including, but not limited to, land clearing, grubbing, scraping, travel on-site, and travel on access roads to and from the site.
- Regulation VIII, Rule 8031 applies to the outdoor handling, storage, and transport of any bulk material.
- Regulation VIII, Rule 8041 applies to sites where carryout or trackout has occurred or may occur on paved roads or the paved shoulders of public roads.
- Regulation VIII, Rule 8051 applies to any open area having 0.5 acre or more within urban areas or 3.0 acres or more within rural areas, and contains at least 1,000 square feet of disturbed surface area.
- Regulation VIII, Rule 8061 applies to any new or existing public or private paved or unpaved road, road construction project, or road modification project.
- Regulation VIII, Rule 8071 applies to any unpaved vehicle/equipment traffic area.
- Regulation VIII, Rule 8081 applies to off-field agricultural sources.

Sources regulated are required to provide Dust Control Plans that meet the regulation requirements. Under Rule 8021, a Dust Control Plan is required for any residential project that will include 10 or more acres of disturbed surface area, a nonresidential project with 5 or more acres of disturbed surface area, or a project that relocates 2,500 cubic yards per day of bulk materials for at least three days. The Dust Control Plan is required to be submitted to SJVAPCD prior to the start of any construction activity. The Dust Control Plan must also describe fugitive dust control measure to be implemented before, during, and after any dust-generating activity. For sites smaller than those listed above, the project is still required to notify SJVAPCD a minimum of 48 hours prior to commencing earthmoving activities.

National Emission Standards for Hazardous Air Pollutants

Rule 4002 applies in the event an existing building will be renovated, partially demolished or removed (National Emission Standards for Hazardous Air Pollutants); this rule applies to all sources of Hazardous Air Pollutants.

Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations

If asphalt paving will be used, then paving operations of the proposed project will be subject to Rule 4641. This rule applies to the manufacture and use of cutback asphalt, slow cure asphalt and emulsified asphalt for paving and maintenance operations.

Nuisance Odors

SJVAPCD controls nuisance odors through implementation of Rule 4102, Nuisance. Pursuant to this rule, “a person shall not discharge from any source whatsoever such quantities of air contaminants or other materials which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health, or safety of any such person or the public or which cause or have a natural tendency to cause injury or damage to business or property.”

Employer Based Trip Reduction Program

SJVAPCD has implemented Rule 9410, Employer Based Trip Reduction. The purpose of this rule is to reduce VMT from private vehicles used by employees to commute to and from their worksites to reduce emissions of NO_x, ROG, and particulate matter (PM₁₀ and PM_{2.5}). The rule applies to employers with at least 100 employees. Employers are required to implement an Employer Trip Reduction Implementation Plan (ETRIP) for each worksite with 100 or more eligible employees to meet applicable targets specified in the rule. Employers are required to facilitate the participation of the development of ETRIPs by providing information to its employees explaining the requirements and applicability of this rule. Employers are required to prepare and submit an ETRIP for each worksite to the District. The ETRIP must be updated annually. Under this rule, employers shall collect information on the modes of transportation used for each eligible employee’s commutes both to and from work for every day of the commute verification period, as defined in using either the mandatory commute verification method or a representative survey method. Annual reporting includes the results of the commute verification for the previous calendar year along with the measures implemented as outlined in the ETRIP and, if necessary, any updates to the ETRIP.

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

Nearly all development projects within the San Joaquin Valley Air Basin, from general plans to individual development projects have the potential to generate air pollutants, making it more difficult to attain State and Federal ambient air quality standards. Therefore, it is necessary to evaluate air quality impacts to comply with CEQA. As identified in the SJVAPCD's *Guidance for Assessing and Mitigation Air Quality Impacts (GAMAQI)*, land use decisions are critical to improving air quality within the San Joaquin Valley Air Basin because land use patterns greatly influence transportation needs and motor vehicle emissions are the largest source of air pollution. Land use decisions and project design elements such as preventing urban sprawl, encouraging mixed-use development, and project designs that reduce vehicle miles traveled (VMT) have proven benefit for air quality.

The analysis presented below was completed to include both a qualitative and a quantitative approach. The qualitative analysis discusses the proposed General Plan's consistency with the SJVAPCD's GAMAQI and other applicable rules and regulations. The quantitative analysis presents the proposed General Plan's VMT projections associated with buildout of the General Plan, which were developed using the Lathrop Travel Demand Model, in comparison to the population and job projections associated with buildout of the General Plan. 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. The SJVAPCD's most current air quality plans for PM, ozone, and carbon monoxide are (respectively) the *2018 Plan for the 1997, 2006, and 2012 PM_{2.5} Standards*, the *2020 Reasonably Available Control Technology (RACT) Demonstration for the 2015 8-Hour Ozone Standard*, and the *2004 Revisions to the Carbon Monoxide Maintenance Plan*. These plans are also known as "Air Quality Attainment Plans". The SJVAPCD's Air Quality Attainment Plans include measures to promote air quality elements in county and city general plans as one of the primary indirect source programs. For example, the *2018 Plan for the 1997, 2006, and 2012 PM_{2.5} Standards plan* identifies that 5% annual reduction in PM_{2.5} is required annually. Separately, the *2020 Reasonably Available Control Technology (RACT) Demonstration for the 2015 8-Hour Ozone Standard plan* describes a variety of U.S. Environmental Protection Agency (EPA) control technique guidelines to limit volatile organic compounds, including specification requirements for vapor control systems at gasoline service stations, cutback asphalt, and solvent metal cleaning. Consistency with these measures is typically determined based on individual projects' consistency with the criteria pollutant and other air quality thresholds as promulgated by the SJVAPCD.

The San Joaquin Valley is in State-level non-attainment for ozone, PM₁₀, and PM_{2.5}. The SJVAPCD does not provide criteria pollutant thresholds for General Plans (such as the proposed Project). Thresholds of significance for criteria pollutants are established at the project-level by the SJVAPCD. As such, there is no programmatic threshold of significance established for criteria pollutants for which to compare the proposed General Plan.

This EIR explicitly acknowledges that the proposed General Plan will allow notable amounts of new residential and non-residential growth in Lathrop, 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 Lathrop. Additionally, the implementation of individual projects within the General Plan would have the potential to conflict with the SJVAPCD's thresholds of significance for criteria pollutants at the project-level.

The proposed General Plan includes an extensive list of policies and actions that are specifically aimed at improving air quality. These policies and actions, which are provided below, limit impacts to air quality including by reducing the number and length of vehicle trips, supporting green and sustainable building development, promoting the use of renewable energy, and encouraging the conservation of resources.

The policies and actions included throughout the proposed General Plan cover the full breadth of air quality issues as recommended in the applicable air quality plans. If approval of the proposed

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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 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 Lathrop General Plan. As such, total emissions levels associated with Project buildout would increase, which may indirectly hinder the SJVAPCDs efforts to reduce total emissions of criteria pollutants.

The Planning Area is surrounded by a variety of existing urbanized and agricultural uses, and is bisected by two of the most heavily-travelled highway corridors in the San Joaquin Valley (I 5 and SR 120). The proposed General Plan includes polices and land uses that promote mixed use, transit-oriented development patterns that emphasizes alternative transportation access and multi-modal connectivity throughout the Planning Area and into the surrounding areas.

Implementation of the proposed General Plan, which is consistent with all federal and state guidelines, would be consistent with the applicable air quality plans, but would still lead to overall increases in emissions of criteria pollutants, given the total growth projected upon full buildout of the proposed General Plan.

The following quantitative analysis describes VMT and population increases associated with implementation of the General Plan. The proposed General Plan is intended to support and enhance jobs-generating uses within Lathrop, and to provide a mix of housing opportunities within the city.

As part of the transportation analysis, Fehr & Peers (the traffic consultant) modeled VMT for the Planning Area for air quality analysis purposes. As described in Section 3.14: Circulation, the existing VMT for the Planning Area is approximately 1,497,700 and VMT for the Planning Area at buildout under the proposed General Plan is expected to be 7,503,700.

As shown in Table 2.0-2 of this Draft EIR (see Chapter 2.0: Project Description), Lathrop has an existing population of approximately 28,503. Full buildout of the General Plan could generate up to an additional 66,562 new residents, for a total population of approximately 95,065 at buildout. Lathrop has an existing jobs base of approximately 9,153 jobs. Full buildout of the Planning Area could generate up to 49,250 new jobs in Lathrop, resulting in 58,403 total jobs at buildout. Table 3.3-6 shows the combined population and jobs growth generated by the proposed Project, compared to existing levels within the city. Table 3.3-7 shows the existing baseline VMT and projected VMT following buildout of the proposed Project.

TABLE 3.3-6: COMBINED JOBS AND POPULATION GROWTH

EXISTING JOBS + POPULATION IN LATHROP	37,656
EXISTING PLUS PROJECT JOBS + POPULATION	153,468
PERCENT INCREASE IN JOBS + POPULATION	307.6%

SOURCES: SAN JOAQUIN COUNTY ASSESSOR 2021; CALIFORNIA DEPARTMENT OF FINANCE 2021;
U.S CENSUS ONTHEMAP; ESRI 2020, DE NOVO PLANNING GROUP 2021.

TABLE 3.3-7: EXISTING AND PLUS-PROJECT VMT – PLANNING AREA

EXISTING VMT	1,497,700
EXISTING PLUS PROJECT VMT	7,503,700
PERCENT INCREASE IN VMT	401.0%

SOURCE: FEHR & PEERS, 2021

As shown in the two tables above, implementation of the proposed Project would result in an approximately 401.0% increase in citywide VMT, greater than the projected 307.6% increase in combined population and jobs. Therefore, the growth rate associated with the proposed General Plan is anticipated to be slower than the VMT increase associated with it. Therefore, the proposed Project is anticipated to result in VMT increases on a per service population basis.

Table 3.3-8 shows additional details on projected VMT numbers per dwelling unit, per employee, per resident, and per service population for General Plan buildout conditions, as well as for the baseline condition. As shown in the table, the proposed General Plan would result in notable reductions in VMT per dwelling unit for all residential land use types, and would reduce the per resident VMT in Lathrop by 45% compared to existing baseline conditions.

However, as shown in the table below, the proposed General Plan would result in increased VMT for employment-generating land uses and would also result in an increase in total VMT in comparison to the existing condition as well as in comparison to the baseline scenario.

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TABLE 3.3-8: VMT PER DWELLING UNIT AND PER EMPLOYEE FOR EXISTING CONDITION AND PROPOSED GENERAL PLAN

<i>LAND USE</i>	<i>UNITS</i>	<i>EXISTING CONDITION (2020 BASELINE)</i>	<i>THRESHOLD (85 PERCENT OF BASELINE)</i>	<i>PROPOSED GENERAL PLAN</i>
Single family	VMT per dwelling unit	111.5	94.8	64.5
Multi family	VMT per dwelling unit	86.0	73.1	54.6
Age restricted	VMT per dwelling unit	47.5	40.4	27.3
Restaurant	VMT per employee ¹	215.2	182.9	248.9
Industrial	VMT per employee	77.8	66.2	79.1
Office	VMT per employee	36.5	31.0	47.3
Retail	VMT per employee	135.3	115.0	211.5
All residential	VMT per dwelling unit	108.3	NA ⁵	58.9
All residential	VMT per resident ²	27.9	NA	15.2
All employment	VMT per employee	85.8	NA	101.6
All land uses	VMT per service population ^{2,3}	42.9	NA	47.4
Total VMT	VMT	1,497,700	NA	7,503,700

NOTES: ¹VMT PER EMPLOYEE RATIOS INCLUDE ALL TRIPS BY EMPLOYEES, CUSTOMERS, AND DELIVERIES

²BASED ON 3.88 RESIDENTS/DWELLING UNIT (CALIFORNIA DEPARTMENT OF FINANCE, E-5 CITY/COUNTY POPULATION AND HOUSING ESTIMATES, 1/1/2020)

³SERVICE POPULATION INCLUDES RESIDENTS AND EMPLOYEES

⁴VMT INCLUDES FULL LENGTH OF ALL TRIPS WITH EITHER AN ORIGIN OR DESTINATION WITHIN THE PLANNING AREA

⁵NA = NOT APPLICABLE, METRIC FOR INFORMATIONAL PURPOSES ONLY

SOURCE: FEHR & PEERS, 2021

The results shown in the table above are due to the change in the balance between jobs and housing in Lathrop, which is based upon the large increases in employment shown in Table 2.0-2 of the Project Description. In the future, a smaller share of residents is expected to leave the city for employment, reducing VMT per dwelling unit, but a greater share of employees and customers are expected to travel from outside the city to employment centers within the city, increasing VMT per employee. If such employment growth does not occur, actual VMT per dwelling unit could be higher and VMT per employee could be lower than estimated for General Plan buildout conditions.

The proposed General Plan includes numerous goals, policies and implementation actions which would further the fundamental goals of the SJVAPCD in reducing emissions of criteria pollutants associated with vehicle miles traveled, reducing building energy usage, and would increase opportunities for transit ridership in Lathrop and the surrounding areas. The list below provides those General Plan policies and actions that would work to further criteria pollutant emissions reductions, including reviewing projects for conformance with applicable air quality plans and regulations, reducing energy demands, and implementing methods to reduce vehicle miles traveled, including providing adequate pedestrian, bicycle, and transit facilities and opportunities, promoting non-vehicle travel modes, requiring employers with 100 or more employees to implement TDM programs, and ensuring regional coordination on trip and VMT reduction efforts..

However, even with implementation of the General Plan policies and actions that would reduce criteria pollutant emissions, since the proposed General Plan would increase VMT at a rate faster than the combined increase in jobs and population growth, this impact is considered **significant and unavoidable**.

There is no additional feasible mitigation available that would reduce this impact to a less than significant level. The City of Lathrop has proactively developed the proposed Land Use Map to focus new jobs-generating uses and development to areas within the City limits that have already been identified for urban growth. The updated General Plan does not extend urbanization outward beyond the City limits, and focuses all new growth and development to areas inside the City limits, which are closer to housing, services, jobs and infrastructure. This land use approach minimizes urban sprawl, and results in a more compact land use pattern, which leads to lower VMT levels than if the City had chosen to grow outward, rather than inward.

However, given the large swaths of developable jobs-generating land uses in Lathrop, the City projects that jobs in Lathrop may increase notably over the life of the General Plan. As noted above, this growth in jobs is likely to attract employees and customers from outside of Lathrop, thereby increasing the VMT per employee and the VMT per service population, even though the City is achieving notable reductions in VMT per dwelling unit and VMT per resident.

GENERAL PLAN GOALS, POLICIES, AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

GOALS

- LU-1 Accommodate a mix of land uses that meet the needs of residents, businesses, and visitors with places to live, work, shop, be entertained and culturally engaged.
- LU-2 Promote objectives and development in special planning areas consistent with adopted specific plans, overlay districts, Master Plans and density bonus provisions.
- LU-3 Participate in coordinated local and regional land use planning activities.
- LU-4 Coordinate and integrate land use planning and transportation objectives.
- LU-5 Ensure that new development is compatible with existing development.
- CIR-1 Develop and maintain a roadway system that accommodates all users.
- CIR-2 Create a system of pedestrian, bicycle, and transit facilities that enables non-automotive accessibility and increases the health and livability of the community.
- CIR-4 Plan for the future of transportation to ensure accessibility for all, reduce the environmental impacts of Transportation, and improve the quality of life.
- RR-6 Provide the community with optimal air quality.

POLICIES

- LU-1.1 Support a full spectrum of conveniently located residential, commercial, industrial, public, and quasi-public uses that support business development, regional transportation objectives and the livability of residential neighborhoods.

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- LU-1.3 Maintain a supply of developable lands sufficient to meet desired levels of housing, jobs, economic, educational, and recreational needs of the city over the planning horizon.
- LU-1.4 Continue to support the development of a variety of housing types and densities that meet the needs of individuals and families, and offers residents of all income levels, age groups and special needs sufficient housing opportunities and choices. (Additional policies specifically related to Housing are included in the General Plan's Housing Element)
- LU-1.8 Recognize that the General Plan and Land Use Map may be amended in accordance with State law in order to ensure that there is an adequate supply of commercial, industrial, public facility, parks, residential, and other desired land uses to serve the City's needs.
- LU-3.1 Support regional efforts that promote higher densities and intensities near major transit and travel facilities, and reduce regional vehicle miles traveled by supporting active modes of transportation including walking, biking, and public transit.
- LU-3.2 Utilize planning tools and objectives that promote transit-oriented and mixed-use development objectives near future ACE and Valley Link Transit Facilities. Land use plans for these areas should complement transit facilities to accommodate transit oriented development (TOD) developments and/or park-and-ride facilities near ACE stations and future Valley Link station.
- LU-3.3 Integrate climate change and adaptation planning principles into future updates of the Zoning Code, and other related long-range utilities and facilities planning documents. (See the Safety Element for additional policies related to climate change and resiliency planning).
- LU-3.4 Promote logical City boundaries and work with surrounding jurisdictions to encourage complementary uses. Specifically, work with the City of Manteca and San Joaquin County to ensure development of complementary and compatible uses adjacent to Lathrop.
- LU-4.2 Emphasize efforts to reduce regional vehicle miles traveled (VMT) by supporting land use patterns and site designs that promote active modes of transportation, and public transit.
- LU-4.3 Encourage the development of new industrial and business park which facilitate efficient circulation patterns that reduce truck traffic near residential uses.
- LU-4.4 As the city grows, encourage and support the development of a transit system with regular service connecting destinations within the city, to ACE and Valley Link stations, and to adjacent jurisdictions.
- LU-5.1 Require new development to be compatible and complementary to existing development. Where appropriate and feasible, promote connections between neighborhoods and services and facilities.
- LU-5.2 Prohibit the establishment or encroachment of incompatible uses into industrial-designated lands. Examples include, but are not limited to, new residential uses in areas designated for industrial development, which may be subject to existing and future nuisance impacts associated with industrial operations and associated activities.

- LU-5.3 Require that new residential development be designed to protect residents from potential conflicts with adjacent land uses, and other features including rail corridors, and high-volume roadways.
- LU-5.4 In industrial areas located within 1,000 feet of existing and planned sensitive receptors, promote industrial uses that are environmentally sustainable with limited potential to create nuisances such as noise and odors.
- LU-5.5 Ensure that industrial development projects, including warehouse, distribution, logistics, and fulfillment projects, mitigate adverse impacts (including health risks and nuisances) to nearby residential land uses and other existing and planned sensitive receptors.
- CIR-1.2 Complete Streets. Consider all modes of travel in planning, design, and construction of all transportation projects to create safer, more livable, and more inviting environments for pedestrians, bicyclists, motorists and public transit users of all ages and capabilities.
- CIR-2.1 Bicycle and Pedestrian Networks. Establish a network of identified bicycle and pedestrian routes connecting residential areas with schools, recreation, shopping, and employment areas within the City.
- CIR-2.3 Safe Routes to School. Consider walking and bicycling school access as a priority over vehicular movements when any such conflicts occur.
- CIR-2.4 Transit Access. Provide safer, more convenient access to transit service including rail, bus, and paratransit.
- CIR-2.5 Amenities. To support bicycle, pedestrian, and transit usage, provide amenities including pedestrian-scale lighting, bicycle parking, shade trees and landscaping, and bus shelters and benches.
- CIR-4.1 Land Use Supporting Reduced VMT. Support land use with increased land use densities and mixed uses, consistent with the Land Use Element, to reduce vehicle miles traveled and promote the use of walking, biking, and transit.
- CIR-4.2 Demand Management. Encourage employers to provide programs for carpooling/transit/biking/walking, transit ridership subsidies, bicycle facilities, alternative work schedules, ridesharing, telecommuting, working at home, employee education, and preferential parking for carpools/vanpools.
- CIR-4.3 New Technologies. Monitor 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.
- CIR-4.4 Electric Vehicle Charging. Support the creation of electric vehicle charging stations at multifamily residential, commercial, government, and other employment and community destinations.
- RR-6.1 Regional Standards. Coordinate planning efforts with the San Joaquin Valley Air Pollution Control District (SJVAPCD), San Joaquin Council of Governments, and the California Air Resource Board to meet local and regional air quality standards and ensure attainment of established goals.

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- RR-6.2 Sensitive Receptors. Minimize the community's exposure to toxic and harmful air emissions and odors by requiring an adequate buffer or distance between residential and other sensitive receptors and industrial-type uses that typically generate air pollutants, toxic air contaminants, and/or obnoxious fumes or odors.
- RR-6.3 Construction Activities. Require new construction to minimize fugitive dust and construction vehicle emissions.
- RR-6.4 Development. Encourage the development of mixed-use residential opportunities and live-work environments within the City to lessen the impacts of traffic congestion on local air quality.
- RR-6.5 Appliances and Equipment. Require appliances and equipment, including wood-burning devices, in development projects to meet current standards for controlling air pollution, including particulate matter and toxic air contaminants.
- RR-6.6 Combustible Materials. Cooperate with the Air District to ensure that burning of any combustible material within the City is consistent with Air District regulations to minimize particulate air pollution.
- RR-6.7 Mitigation. Require the implementation of relevant mitigation measures for all future development upon identification of potential air quality impacts.
- RR-6.8 Local Reduction Targets. The City of Lathrop establishes the following per capita GHG reduction targets, in order to meet the requirements established by the state under AB 32 and SB 32, consistent with the CARB's 2017 Scoping Plan:
- A. 3.99 MT CO₂e per capita by 2030
 - B. 2.66 MT CO₂e per capita by 2040; and
 - C. 1.33 MT CO₂e per capita by 2050.
- RR-6.9 GHG Reduction. Consider, and implement as feasible, new policies and programs that will help to provide energy efficient alternatives to fossil fuel use and reduce consumption in order to reduce greenhouse gas emissions.
- RR-6.10 Public Engagement. Promote regional air quality programs to inform the public on regional air quality concerns and encourage the engagement of all Lathrop residents in future planning decisions related to air quality.

IMPLEMENTATION ACTIONS

- LU-3.b Work with adjacent jurisdictions to facilitate increased compatibility and access across barriers to travel such as discontinuous streets, bike lanes, sidewalks, and paths.
- LU-3.c Work with developers, reclamation districts and utility providers to create or expand linear parks, trails, and publicly-accessible greenways along levees, drainage and utility rights-of-way that provide opportunities for greenway connections and passive recreational opportunities.

- LU-5b Through the development review process, analyze land use compatibility and require adequate buffers and/or architectural enhancements to protect sensitive receptors from intrusion of development activities that may cause unwanted nuisances and health risks.
- LU-5c When industrial projects, including warehouse projects, fulfillment centers, and other projects that may generate high volumes of truck trips and/or air quality emissions are proposed within 1,000 feet of existing or planned residential uses or other sensitive receptors, the City shall require the preparation of a Health Risk Assessment (HRA) that meets the standards established by the Office of Environmental Health Hazard Assessment (OEHHA), and the San Joaquin Valley Air Pollution Control District (SJVAPCD). Projects shall not be approved until it can be demonstrated that the project would not result in an exceedance of the established thresholds of significance for public health risks at nearby sensitive receptors.
- LU-5d When industrial projects, including warehouse projects, fulfillment centers, and other projects that may generate high volumes of truck trips and/or air quality emissions are proposed within 1,000 feet of existing or planned residential uses or other sensitive receptors, the City shall require the implementation of best management practices (BMPs) to reduce pollution exposure to sensitive receptors, particularly diesel particulate matter (DPM). The appropriate BMPs shall be established on a case-by-case basis, and should consider the following tools, methods, and approaches:
- Creating physical, structural, and/or vegetative buffers that adequately prevent or substantially reduce pollutant dispersal between warehouses and any areas where sensitive receptors are likely to be present, such as homes, schools, daycare centers, hospitals, community centers, and parks.
 - Providing adequate areas for on-site parking, on-site queuing, and truck check-in that prevent trucks and other vehicles from parking or idling on public streets.
 - Placing facility entry and exit points from the public street away from sensitive receptors, e.g., placing these points on the north side of the facility if sensitive receptors are adjacent to the south side of the facility. Exceptions can be made for emergency vehicle access (EVA) points.
 - Locating warehouse dock doors and other onsite areas with significant truck traffic and noise away from sensitive receptors.
 - Screening dock doors and onsite areas with significant truck traffic and noise with physical, structural, and/or vegetative barriers that adequately prevent or substantially reduce pollutant dispersal from the facility towards sensitive receptors.
 - Posting signs clearly showing the designated entry and exit points from the public street for trucks and service vehicles.
 - Posting signs indicating that all parking and maintenance of trucks must be conducted within designated on-site areas and not within the surrounding community or public streets.

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LU-5e Update the Lathrop Municipal Code to include Good Neighbor Guidelines for Warehouse Distribution Facilities. The new Good Neighbor Guidelines should include:

- A. A definition of the type and size of facility that is subject to the Guidelines;
 - B. Standards to minimize exposure to diesel emissions to sensitive receptors that are situated in close proximity to the proposed facility;
 - C. Standards and practices that eliminate diesel trucks from unnecessarily traversing through residential neighborhoods;
 - D. Standards and practices that eliminate trucks from using residential areas and repairing vehicles on the streets;
 - E. Strategies to reduce and/or eliminate diesel idling within the facility's site;
- CIR-1a Review and revise roadway standards to establish complete streets standards addressing the following factors as applicable: number of travel lanes, lane width, medians, drainage control, shoulder width, parking lanes, bike lanes, fire and emergency response standards, curb and gutter design, landscaped strips, and sidewalk width.
- CIR-1b Require development projects to arrange streets in an interconnected pattern, so that pedestrians, bicyclists, and drivers are not forced onto arterial streets for inter- or intra-neighborhood travel. This approach will also increase the safety and efficiency of movement of emergency responders and reduce vehicle miles traveled within the community.
- CIR-1c Apply signals, roundabouts, traffic circles and other traffic management techniques appropriately at residential and collector street intersections with collector and arterial streets in order to allow bicyclists and pedestrians to travel more conveniently and more safely from one neighborhood to another.
- CIR-1d Use traffic calming tools to assist in implementing complete street principles; possible tools include roundabouts, raised intersections, curb extensions, reduced roadway width, and high visibility crosswalks.
- CIR-2a Create an active transportation plan supporting the development of bicycle and pedestrian networks across the City and funding applications for bicycle and pedestrian improvements.
- CIR-2b Add planned bicycle and pedestrian facilities in conjunction with road rehabilitation, reconstruction, or re-striping projects whenever feasible.
- CIR-2c Enhance sidewalks to create a high-quality pedestrian environment, including wider sidewalks and improved pedestrian crossings, landscaping, buffers between sidewalks and vehicle travel lanes, enhanced pedestrian lighting, wayfinding signage, shade trees, and canopies, increased availability of benches, and other features.
- CIR-2d Improve bicycle facilities to include attractive and secure bicycle parking, bicycle lanes, bike paths, and wayfinding signage along appropriate roadways.

- CIR-2e Encourage and support the enhancement of transit stops with high quality, well-maintained shelters, and provision of wayfinding signage and transit timetables.
- CIR-2f Provide access for bicycles and pedestrians at the ends of cul-de-sacs and through walls and berms, where right-of-way is available, to provide convenient access within and between neighborhoods and to encourage walking and bicycling to neighborhood destinations.
- CIR-2g Ensure that development and infrastructure projects are designed to provide pedestrian and bicycle access and leave no gaps in the bicycle and pedestrian networks.
- CIR-2h Require new development to provide bicycle parking and shower and locker facilities at commercial, business/professional and light industrial uses in accordance with the California Green Building Standards Code. Encourage existing uses to provide such facilities.
- CIR-2i Require new multifamily developments to provide bicycle parking facilities in accordance with the California Green Building Standards Code. Encourage existing multifamily developments to provide such facilities.
- CIR-2j Create an off-street shared-use path system for use by pedestrians and bicyclists for transportation and recreation.
- CIR-2k Create bicycle and pedestrian connections to adjacent jurisdictions via shared use paths, bikeways, and sidewalks.
- CIR-2l Create bicycle and pedestrian connections to the ACE station, planned Valley Link stations, and other transit stops.
- CIR-2m Encourage transit providers to improve passenger pick-up and drop-off areas at the ACE and planned Valley Link stations to provide more convenient access.
- CIR-2n Partner with neighboring jurisdictions and regional transit providers (including San Joaquin Regional Transit District, Manteca Transit, and Tracy TRACER Bus Services) to expand transit service between Lathrop and destinations in other jurisdictions.
- CIR-2o Coordinate with transit providers and encourage them to enhance transit amenities for safe and comfortable access to transit including waiting areas, seating, landscaping, lighting, shade and rain cover, trash receptacles, and passenger loading zones.
- CIR-4a Refine and update the City of Lathrop interim VMT thresholds and screening criteria to reflect the updated VMT analysis completed for the General Plan update if such updates are deemed necessary or warranted.

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- CIR-4b Evaluate the feasibility of a local or regional VMT impact fee program, bank, or exchange. Such an offset program, if determined feasible, would be administered by the City or a City-approved agency, and would offer demonstrated VMT reduction strategies through transportation demand management programs, impact fee programs, mitigation banks or exchange programs, in-lieu fee programs, or other land use project conditions that reduce VMT in a manner consistent with state guidance on VMT reduction. If, through on-site changes, a subject project cannot eliminate VMT impacts, the project could contribute on a pro-rata basis to a local or regional VMT reduction bank or exchange, as necessary, to reduce net VMT impacts.
- CIR-4c 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-4d Require development projects that employ 100 or more full-time equivalent employees to establish transportation demand management (TDM) programs consistent with San Joaquin Valley Air Pollution Control District requirements.
- CIR-4e Partner with SJCOG on the Dibs program, which is the regional smart travel program, including rideshare, transit, walking, and biking.
- CIR-4f As new transportation technologies and mobility services, including autonomous vehicles, electric vehicles, electric bicycles and scooters, and transportation network companies (e.g., Uber and Lyft) are implemented and used by the public, review and update City policies and plans to maximize the benefit to the public of such technologies and services without adversely affecting the City's transportation network. Updates to the City's policies and plans may cover topics such as electric vehicle charging stations, curb space management, changes in parking supply requirements, policies regarding electric scooter use, etc.
- CIR-4g Encourage open data sharing. Anonymized data can improve the City's decision-making and help to develop more informed policies and plans while preserving people's privacy.
- CIR-4i As part of the development of or participation in any ridesharing program, including for shared automated vehicle fleets, ensure that the program considers the safety needs of vulnerable populations and loading needs of seniors, families with children, and individuals with mobility impairments.
- CIR-4j As need for transit grows, review and consider alternatives to conventional bus systems, such as smaller shuttle buses (micro-transit), on-demand transit services, or transportation networking company services that connect neighborhood centers to local activity centers with greater cost efficiency.
- CIR-4k Require new development to incorporate electric vehicle charging in accordance with the California Green Building Standards Code. Encourage installation of electric vehicle charging stations at existing development.

- RR-6a Review development, infrastructure, and planning projects for consistency with SJVAPCD requirements during the CEQA review process. Require project applicants to prepare air quality analyses to address SJVAPCD and General Plan requirements, which include analysis and identification of:
- A. Air pollutant emissions associated with the project during construction, project operation, and cumulative conditions.
 - B. Potential exposure of sensitive receptors to toxic air contaminants.
 - C. Significant air quality impacts associated with the project for construction, project operation, and cumulative conditions.
 - D. Mitigation measures to reduce significant impacts to less than significant or the maximum extent feasible where impacts cannot be mitigated to less than significant.
- RR-6b Review all new industrial and commercial development projects for potential air quality impacts to residences and other sensitive receptors. Ensure that mitigation measures and best management practices are implemented to reduce significant emissions of criteria pollutants.
- RR-6c Work with SJCOG and the SJVAPCD to implement plans and programs aimed at improving regional air quality.
- RR-6d Continue to review development projects to ensure that all new public and private development complies with the California Code of Regulations (CCR), Title 24 standards as well as the energy efficiency standards established by the Lathrop Municipal Code.
- RR-6e Monitor GHG emissions generated by the community over time for consistency with the established GHG reduction targets, and update the City's community GHG Inventory every five years. In the event that the City determines that ongoing efforts to reduce GHG emissions are not on track to meet the City's adopted GHG reduction targets, the City shall establish and adopt new and/or revised GHG reductions measures that will effectively meet the established GHG reduction targets.
- RR-6f Continue the expansion of infrastructure to facilitate the use of City-owned low or zero emission vehicles such as electric vehicle charging facilities and conveniently located alternative fueling stations at key City facilities as operations necessitate and/or as funding becomes available.
- RR-6g Evaluate and consider multi-modal transportation benefits to all City employees, such as free or low-cost monthly transit passes. Encourage employer participation in similar programs. Encourage new transit/shuttle services and use.
- RR-6h Encourage community car-sharing and carpooling.
- RR-6i Support the establishment and expansion of a regional network of electric vehicle charging stations and encourage the expanded use of electric vehicles.

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- RR-6j Establish and adopt standards and requirements for electric vehicle parking, including minimum requirements for the installation of electric vehicle charging stations in new multi-family residential and commercial, office, and light industrial development.
- RR-6k Consider instituting a Green Building Program to reflect best practices, such as encouraging the use of cement substitutes and recycled building materials for new construction.
- RR-6l Continue cooperating with the SJVAPCD by requiring a dust management plan to prevent fugitive dust from leaving the property boundaries and causing a public nuisance or a violation of an ambient air standard prior to construction and grading.

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

The SJVAPCD has identified local community risks from air pollutants to 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 diesel backup generators, which are subject to SJVAPCD permit 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.

Health risks associated with TACs are most pronounced in the areas adjacent to freeway segments. Regardless of the existing health risks associated with TACs, the SJVAPCD CEQA Guidelines provide recommendations for all communities to ensure reduced health risks associated with TACs. The proposed General Plan includes policies that are intended to minimize exposure of TACs to sensitive receptors (see below).

The *Air Quality and Land Use Handbook: A Community Health Perspective*, adopted by CARB, May 2005 was prepared to address the siting of sensitive land uses in close proximity to sources of TAC emissions that include the following sources within the City:

- Within 500 feet of Interstate 5 and Highway 120;
- Within 300 feet of dry cleaning operations that use perchloroethylene; and
- Within 50 feet of a typical gas station.

The proposed General Plan includes policies and programs aimed to limit exposure to TAC and PM concentrations within the city. These policies and actions are included within various elements of the General Plan. For example, Policy RR-6.2 requires that community exposure to toxic and harmful emissions and odors is minimized by required adequate buffer or distance between residential or other sensitive receptors and industrial, manufacturing, and processing facilities, highways and rail lines, and similar uses that typically generate air pollutants, toxic air contaminants, and/or obnoxious fumes or odors. Policy RR-6.3 requires new construction to minimize fugitive dust and construction vehicle emissions. Furthermore, Implementing Measure RC-6a requires that planning projects are reviewed for their consistency with SJVAPCD requirements during the CEQA review process. Additionally, Implementing Action RR-6b requires a review of all new industrial and commercial development projects for potential air quality impacts to residences and other sensitive receptors, and that mitigation measures and best management practices are implemented to reduce significant emissions of criteria pollutants.

3.3 AIR QUALITY

Individual projects will be required to provide their own environmental assessments to determine health impacts from the construction and operation of their projects. In the event that future individual projects may result in exposure to TACs by sensitive receptors, these future projects would be required to implement mitigation measures to reduce the impact to a less than significant level, consistent with SJVAPCD requirements.

In addition, it should also be noted that the Omnibus Low-NOx Rule was approved by CARB August 28, 2020, which will require heavy-duty truck engine NOx emissions to be cut to approximately 75% below current standards beginning in 2024, and 90% below current standards in 2027. The rule also places nine additional regulatory requirements on new heavy-duty truck and engines. Those additional requirements include a 50% reduction in particulate matter emissions, stringent new low-load and idle standards, a new in-use testing protocol, extended deterioration requirements, a new California-only credit program, and extended mandatory warranty requirements.

The City of Lathrop has been thoughtful throughout the process of updating the proposed Land Use Map, and determining the appropriate location for future light industrial development, which has the potential to lead to increases in truck traffic in Lathrop. For example, the proposed Land Use Map identifies new areas for light industrial development north of Dos Reis Road, west of I-5. This area is sparsely populated and includes very few sensitive receptors. Lands to the north and west of this area consist of agricultural lands outside of the City limits. This area is bounded to the east by I-5. Existing and planned sensitive receptors are located to the south of this area, south of Dos Reis Road, including Lathrop High School and existing and planned residences.

In order to ensure that newly proposed light industrial development does not result in excessive exposure of TACs to sensitive receptors, the General Plan includes numerous policies and actions that would ensure that future projects undertake rigorous health risk assessments in order to demonstrate that no applicable thresholds of significance are exceeded. For example, Action LU-5c requires industrial and/or warehouse projects proposed within 1,000 feet of existing or planned sensitive receptors to prepare a health risk assessment (HRA) that meets the standards established by the OEHHA and the SJVAPCD, and states that projects shall not be approved until it can be demonstrated that the project would not result in an exceedance of an established threshold for public health risks.

Additionally, Action LU-5.d requires new industrial and/or warehouse projects to implement a range of best management practices (BMPs) to reduce pollution exposure to sensitive receptors. Sample BMPs include, but are not limited to, screening and vegetative buffers, measures to reduce truck idling, placing ingress/egress points away from public streets and receptors, screening dock doors, and orienting buildings to provide screening between emissions sources and sensitive receptors.

The General Plan also requires the City to update the Central Lathrop Specific Plan to establish a circulation network that keeps future truck trips as far from existing and planned sensitive receptors as feasible (Action LU-5.f).

Compliance with the applicable policies and programs in the proposed General Plan as well the applicable CARB and SJVAPCD rules and regulations, would minimize the potential exposure of sensitive receptors to substantial concentrations of TACs and PM_{2.5} within the city.

Nevertheless, since the proposed General Plan is anticipated to generate new areas of light industrial development that could generate high levels of heavy-duty truck traffic, the road segment with the highest net increase in daily heavy-duty truck trips at full General Plan buildout was identified, along with its adjacent and nearby roadways, as having the most potential for impacting sensitive receptors. Specifically, the road segment with the highest potential net increase in daily heavy-duty truck trips at full General Plan buildout was identified at Spartan Way between I-5 and Golden Valley Parkway⁷ (Fehr & Peers, 2022). According to Fehr & Peers, Spartan Way between I-5 and Golden Valley Parkway road segment could generate approximately 7,742 net new heavy-duty truck trips upon full General Plan buildout. Therefore, new heavy-duty truck traffic along this road segment, combined with the heavy-duty truck traffic anticipated along adjacent and other nearby roadway segments associated with the new areas for light industrial development north of Dos Reis Road, west of I-5 (i.e. I-5, Golden Valley Parkway, Manthey Road, Dos Reis Road, De Lima Road, etc.), were analyzed for their total potential localized TAC impacts at full buildout.

Disclosure of the results of this analysis is provided below (see Table 3.3-10). The results of this analysis provide a summary of the overall anticipated heavy-duty truck diesel particulate matter (DPM) TAC impacts from full buildout of the new light industrial area located north of Dos Reis Road and west of I-5. For full detail on the results of this analysis, see the Health Risk Assessment provided in Appendix B.

SCOPE OF RISK ASSESSMENT

Preparation of risk assessments is a three-step process. The first step is to identify potential contaminants that may lead to public health risks. The second step is to assess the magnitude of contaminants that may reach the public (exposure assessment). The last step is to calculate the magnitude of the health risk as a result of exposure to harmful contaminants on the basis of the toxicology of the contaminants.

The Office of Environmental Health Hazard Assessment (OEHHA), and the SJVAPCD provide guidance on the procedures that should be used, including, toxicological data for individual contaminants. While this risk assessment uses certain procedures and data from these Guidelines, this assessment is not intended to satisfy the reporting requirements under AB-2588 “Air Toxics” Hot Spots program.

⁷ Note this analysis was included as a case study of potential Health Impacts related to heavy duty truck trips, and assumed a worse-case-scenario if all routes were unrestricted for heavy trucks. It should be noted that trucks within Lathrop are restricted in some areas of the city, and new future truck routes and circulation improvements that would reduce air toxics at sensitive receptors have been addressed via new policies and actions in the Updated General Plan. However, out of an abundance of caution, these new truck routes and restrictions were not included as part of this worst-case-scenario HRA analysis.

3.3 AIR QUALITY

The health risks that are evaluated in this study include:

- Residential Cancer Risk (70-year exposure; start at third trimester); and
- Acute and Chronic Hazard Indices.

The 70-year risk applies to residential areas where exposure may potentially occur 24 hours/day, 365 days/year. Non-cancer risks can be described as acute (short-term, exposure) or chronic health impacts.

SIGNIFICANCE CRITERIA

The following significance criteria shown in Table 3.3-9, based on guidance from the SJVAPCD, are used in this report to assess the significance of public health risks.

TABLE 3.3-9: THRESHOLDS OF SIGNIFICANCE FOR PUBLIC HEALTH RISKS

<i>RISK METRIC</i>	<i>SIGNIFICANCE THRESHOLD</i>
Residential Cancer Risk	20 per million
Chronic and Acute non-cancer hazard Indices	Non-cancer health hazard exposure index of 1.0

SOURCE: SJVAPCD, 2015.

As shown in Table 3.3-9, a project that contributes a cancer risk in excess of 20 new cases in a population of one million persons at identified residential receptors, or a non-cancer hazard index of greater than or equal to 1.0 would be considered to have a significant project-level impact.

EMISSION SOURCES AND EXPOSURE

The source of TACs from the proposed Project is DPM from mobile emissions associated with the proposed net new heavy-duty trucks traffic. Based on numerous studies by the CARB, DPM represents the largest single contributor to public health risks. Additionally, in its comprehensive assessment of diesel exhaust, OEHHA analyzed more than 30 studies of people who worked around diesel equipment, including truck drivers, railroad workers, and equipment operators. The studies showed these workers were more likely to develop lung cancer than workers who were not exposed to diesel emissions. These studies provide strong evidence that long-term occupational exposure to diesel exhaust increases the risk of lung cancer. Exposure to diesel exhaust can have immediate health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. In studies with human volunteers, diesel exhaust particles made people with allergies more susceptible to the materials to which they are allergic, such as dust and pollen. Exposure to diesel exhaust also causes inflammation in the lungs, which may aggravate chronic respiratory symptoms and increase the frequency or intensity of asthma attacks.

Table 3.3-10 displays the residential cancer risk and acute and chronic incidence rate results at the receptors that were shown to bear the highest TAC risks (including the cumulative impacts associated with the combined impact of proposed segments and interacting segments together). The results of the risk analysis indicate that cancer and non-cancer risks vary depending on the exposure scenario and location. As would be expected, sensitive receptors nearest the roadway

segments where truck traffic would be greatest have the greatest exposure, and the associated risks are considerably lower as the distance from the high truck traffic roadway segments increases. The northeastern corner of the proposed Residential Mixed Use land use area located at the southwest corner of Dos Reis Road and Golden Valley Parkway was identified as having the highest TAC risk (i.e. 36.96 per million persons residential cancer risk over a 70-year exposure). Other areas where residential cancer risk exceeded the residential cancer risk threshold of 20 per million persons over a 70-year exposure include:

- The far northeastern corner of the residential community located at the southwestern corner of Spartan Way and Golden Valley Parkway;
- Residences located at the intersection of Manthey Road and De Lima Road;

Residences located along the far side of I-5 (along South Harlan Road), north of Shilling Avenue and south of Stonebridge lane. Table 3.3-10 provided the maximum health risks associated with the road segments at full buildout of the General Plan. As shown, the highest residential cancer risk would exceed the applicable significance threshold (at some locations). See Appendix B for further detail.

TABLE 3.3-10: SUMMARY OF MAXIMUM HEALTH RISKS ASSOCIATED WITH THE NET NEW HEAVY-DUTY TRUCK TRAFFIC GENERATED FROM THE LIGHT INDUSTRIAL DEVELOPMENT NORTH OF DOS REIS ROAD, WEST OF I-5.

<i>RISK METRIC</i>	<i>MAXIMUM RISK (PER MILLION PERSONS)</i>	<i>SIGNIFICANCE THRESHOLD</i>	<i>IS THRESHOLD EXCEEDED?</i>
Residential Cancer Risk (70-year exposure)	36.96	20 per million	Yes
Chronic (non-cancer)	<0.01	Hazard Index ≥1	No
Acute (non-cancer)	<0.01	Hazard Index ≥1	No

SOURCES: AERMOD (LAKES ENVIRONMENTAL SOFTWARE, 2021); AND HARP-2 AIR DISPERSION AND RISK TOOL.

It should be noted that the results as provided in Table 3.3-10 may be an overestimate of actual TAC risks, given that the modeling does not account for a transition of the heavy-duty truck fleet from diesel truck to electric trucks over the 70-year modeled timeframe. Nevertheless, the results in Table 3.3-10 provide a conservative analysis of the risks associated with heavy-duty truck-related DPM on nearby sensitive receptors over this time period.

Furthermore, individual projects will be required to provide their own environmental assessments to determine health impacts from the construction and operation of their projects. In the event that future individual projects may result in exposure to TACs by sensitive receptors, these future projects would be required to analyze TAC impacts on an individual project level, per SJVAPCD requirements, and in accordance with California Office of Environmental Health Hazard Assessment (OEHHA) guidance.

CONCLUSION

As shown in Table 3.3-10, maximum health risks associated with the combined impact heavy-duty truck traffic from new areas for light industrial development north of Dos Reis Road, west of I-5 that could occur with implementation of the proposed General Plan, are shown to exceed the applicable significance thresholds at some sensitive receptors. However, the proposed General Plan also includes development of industrial projects that whose specific characteristics are not known at this time. Individual projects will be required to provide their own environmental assessments to determine health impacts from the construction and operation of their projects. In the event that future individual projects may result in exposure to TACs by sensitive receptors, these future projects would be required to analyze TAC impacts on an individual project level, per SJVAPCD requirements, and in accordance with California Office of Environmental Health Hazard Assessment (OEHHA) guidance. Therefore, since the full nature of the impacts of proposed Project-generated TAC impacts is not fully known at this time, this is a potentially significant impact and is considered **significant and unavoidable**.

GENERAL PLAN GOALS, POLICIES, AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

GOALS

- LU-3 Participate in coordinated local and regional land use planning activities.
- LU-4 Coordinate and integrate land use planning and transportation objectives.
- LU-5 Ensure that new development is compatible with existing development.
- CIR-2 Create a system of pedestrian, bicycle, and transit facilities that enables non-automotive accessibility and increases the health and livability of the community.
- CIR-4 Plan for the future of transportation to ensure accessibility for all, reduce the environmental impacts of Transportation, and improve the quality of life.
- RR-6 Provide the community with optimal air quality.

POLICIES

- LU-1.1 Support a full spectrum of conveniently located residential, commercial, industrial, public, and quasi-public uses that support business development, regional transportation objectives and the livability of residential neighborhoods.
- LU-3.3 Integrate climate change and adaptation planning principles into future updates of the Zoning Code, and other related long-range utilities and facilities planning documents. (See the Safety Element for additional policies related to climate change and resiliency planning).
- LU-3.4 Promote logical City boundaries and work with surrounding jurisdictions to encourage complementary uses. Specifically, work with the City of Manteca and San Joaquin County to ensure development of complementary and compatible uses adjacent to Lathrop.
- LU-4.2 Emphasize efforts to reduce regional vehicle miles traveled (VMT) by supporting land use patterns and site designs that promote active modes of transportation, and public transit.
- LU-4.3 Encourage the development of new industrial and business park which facilitate efficient circulation patterns that reduce truck traffic near residential uses.
- LU-5.1 Require new development to be compatible and complementary to existing development. Where appropriate and feasible, promote connections between neighborhoods and services and facilities.
- LU-5.4 In industrial areas located within 1,000 feet of existing and planned sensitive receptors, promote industrial uses that are environmentally sustainable with limited potential to create nuisances such as noise and odors.
- LU-5.5 Ensure that industrial development projects, including warehouse, distribution, logistics, and fulfillment projects, mitigate adverse impacts (including health risks and nuisances) to nearby residential land uses and other existing and planned sensitive receptors.
- CIR-1.2 Complete Streets. Consider all modes of travel in planning, design, and construction of all transportation projects to create safer, more livable, and more inviting environments for pedestrians, bicyclists, motorists and public transit users of all ages and capabilities.
- CIR-2.1 Bicycle and Pedestrian Networks. Establish a network of identified bicycle and pedestrian routes connecting residential areas with schools, recreation, shopping, and employment areas within the City.
- CIR-2.3 Safe Routes to School. Consider walking and bicycling school access as a priority over vehicular movements when any such conflicts occur.
- CIR-2.4 Transit Access. Provide safer, more convenient access to transit service including rail, bus, and paratransit.
- CIR-2.5 Amenities. To support bicycle, pedestrian, and transit usage, provide amenities including pedestrian-scale lighting, bicycle parking, shade trees and landscaping, and bus shelters and benches.

3.3 AIR QUALITY

- CIR-4.1 Land Use Supporting Reduced VMT. Support land use with increased land use densities and mixed uses, consistent with the Land Use Element, to reduce vehicle miles traveled and promote the use of walking, biking, and transit.
- CIR-4.2 Demand Management. Encourage employers to provide programs for carpooling/transit/biking/walking, transit ridership subsidies, bicycle facilities, alternative work schedules, ridesharing, telecommuting, working at home, employee education, and preferential parking for carpools/vanpools.
- CIR-4.3 New Technologies. Monitor 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.
- CIR-4.4 Electric Vehicle Charging. Support the creation of electric vehicle charging stations at multifamily residential, commercial, government, and other employment and community destinations.
- RR-6.1 Regional Standards. Coordinate planning efforts with the San Joaquin Valley Air Pollution Control District (SJVAPCD), San Joaquin Council of Governments, and the California Air Resource Board to meet local and regional air quality standards and ensure attainment of established goals.
- R-6.2 Sensitive Receptors. Minimize the community's exposure to toxic and harmful air emissions and odors by requiring an adequate buffer or distance between residential and other sensitive receptors and industrial-type uses that typically generate air pollutants, toxic air contaminants, and/or obnoxious fumes or odors.
- RR-6.3 Construction Activities. Require new construction to minimize fugitive dust and construction vehicle emissions.
- RR-6.4 Development. Encourage the development of mixed-use residential opportunities and live-work environments within the City to lessen the impacts of traffic congestion on local air quality.
- RR-6.5 Appliances and Equipment. Require appliances and equipment, including wood-burning devices, in development projects to meet current standards for controlling air pollution, including particulate matter and toxic air contaminants.
- RR-6.6 Combustible Materials. Cooperate with the Air District to ensure that burning of any combustible material within the City is consistent with Air District regulations to minimize particulate air pollution.
- RR-6.7 Mitigation. Require the implementation of relevant mitigation measures for all future development upon identification of potential air quality impacts.
- RR-6.8 Local Reduction Targets. The City of Lathrop establishes the following per capita GHG reduction targets, in order to meet the requirements established by the state under AB 32 and SB 32, consistent with the CARB's 2017 Scoping Plan:
- A. 3.99 MT CO₂e per capita by 2030

- B. 2.66 MT CO₂e per capita by 2040; and
- C. 1.33 MT CO₂e per capita by 2050.

RR-6.9 GHG Reduction. Consider, and implement as feasible, new policies and programs that will help to provide energy efficient alternatives to fossil fuel use and reduce consumption in order to reduce greenhouse gas emissions.

RR-6.10 Public Engagement. Promote regional air quality programs to inform the public on regional air quality concerns and encourage the engagement of all Lathrop residents in future planning decisions related to air quality.

IMPLEMENTATION ACTIONS

LU-5b Through the development review process, analyze land use compatibility and require adequate buffers and/or architectural enhancements to protect sensitive receptors from intrusion of development activities that may cause unwanted nuisances and health risks.

LU-5c When industrial projects, including warehouse projects, fulfillment centers, and other projects that may generate high volumes of truck trips and/or air quality emissions are proposed within 1,000 feet of existing or planned residential uses or other sensitive receptors, the City shall require the preparation of a Health Risk Assessment (HRA) that meets the standards established by the Office of Environmental Health Hazard Assessment (OEHHA), and the San Joaquin Valley Air Pollution Control District (SJVAPCD). Projects shall not be approved until it can be demonstrated that the project would not result in an exceedance of the established thresholds of significance for public health risks at nearby sensitive receptors.

LU-5d When industrial projects, including warehouse projects, fulfillment centers, and other projects that may generate high volumes of truck trips and/or air quality emissions are proposed within 1,000 feet of existing or planned residential uses or other sensitive receptors, the City shall require the implementation of best management practices (BMPs) to reduce pollution exposure to sensitive receptors, particularly diesel particulate matter (DPM). The appropriate BMPs shall be established on a case-by-case basis, and should consider the following tools, methods, and approaches:

- Creating physical, structural, and/or vegetative buffers that adequately prevent or substantially reduce pollutant dispersal between warehouses and any areas where sensitive receptors are likely to be present, such as homes, schools, daycare centers, hospitals, community centers, and parks.
- Providing adequate areas for on-site parking, on-site queuing, and truck check-in that prevent trucks and other vehicles from parking or idling on public streets.
- Placing facility entry and exit points from the public street away from sensitive receptors, e.g., placing these points on the north side of the facility if sensitive receptors are adjacent to the south side of the facility. Exceptions can be made for emergency vehicle access (EVA) points.

3.3 AIR QUALITY

- Locating warehouse dock doors and other onsite areas with significant truck traffic and noise away from sensitive receptors.
- Screening dock doors and onsite areas with significant truck traffic and noise with physical, structural, and/or vegetative barriers that adequately prevent or substantially reduce pollutant dispersal from the facility towards sensitive receptors.
- Posting signs clearly showing the designated entry and exit points from the public street for trucks and service vehicles.
- Posting signs indicating that all parking and maintenance of trucks must be conducted within designated on-site areas and not within the surrounding community or public streets.

LU-5e Update the Lathrop Municipal Code to include Good Neighbor Guidelines for Warehouse Distribution Facilities. The new Good Neighbor Guidelines should include:

- A. A definition of the type and size of facility that is subject to the Guidelines;
- B. Standards to minimize exposure to diesel emissions to sensitive receptors that are situated in close proximity to the proposed facility;
- C. Standards and practices that eliminate diesel trucks from unnecessarily traversing through residential neighborhoods;
- D. Standards and practices that eliminate trucks from using residential areas and repairing vehicles on the streets;
- E. Strategies to reduce and/or eliminate diesel idling within the facility's site;

CIR-1b Require development projects to arrange streets in an interconnected pattern, so that pedestrians, bicyclists, and drivers are not forced onto arterial streets for inter- or intra-neighborhood travel. This approach will also increase the safety and efficiency of movement of emergency responders and reduce vehicle miles traveled within the community.

CIR-4a Refine and update the City of Lathrop interim VMT thresholds and screening criteria to reflect the updated VMT analysis completed for the General Plan update if such updates are deemed necessary or warranted.

CIR-4b Evaluate the feasibility of a local or regional VMT impact fee program, bank, or exchange. Such an offset program, if determined feasible, would be administered by the City or a City-approved agency, and would offer demonstrated VMT reduction strategies through transportation demand management programs, impact fee programs, mitigation banks or exchange programs, in-lieu fee programs, or other land use project conditions that reduce VMT in a manner consistent with state guidance on VMT reduction. If, through on-site changes, a subject project cannot eliminate VMT impacts, the project could contribute on a pro-rata basis to a local or regional VMT reduction bank or exchange, as necessary, to reduce net VMT impacts.

- CIR-4c 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-4d Require development projects that employ 100 or more full-time equivalent employees to establish transportation demand management (TDM) programs consistent with San Joaquin Valley Air Pollution Control District requirements.
- RR-6a Review development, infrastructure, and planning projects for consistency with SJVAPCD requirements during the CEQA review process. Require project applicants to prepare air quality analyses to address SJVAPCD and General Plan requirements, which include analysis and identification of:
- A. Air pollutant emissions associated with the project during construction, project operation, and cumulative conditions.
 - B. Potential exposure of sensitive receptors to toxic air contaminants.
 - C. Significant air quality impacts associated with the project for construction, project operation, and cumulative conditions.
 - D. Mitigation measures to reduce significant impacts to less than significant or the maximum extent feasible where impacts cannot be mitigated to less than significant.
- RR-6b Review all new industrial and commercial development projects for potential air quality impacts to residences and other sensitive receptors. Ensure that mitigation measures and best management practices are implemented to reduce significant emissions of criteria pollutants.
- RR-6c Work with SJCOG and the SJVAPCD to implement plans and programs aimed at improving regional air quality.
- RR-6d Continue to review development projects to ensure that all new public and private development complies with the California Code of Regulations (CCR), Title 24 standards as well as the energy efficiency standards established by the Lathrop Municipal Code.
- RR-6e Monitor GHG emissions generated by the community over time for consistency with the established GHG reduction targets, and update the City's community GHG Inventory every five years. In the event that the City determines that ongoing efforts to reduce GHG emissions are not on track to meet the City's adopted GHG reduction targets, the City shall establish and adopt new and/or revised GHG reductions measures that will effectively meet the established GHG reduction targets.
- RR-6f Continue the expansion of infrastructure to facilitate the use of City-owned low or zero emission vehicles such as electric vehicle charging facilities and conveniently located alternative fueling stations at key City facilities as operations necessitate and/or as funding becomes available.

- RR-6g Evaluate and consider multi-modal transportation benefits to all City employees, such as free or low-cost monthly transit passes. Encourage employer participation in similar programs. Encourage new transit/shuttle services and use.
- RR-6h Encourage community car-sharing and carpooling.
- RR-6i Support the establishment and expansion of a regional network of electric vehicle charging stations and encourage the expanded use of electric vehicles.
- RR-6j Establish and adopt standards and requirements for electric vehicle parking, including minimum requirements for the installation of electric vehicle charging stations in new multi-family residential and commercial, office, and light industrial development.
- RR-6k Consider instituting a Green Building Program to reflect best practices, such as encouraging the use of cement substitutes and recycled building materials for new construction.
- RR-6l Continue cooperating with the SJVAPCD by requiring a dust management plan to prevent fugitive dust from leaving the property boundaries and causing a public nuisance or a violation of an ambient air standard prior to construction and grading.

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)

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.

With respect to other emissions, future development under the proposed General Plan would be required to comply with all applicable SJVAPCD rules and regulations, and the proposed General Plan policies and actions. The proposed projects that could generate odor impacts on sensitive receptors are required to undergo an analysis consistent with the SJVAPCD's GAMAQI.

The proposed General Plan does not propose any specific development projects, but does identify areas for public and quasi-public facilities that could include expanded wastewater treatment facilities, composting 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 also 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.

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. For example, the proposed General Plan includes policies and programs that would limit exposure to TAC and PM concentrations within the city. These policies and actions are included within various elements of the General Plan. For example, Policy RR-6.2 requires that community exposure to toxic and harmful emissions and odors is minimized by required adequate buffer or distance between residential or other sensitive receptors and industrial, manufacturing, and processing facilities, highways and rail lines, and similar uses that typically generate air pollutants, toxic air contaminants, and/or obnoxious fumes or odors. Policy RR-6.3 requires new construction to minimize fugitive dust and construction vehicle emissions. Furthermore, Implementing Measure RC-6a requires that planning projects are reviewed for their consistency with SJVAPCD requirements during the CEQA review process. Additionally, Implementing Measure RR-6b requires a review of all new industrial and commercial development projects for potential air quality impacts to residences and other sensitive receptors, and that mitigation measures and best management practices are implemented to reduce significant emissions of criteria pollutants.

Therefore, implementation of the proposed General Plan would have a **less than significant** impact relative to this topic.

GENERAL PLAN GOALS, POLICIES, AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

GOALS

- LU-5 Ensure that new development is compatible with existing development.
- CIR-4 Plan for the future of transportation to ensure accessibility for all, reduce the environmental impacts of Transportation, and improve the quality of life.
- RR-6 Provide the community with optimal air quality.

POLICIES

- LU-3.4 Promote logical City boundaries and work with surrounding jurisdictions to encourage complementary uses. Specifically, work with the City of Manteca and San Joaquin County to ensure development of complementary and compatible uses adjacent to Lathrop.
- LU-4.2 Emphasize efforts to reduce regional vehicle miles traveled (VMT) by supporting land use patterns and site designs that promote active modes of transportation, and public transit.
- LU-4.3 Encourage the development of new industrial and business park which facilitate efficient circulation patterns that reduce truck traffic near residential uses.
- LU-5.1 Require new development to be compatible and complementary to existing development. Where appropriate and feasible, promote connections between neighborhoods and services and facilities.
- LU-5.4 In industrial areas located within 1,000 feet of existing and planned sensitive receptors, promote industrial uses that are environmentally sustainable with limited potential to create nuisances such as noise and odors.

3.3 AIR QUALITY

- LU-5.5 Ensure that industrial development projects, including warehouse, distribution, logistics, and fulfillment projects, mitigate adverse impacts (including health risks and nuisances) to nearby residential land uses and other existing and planned sensitive receptors.
- CIR-4.1 Land Use Supporting Reduced VMT. Support land use with increased land use densities and mixed uses, consistent with the Land Use Element, to reduce vehicle miles traveled and promote the use of walking, biking, and transit.
- CIR-4.4 Electric Vehicle Charging. Support the creation of electric vehicle charging stations at multifamily residential, commercial, government, and other employment and community destinations.
- RR-6.1 Regional Standards. Coordinate planning efforts with the San Joaquin Valley Air Pollution Control District (SJVAPCD), San Joaquin Council of Governments, and the California Air Resource Board to meet local and regional air quality standards and ensure attainment of established goals.
- RR-6.2 Sensitive Receptors. Minimize the community's exposure to toxic and harmful air emissions and odors by requiring an adequate buffer or distance between residential and other sensitive receptors and industrial-type uses that typically generate air pollutants, toxic air contaminants, and/or obnoxious fumes or odors.
- RR-6.3 Construction Activities. Require new construction to minimize fugitive dust and construction vehicle emissions.
- RR-6.4 Development. Encourage the development of mixed-use residential opportunities and live-work environments within the City to lessen the impacts of traffic congestion on local air quality.
- RR-6.5 Appliances and Equipment. Require appliances and equipment, including wood-burning devices, in development projects to meet current standards for controlling air pollution, including particulate matter and toxic air contaminants.
- RR-6.6 Combustible Materials. Cooperate with the Air District to ensure that burning of any combustible material within the City is consistent with Air District regulations to minimize particulate air pollution.
- RR-6.7 Mitigation. Require the implementation of relevant mitigation measures for all future development upon identification of potential air quality impacts.
- RR-6.8 Local Reduction Targets. The City of Lathrop establishes the following per capita GHG reduction targets, in order to meet the requirements established by the state under AB 32 and SB 32, consistent with the CARB's 2017 Scoping Plan:
- A. 3.99 MT CO₂e per capita by 2030
 - B. 2.66 MT CO₂e per capita by 2040; and
 - C. 1.33 MT CO₂e per capita by 2050.

RR-6.9 GHG Reduction. Consider, and implement as feasible, new policies and programs that will help to provide energy efficient alternatives to fossil fuel use and reduce consumption in order to reduce greenhouse gas emissions.

RR-6.10 Public Engagement. Promote regional air quality programs to inform the public on regional air quality concerns and encourage the engagement of all Lathrop residents in future planning decisions related to air quality.

IMPLEMENTATION ACTIONS

LU-5b Through the development review process, analyze land use compatibility and require adequate buffers and/or architectural enhancements to protect sensitive receptors from intrusion of development activities that may cause unwanted nuisances and health risks.

LU-5c When industrial projects, including warehouse projects, fulfillment centers, and other projects that may generate high volumes of truck trips and/or air quality emissions are proposed within 1,000 feet of existing or planned residential uses or other sensitive receptors, the City shall require the preparation of a Health Risk Assessment (HRA) that meets the standards established by the Office of Environmental Health Hazard Assessment (OEHHA), and the San Joaquin Valley Air Pollution Control District (SJVAPCD). Projects shall not be approved until it can be demonstrated that the project would not result in an exceedance of the established thresholds of significance for public health risks at nearby sensitive receptors.

LU-5d When industrial projects, including warehouse projects, fulfillment centers, and other projects that may generate high volumes of truck trips and/or air quality emissions are proposed within 1,000 feet of existing or planned residential uses or other sensitive receptors, the City shall require the implementation of best management practices (BMPs) to reduce pollution exposure to sensitive receptors, particularly diesel particulate matter (DPM). The appropriate BMPs shall be established on a case-by-case basis, and should consider the following tools, methods, and approaches:

- Creating physical, structural, and/or vegetative buffers that adequately prevent or substantially reduce pollutant dispersal between warehouses and any areas where sensitive receptors are likely to be present, such as homes, schools, daycare centers, hospitals, community centers, and parks.
- Providing adequate areas for on-site parking, on-site queuing, and truck check-in that prevent trucks and other vehicles from parking or idling on public streets.
- Placing facility entry and exit points from the public street away from sensitive receptors, e.g., placing these points on the north side of the facility if sensitive receptors are adjacent to the south side of the facility. Exceptions can be made for emergency vehicle access (EVA) points.
- Locating warehouse dock doors and other onsite areas with significant truck traffic and noise away from sensitive receptors.

3.3 AIR QUALITY

- Screening dock doors and onsite areas with significant truck traffic and noise with physical, structural, and/or vegetative barriers that adequately prevent or substantially reduce pollutant dispersal from the facility towards sensitive receptors.
- Posting signs clearly showing the designated entry and exit points from the public street for trucks and service vehicles.
- Posting signs indicating that all parking and maintenance of trucks must be conducted within designated on-site areas and not within the surrounding community or public streets.

LU-5e Update the Lathrop Municipal Code to include Good Neighbor Guidelines for Warehouse Distribution Facilities. The new Good Neighbor Guidelines should include:

- a. A definition of the type and size of facility that is subject to the Guidelines;
- b. Standards to minimize exposure to diesel emissions to sensitive receptors that are situated in close proximity to the proposed facility;
- c. Standards and practices that eliminate diesel trucks from unnecessarily traversing through residential neighborhoods;
- d. Standards and practices that eliminate trucks from using residential areas and repairing vehicles on the streets;
- e. Strategies to reduce and/or eliminate diesel idling within the facility's site;

RR-6a Review development, infrastructure, and planning projects for consistency with SJVAPCD requirements during the CEQA review process. Require project applicants to prepare air quality analyses to address SJVAPCD and General Plan requirements, which include analysis and identification of:

- A. Air pollutant emissions associated with the project during construction, project operation, and cumulative conditions.
- B. Potential exposure of sensitive receptors to toxic air contaminants.
- C. Significant air quality impacts associated with the project for construction, project operation, and cumulative conditions.
- D. Mitigation measures to reduce significant impacts to less than significant or the maximum extent feasible where impacts cannot be mitigated to less than significant.

RR-6b Review all new industrial and commercial development projects for potential air quality impacts to residences and other sensitive receptors. Ensure that mitigation measures and best management practices are implemented to reduce significant emissions of criteria pollutants.

-
- RR-6c Work with SJCOG and the SJVAPCD to implement plans and programs aimed at improving regional air quality.
- RR-6l Continue cooperating with the SJVAPCD by requiring a dust management plan to prevent fugitive dust from leaving the property boundaries and causing a public nuisance or a violation of an ambient air standard prior to construction and grading.

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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 Lathrop. 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.

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 (CNDDDB).

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);
- Candidates for listing under the Federal Endangered Species Act (61 FR 7596-7613);

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- 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

Lathrop is located in the southern portion of San Joaquin County, approximately 5 miles south of Stockton and approximately 15 miles northwest of the Modesto. Lathrop is bordered by the City of Manteca to the east and unincorporated San Joaquin County to the north, south, and west. The Planning Area is relatively flat with natural gentle slope from east to west. The city's topography has an average elevation of approximately 20 feet above sea level.

The Planning Area outside Lathrop's urbanized center and surrounding residential areas is predominantly farmland, including alfalfa, orchards, row crops, and pasture. Agricultural lands have become important foraging resources for a number of wildlife species, including Swainson's hawk.

A major watercourse, the San Joaquin River, flows along the west and southwest side of the Planning Area boundary. The Old River is a tributary to the San Joaquin River and runs contiguous with the western boundary of the Planning Area. Additionally, Oakwood Lake is located along the southern boundary of the Planning Area.

GEOMORPHIC PROVINCES/BIOREGIONS

The Planning Area is located in the western portion of the Great Valley Geomorphic Province of California. The Great Valley Province is a broad structural trough bounded by the tilted block of the Sierra Nevada on the east and the complexly folded and faulted Coast Ranges on the west. The San Joaquin River passes through the southern portion and parallels the western border of the city. This major river drains the Great Valley Province into the San Joaquin Delta to the north, ultimately discharging into the San Francisco Bay to the northwest.

The Planning Area is located within the San Joaquin Valley Bioregion, which is comprised of Kings County, most of Fresno, Kern, Merced, and Stanislaus counties, and portions of Madera, San Luis Obispo, and Tulare counties. The San Joaquin Valley Bioregion is the third most populous out of ten bioregions in the state, with an estimated 2 million people. The largest cities are Fresno, Bakersfield, Modesto, and Stockton. Interstate 5 and State Route 99 are the major north-south roads that run the entire length of the bioregion.

The bioregion is bordered on the west by the coastal mountain ranges. Its eastern boundary joins the southern two-thirds of the Sierra bioregion, which features Yosemite, Kings Canyon, and Sequoia National Parks. At its northern end, the San Joaquin Valley bioregion borders the southern end of the Sacramento Valley bioregion. To the west, south, and east, the bioregion extends to the edges of the valley floor.

Habitat in the bioregion includes vernal pools, valley sink scrub and saltbush, freshwater marsh, grasslands, arid plains, orchards, and oak savannah. Historically, millions of acres of wetlands flourished in the bioregion, but stream diversions for irrigation dried all but about five percent. Remnants of the wetland habitats are protected in this bioregion in publicly owned parks, reserves, and wildlife areas. The bioregion is considered the state's top agricultural producing region with the abundance of fertile soil.

VEGETATION

Vegetation occurring within the Planning Area primarily consists of agricultural, ruderal, riparian, and landscaping vegetation. Because of urban nature of the developed areas within the city and the active agricultural uses in surrounding lands, there is limited undisturbed natural vegetation. Common plant species observed in the planning area include: wild oat (*Avena barbata*), rip-gut brome (*Bromus diandrus*), softchess (*Bromus hordeaceus*) alfalfa (*Medicago sativa*), Russian thistle (*Salsola tragus*), Italian thistle (*Carduus pycnocephalus*), rough pigweed (*Amaranthus retroflexus*), sunflower (*Helianthus annuus*), tarragon (*Artemisia dracunculoides*), coyote brush (*Baccharis pilularis*), prickly lettuce (*Lactuca serriola*), milk thistle (*Silybum marianum*), sow thistle (*Sonchus asper*), telegraph weed (*Heterotheca grandiflora*), barley (*Hordeum* sp.), mustard (*Brassica niger*), and heliotrope (*Heliotropium curassavicum*).

WILDLIFE

Agricultural and ruderal vegetation found in the Planning Area provides habitat for both common and special status wildlife populations. For example, some commonly observed wildlife species in the region include: California ground squirrel (*Spermophilus beecheyi*), California vole (*Microtus*

3.4 BIOLOGICAL RESOURCES

californicus), coyote (*Canis latrans*), raccoon (*Procyon lotor*), opossum (*Didelphis virginiana*), striped skunk (*Mephitis mephitis*), red-tailed hawk (*Buteo jamaicensis*), northern harrier (*Circus cyaneus*), American kestrel (*Falco sparverius*), white-tailed kite (*Elanus leucurus*), American killdeer (*Charadrius vociferus*), gopher snake (*Pituophis melanoleucus*), garter snake (*Thamnophis species*), and western fence lizard (*Sceloporus occidentalis*), as well as many native insect species. There are also several bat species in the region. Bats often feed on insects as they fly over agricultural and natural areas.

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.

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 16 cover types (wildlife habitat classifications) in the Planning Area out of 59 found in the State. These include: Annual Grassland, Barren Land, Coastal Scrub, Cropland, Deciduous Orchard, Dryland Grain Crops, Eucalyptus, Evergreen Orchard, Fresh Emergent Wetland, Irrigated Grain Crops, Irrigated Hayfield, Irrigated Row and Field Crops, Riverine, Urban Land, Valley Foothill Riparian, and Vineyard.

Table 3.4-1 identifies the area by acreage for each cover type (classification) found in Lathrop (City limits and SOI). Figure 3.4-1 illustrates the location of each cover type (classification) within Lathrop. A brief description of each cover type follows.

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

<i>COVER TYPE</i>	<i>CITY (ACRES)</i>	<i>SOI (ACRES)</i>	<i>PLANNING AREA (TOTAL ACRES)</i>
Annual Grassland	736.46	99.93	836.39
Barren	105.96	13.41	119.36
Coastal Scrub	6.20	0.00	6.20
Cropland	2,356.91	101.85	2,458.76
Deciduous Orchard	162.83	17.91	180.75
Dryland Grain Crops	1,374.21	209.15	1,583.36
Eucalyptus	0.00	0.04	0.04
Evergreen Orchard	0.89	0.00	0.89
Fresh Emergent Wetland	9.17	7.93	17.09
Irrigated Grain Crops	779.44	1.15	780.59
Irrigated Hayfield	1,172.67	6.33	1,179.00
Irrigated Row and Field Crops	1,032.65	0.68	1,033.33
Riverine	329.61	37.28	366.89
Urban	4,460.35	230.32	4,690.67
Valley Foothill Riparian	304.63	4.64	309.27
Vineyard	8.01	1.33	9.34
Total	12,839.98	731.95	13,571.93

SOURCE: SOURCE: CASIL GIS DATA, CALIFORNIA WILDLIFE HABITAT RELATIONSHIP SYSTEM, 2018

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 2,458.76 acres of cropland habitat.

Deciduous orchards are typically open single species tree dominated habitats. Depending on the tree type and pruning methods they are usually low, bushy trees with an open understory to facilitate harvest. Trees range in height at maturity for many species from 15 to 30 feet, but may be 10 feet or less depending on the species. Crowns usually touch and are usually in a linear pattern. Spacing between trees is uniform depending on desired spread of mature trees. The understory is usually composed of low-growing grasses, legumes, and other herbaceous plants, but may be managed to prevent understory growth totally or partially, such as along tree rows.

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Deciduous orchards can be found on flat alluvial soils in the valley floors, in rolling foothill areas, or on relatively steep slopes. Though some deciduous orchards are nonirrigated, most are irrigated. Some flat soils are flood irrigated, but many deciduous orchards are sprinkler irrigated. Large numbers of orchards are irrigated by drip or trickle irrigation systems. Most deciduous orchards are in valley or foothill areas, with a few, such as, apples and pears, up to 3,000 feet elevation. Within the Planning Area, there are 180.75 acres of deciduous orchard habitat.

Evergreen orchards are typically open single species tree dominated habitats. Depending on the tree type and pruning methods they are usually low, bushy trees with an open understory to facilitate harvest. Trees range in height at maturity for many species from 15 to 30 feet, but may be 10 feet or less depending on the species. Crowns often do not touch and are usually in a linear pattern. Spacing between trees is uniform depending on desired spread of mature trees. The understory is usually composed of low-growing grasses, legumes, and other herbaceous plants, but may be managed to prevent understory growth totally or partially, such as along tree rows. Evergreen orchards can be found on flat alluvial soils in the valley floors, in rolling foothill areas, or on relatively steep slopes. All are irrigated. Some flat soils are flood irrigated, but most evergreen orchards are sprinkler irrigated. Large numbers of orchards are irrigated by drip or trickle irrigation systems. Most evergreen orchards are in valley or foothill areas. Except for olive, most evergreen orchard trees are not very frost tolerant. Within the Planning Area, there are 0.89 acres of evergreen orchard habitat.

Vineyards are composed of single species planted in rows, usually supported on wood and wire trellises. Vines are normally intertwined in the rows but open between rows. Rows under the vines are usually sprayed with herbicides to prevent growth of herbaceous plants. Between rows of vines, grasses and other herbaceous plants may be planted or allowed to grow as a cover crop to control erosion. Vineyards can be found on flat alluvial soils in the valley floors, in rolling foothill areas, or on relatively steep slopes. All are irrigated. Most vineyards are sprinkler irrigated. Large numbers of vineyards are irrigated by drip or trickle irrigation systems. Most vineyards are in valley or foothill areas. Within the Planning Area, there are 9.34 acres of vineyard habitat.

Dryland Grain Crops are composed of vegetation in the dryland (nonirrigated) grain and seed crops habitat includes seed producing grasses, primarily barley, cereal rye, oats, and wheat. These seed and grain crops are annuals. They are usually planted by drilling in rows which produce solid stands, forming 100 percent canopy at maturity in good stands. They are normally planted in fall and harvested in spring. However, they may be planted in rotation with other irrigated crops and winter wheat or barley may be planted after harvest of a previous crop in the fall, dry farmed (during the wet winter and early spring months), and then harvested in late spring. Within the Planning Area, there are 1,583.36 acres of Dryland Grain Crop habitat.

Irrigated Grain Crops include a variety of sizes, shapes and growing patterns. Field corn can reach ten feet tall while dry beans are only several inches tall. Most irrigated grain and seed crops are grown in rows. Some may form 100 percent canopy while others may have significant bare areas between rows. All seed and grain crops are annuals. They are usually planted in spring and harvested in summer or fall. However, they may be planted in rotation with other irrigated crops and sometimes winter wheat or barley may be planted after harvest of a previous crop in the fall, dry farmed (during the wet winter and early spring months) or they may be irrigated, and then

harvested in the late spring. Within the Planning Area, there are 780.59 acres of Irrigated Grain Crop habitat.

Irrigated Hayfield normally has a 2 to 6 months initial growing period, depending on climate, and soil, this habitat is dense, with nearly 100 percent cover. Average height is about 0.46 m. (1.5 feet) tall. Planted fields generally are monocultures (the same species or mixtures or a few species with similar structural properties). Structure changes to a lower stature following each harvest, grows up again and reverts to bare ground following plowing or discing. Plowing may occur annually, but is usually less often. Layering generally does not occur in this habitat. Unplanted "native" hay fields may contain short and tall patches. If not harvested for a year, they may develop a dense thatch of dead leaves between the canopy and the ground. Within the Planning Area, there are 1,179.00 acres of Irrigated Hayfield habitat.

Irrigated Row and Field Crops include a variety of sizes, shapes and growing patterns. Cotton and asparagus can be three or four feet tall while others may be a foot or less high. Most irrigated row and field crops are grown in rows. Some may form 100 percent canopy while others may have significant bare areas between rows. Most are annuals, while others, such as asparagus and strawberries are perennial. The annuals are usually planted in spring and harvested in summer or fall. However, they may be planted in rotation with other irrigated crops and sometimes winter wheat or barley may be planted after harvest of a previous crop in the fall, dry farmed (during the wet winter and early spring months), and then harvested in the late spring. In some areas of southern California three crops may be grown in a year. Within the Planning Area, there are 1,033.33 acres of Irrigated Row and Field Crop 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 4,690.67 acres of urban habitat.

Shrub Cover Types

Coastal Scrub occurs discontinuously in a narrow strip throughout the length of California, usually occurs within about 45 km (20 mi) of the ocean. Coastal Scrub is typified by low to moderate-sized shrubs with mesophytic leaves, flexible branches, semi-woody stems growing from a woody base, and a shallow root system. Coastal Scrub appears to support numbers of vertebrate species roughly equivalent to those in surrounding habitats. The Federal and State listed endangered peregrine falcon, Morro Bay kangaroo rat and the Santa Cruz long-toed salamander all occur in Coastal Scrub, though not exclusively. A subspecies of the black-tailed gnatcatcher, a California Department of Fish and Game Species of Special Concern, is found exclusively in southern sage scrub. Within the Planning Area, there are 6.204 acres of Coastal Scrub 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 836.39 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 17.09 acres of fresh emergent wetland habitat.

Tree Dominated Cover Types

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 309.27 acres of valley-foothill riparian habitat.

Eucalyptus habitats range from single-species thickets with little or no shrubby understory to scattered trees over a well-developed herbaceous and shrubby understory. In most cases, eucalyptus forms a dense stand with a closed canopy. Stand structure for this habitat may vary considerably because most eucalyptus have been planted into either rows for wind protection or dense groves for hardwood production and harvesting. Eucalyptus is often found in monotypic stands. The genus is composed of over 150 species with high morphological diversity. Thus, habitat structure may be affected if more than two or three species coexist. Tree size may vary considerably depending on spacing and species. Typically, trees may range in height from 26 to 40 m (87 to 133 ft) and have diameters (dbh) of 21.8 to 38.4 cm (8.6 to 15.1 in) (Walters 1980), with most growth occurring in the first 15 years. Trees in excess of 46 to 80 m (152 to 264 ft) are not uncommon. Within the Planning Area, there are 0.04 acres of Eucalyptus habitat.

Other Habitats

Barren habitat is defined by the absence of vegetation. Any habitat with <2% total vegetation cover by herbaceous, desert, or non-wildland species and <10% cover by tree or shrub species is defined this way. The physical settings for permanently barren habitat represent extreme environments for vegetation. An extremely hot or cold climate, a near-vertical slope, an impermeable substrate, constant disturbance by either human or natural forces, or a soil either lacking in organic matter or excessively saline can each contribute to a habitat being inhospitable to plants. Within the Planning Area, there are 119.36 acres of barren habitat.

Aquatic Habitats

Riverine habitats can occur in association with many terrestrial habitats. Riverine habitats are found adjacent to many rivers and streams. Riverine habitats are also found contiguous to lacustrine and fresh emergent wetland habitats. This habitat requires intermittent or continually running water generally originating at some elevated source, such as a spring or lake, and flows downward at a rate relative to slope or gradient and the volume of surface runoff or discharge. Velocity generally declines at progressively lower altitudes, and the volume of water increases until the enlarged stream finally becomes sluggish. Over this transition from a rapid, surging stream to a slow, sluggish river, water temperature and turbidity will tend to increase, dissolved oxygen will decrease, and the bottom will change from rocky to muddy. Within the Planning Area, there are 366.89 acres of riverine 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 one mile and within a 9 Quad search area of Lathrop. Figure 3.4-2 illustrates the special status species located within one mile of the Planning Area. As shown in Figure 3.4-3, the 9 quads consist of Holt, Stockton West, Stockton East, Peters, Union Island, Lathrop, Manteca, Tracy, Vernalis, and Ripon.

Special Status Plants

The search revealed documented occurrences of three special status plant species within one mile of the Lathrop Planning Area. The search revealed documented occurrences of 25 special status plant species within a Nine-Quad search of the Lathrop Planning Area.

Tables 3.4-2 and 3.4-3 provide a list of special-status plant species that are documented within one and 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 one mile of the Planning Area. Figure 3.4-3 illustrates the special status species located within approximately 9-quads of the Planning Area.

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TABLE 3.4-2: SPECIAL-STATUS PLANT SPECIES PRESENT OR POTENTIALLY PRESENT (APPROXIMATELY ONE MILE)

<i>PLANTS SPECIES</i>	<i>COMMON NAME</i>	<i>FEDERAL STATUS</i>	<i>CALIFORNIA STATUS</i>
<i>Eryngium racemosum</i>	Delta button-celery	None	Endangered
<i>Trichocoronis wrightii</i> var. <i>wrightii</i>	Wright's trichocoronis	None	None
<i>Cirsium crassicaule</i>	Slough Thistle	None	None

SOURCE: CDFW CNDDDB 2018

NOTES: CNPS = CALIFORNIA NATIVE PLANT SOCIETY
 SJMSCP = SAN JOAQUIN MULTI-SPECIES HABITAT CONSERVATION AND OPEN SPACE PLAN

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 PLANTS PRESENT OR POTENTIALLY PRESENT (9-QUAD)

<i>PLANTS SPECIES</i>	<i>COMMON NAME</i>	<i>FEDERAL STATUS</i>	<i>CALIFORNIA STATUS</i>
<i>Eryngium racemosum</i>	Delta button-celery	None	Endangered
<i>Lilaeopsis masonii</i>	Mason's lilaeopsis	None	Rare
<i>Blepharizonia plumosa</i>	big tarplant	None	None
<i>Cirsium crassicaule</i>	slough thistle	None	None
<i>Madia radiata</i>	showy golden madia	None	None
<i>Trichocoronis wrightii</i> var. <i>wrightii</i>	Wright's trichocoronis	None	None
<i>Symphyotrichum lentum</i>	Suisun Marsh aster	None	None
<i>Amsinckia grandiflora</i>	large-flowered fiddleneck	Endangered	Endangered
<i>Tropidocarpum capparideum</i>	caper-fruited tropidocarpum	None	None
<i>Brasenia schreberi</i>	watershield	None	None
<i>Atriplex cordulata</i> var. <i>cordulata</i>	heartscale	None	None
<i>Extriplex joaquinana</i>	San Joaquin spearscale	None	None
<i>Atriplex minuscula</i>	lesser saltscale	None	None
<i>Astragalus tener</i> var. <i>tener</i>	alkali milk-vetch	None	None
<i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	Delta tule pea	None	None
<i>Trifolium hydrophilum</i>	saline clover	None	None
<i>California macrophylla</i>	round-leaved filaree	None	None
<i>Hibiscus lasiocarpus</i> var. <i>occidentalis</i>	woolly rose-mallow	None	None
<i>Eschscholzia rhombipetala</i>	diamond-petaled California poppy	None	None
<i>Delphinium recurvatum</i>	recurved larkspur	None	None
<i>Chloropyron palmatum</i>	palmate-bracted salty bird's-beak	Endangered	Endangered
<i>Limosella australis</i>	Delta mudwort	None	None
<i>Sagittaria sanfordii</i>	Sanford's arrowhead	None	None
<i>Carex comosa</i>	bristly sedge	None	None

3.4 BIOLOGICAL RESOURCES

<i>PLANTS SPECIES</i>	<i>COMMON NAME</i>	<i>FEDERAL STATUS</i>	<i>CALIFORNIA STATUS</i>
<i>Puccinellia simplex</i>	California alkali grass	None	None

SOURCE: CDFW CNDDDB 2018

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CALIFORNIA NATIVE PLANT SOCIETY

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

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

Special Status Animals

The search revealed documented occurrences of 46 special status animal species within approximately 9-quads of the Planning Area. Of these species, 10 are documented within approximately one mile of the City's SOI. Tables 3.4-4 and 3.4-5 provide a list of the special-status animal species that are documented within approximately one mile and 9-quad of the Planning Area, along with their current protective status, geographic distribution, and habitat. Figure 3.4-2 illustrates the location of documented occurrences within one mile of the Planning Area, and Figure 3.4-3 shown documented occurrences within approximately 9-quad of the Planning Area.

TABLE 3.4-4: SPECIAL STATUS ANIMALS PRESENT OR POTENTIALLY PRESENT (APPROXIMATELY ONE MILE)

<i>ANIMAL SPECIES</i>	<i>COMMON NAME</i>	<i>FEDERAL STATUS</i>	<i>CALIFORNIA STATUS</i>
<i>Ambystoma californiense</i>	California tiger salamander	Threatened	Threatened
<i>Buteo swainsoni</i>	Swainson's hawk	None	Threatened
<i>Athene cunicularia</i>	burrowing owl	None	None
<i>Lanius ludovicianus</i>	loggerhead shrike	None	None
<i>Melospiza melodia</i>	song sparrow ("Modesto" population)	None	None
<i>Agelaius tricolor</i>	tricolored blackbird	None	Candidate Endangered
<i>Xanthocephalus xanthocephalus</i>	yellow-headed blackbird	None	None
<i>Oncorhynchus mykiss irideus</i> <i>pop. 11</i>	steelhead - Central Valley DPS	Threatened	None
<i>Spirinchus thaleichthys</i>	longfin smelt	Candidate	Threatened
<i>Sylvilagus bachmani riparius</i>	riparian brush rabbit	Endangered	Endangered

SOURCE: CDFW CNDDDB 2018

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 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.
 BCC = BIRD OF CONSERVATION CONCERN
 D = DELISTED FROM FEDERAL LISTING STATUS.

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 BIOLOGICAL RESOURCES

TABLE 3.4-5: SPECIAL STATUS ANIMALS PRESENT OR POTENTIALLY PRESENT (9-QUAD)

<i>ANIMAL SPECIES</i>	<i>COMMON NAME</i>	<i>FEDERAL STATUS</i>	<i>CALIFORNIA STATUS</i>
<i>Ambystoma californiense</i>	California tiger salamander	Threatened	Threatened
<i>Spea hammondi</i>	western spadefoot	None	None
<i>Rana draytonii</i>	California red-legged frog	Threatened	None
<i>Rana boylei</i>	foothill yellow-legged frog	None	Candidate Threatened
<i>Branta hutchinsii leucopareia</i>	cackling (=Aleutian Canada) goose	Delisted	None
<i>Elanus leucurus</i>	white-tailed kite	None	None
<i>Buteo swainsoni</i>	Swainson's hawk	None	Threatened
<i>Falco columbarius</i>	merlin	None	None
<i>Laterallus jamaicensis coturniculus</i>	California black rail	None	Threatened
<i>Coccyzus americanus occidentalis</i>	western yellow-billed cuckoo	Threatened	Endangered
<i>Athene cunicularia</i>	burrowing owl	None	None
<i>Eremophila alpestris actia</i>	California horned lark	None	None
<i>Lanius ludovicianus</i>	loggerhead shrike	None	None
<i>Vireo bellii pusillus</i>	least Bell's vireo	Endangered	Endangered
<i>Melospiza melodia</i>	song sparrow ("Modesto" population)	None	None
<i>Agelaius tricolor</i>	tricolored blackbird	None	Candidate Endangered
<i>Xanthocephalus xanthocephalus</i>	yellow-headed blackbird	None	None
<i>Oncorhynchus mykiss irideus pop. 11</i>	steelhead - Central Valley DPS	Threatened	None
<i>Hypomesus transpacificus</i>	Delta smelt	Threatened	Endangered
<i>Spirinchus thaleichthys</i>	longfin smelt	Candidate	Threatened
<i>Mylopharodon conocephalus</i>	hardhead	None	None
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	None	None
<i>Antrozous pallidus</i>	pallid bat	None	None
<i>Eumops perotis californicus</i>	western mastiff bat	None	None
<i>Sylvilagus bachmani riparius</i>	riparian brush rabbit	Endangered	Endangered
<i>Perognathus inornatus</i>	San Joaquin Pocket Mouse	None	None
<i>Neotoma fuscipes riparia</i>	riparian (=San Joaquin Valley) woodrat	Endangered	None
<i>Neotoma fuscipes riparia</i>	riparian (=San Joaquin Valley) woodrat	Endangered	None
<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	Endangered	Threatened
<i>Taxidea taxus</i>	American badger	None	None
<i>Emys marmorata</i>	western pond turtle	None	None
<i>Phrynosoma blainvillii</i>	coast horned lizard	None	None
<i>Arizona elegans occidentalis</i>	California glossy snake	None	None
<i>Masticophis flagellum ruddocki</i>	San Joaquin coachwhip	None	None
<i>Thamnophis gigas</i>	giant gartersnake	Threatened	Threatened

Special Status Invertebrate Animals

The search revealed documented occurrences of 9 special status invertebrate animals including insect species within a 9-quad search area. Of these species, two (western bumble bee *Bombus occidentalis*, and moestan blister beetle *Lytta moesta*) are documented within one mile of the Planning Area. Tables 3.4-6, provides a list of the special-status Invertebrate Animal species that are documented within the vicinity of the Planning Area, and their current protective status. Figure 3.4-3 illustrates the location of documented occurrences within the 9-quad search radius of Planning Area, and Figure 3.4-2 shown documented occurrences within one mile of the Planning Area.

Table 3.4-6: Special Status Invertebrate Animals Present Or Potentially Present (9 Quad)

<i>Animal Species</i>	<i>Common Name</i>	<i>Federal Status</i>	<i>California Status</i>
<i>Branchinecta conservatio</i>	Conservancy fairy shrimp	Endangered	None
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	Threatened	None
<i>Linderiella occidentalis</i>	California linderiella	None	None
<i>Lepidurus packardi</i>	vernal pool tadpole shrimp	Endangered	None
<i>Desmocerus californicus dimorphus</i>	valley elderberry longhorn beetle	Threatened	None
<i>Anthicus sacramento</i>	Sacramento anthicid beetle	None	None
<i>Lytta moesta</i>	moestan blister beetle	None	None
<i>Bombus occidentalis</i>	western bumble bee	None	None
<i>Bombus crotchii</i>	Crotch bumble bee	None	None

SOURCE: CDFW CNDDDB 2018

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BCC = BIRD OF CONSERVATION CONCERN

STATE

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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.

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 five sensitive natural communities within a Nine-Quad search area. This includes: Coastal and Valley Freshwater Marsh, Great Valley Cottonwood Riparian Forest, Great Valley Cottonwood Riparian Forest, Great Valley Valley Oak Riparian Forest, and Elderberry Savanna.

All of these community types 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. Of these sensitive natural communities documented within proximity of Lathrop, only one (Great Valley Valley Oak Riparian Forest) is located within one mile of the city.

SALMON AND STEELHEAD TROUT FISHERIES

Salmon and steelhead trout are anadromous fish species that are present in the Bay Delta and San Joaquin and Sacramento River Basins. Anadromous fish are born in freshwater rivers and streams, and then migrate to the Pacific Ocean to grow and mature before returning to their place of origin to spawn. The San Joaquin and Sacramento River system produces most of the Chinook salmon (*Oncorhynchus tshawytscha*) and a large percentage of the steelhead trout (*Oncorhynchus mykiss*) in California.

Anadromous fish resources once flourished naturally in the San Joaquin and Sacramento River system, but as a result of habitat destruction from water storage/diversion projects, flood control, mining, sedimentation, and bank degradation, they are protected species under the Federal Endangered Species Act. The San Joaquin and Sacramento River system has historically supported steelhead trout and four distinct spawning runs of Chinook salmon: fall, late fall, winter, and spring. The salmon runs have declined since the late 1800s and are now characterized as episodic. The Central Valley steelhead was Federally listed as threatened in 2003. The fall/late fall-run salmon is a Federal and State species of concern, and a candidate species for Federal listing. The spring-run Chinook salmon population is listed as threatened by both Federal and State agencies. Winter-run Chinook salmon population is listed as a Federally and State endangered species. Populations of Central Valley Steelhead and Chinook salmon are supported by natural spawning grounds and hatcheries within the San Joaquin and Sacramento River Basin.

Water remaining behind the dams by the start of the spawning run in October is often warmed by summer heat. Warm water and low water elevation are harmful to most coldwater anadromous fish species. Riparian vegetation is critical for the maintenance of high quality fish habitat. It provides cover, controls temperature, stabilizes stream banks, provides food, and buffers streams from erosion and impacts of adjacent land uses. Riparian vegetation also affects stream depth, current velocity, and substrate composition. The decline of riparian communities in California is a factor contributing to the loss of high quality fish habitat.

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 San Joaquin County.

The San Joaquin River is a natural movement corridor for native fish that are documented in the region including: Delta smelt (*Hypomesus transpacificus*), Central Valley steelhead (*Oncorhynchus mykiss*), Central Valley fall-/late fall-run Chinook salmon (*Oncorhynchus tshawytscha*), Longfin smelt (*Spirinchus thaleichthys*), Sacramento splittail (*Pogonichthys macrolepidotus*), River lamprey (*Lampetra ayresii*), Hardhead (*Mylopharodon conocephalus*). Additionally, portions of the Planning Area are located within an ecological or wildlife movement corridors identified by the CDFW or identified in the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) as important to maintaining connectivity between communities, habitat patches, and species populations or identified in the SJMSCP 2019 Annual Report as preserve areas. The wildlife movement corridor identified by the CDFW is approximately 670 acres in the City of Lathrop, within the western portion of the Planning Area. The riparian habitat along the San Joaquin River corridor bordering Lathrop also serves one of the two remaining brush rabbit (*Syvilagus bachmani riparius*) populations. This species occupies riparian forests with ample understory within the natural floodplains of the San Joaquin River.

As described previously, a portion of the Planning Area is adjacent to the San Joaquin River, which the SJMSCP identifies as a wildlife corridor due to its riparian habitat. To preserve the San Joaquin River Wildlife Corridor, the SJMSCP requires developments to be situated so as to maintain a 1,200-foot corridor encompassing 600 feet from the mean high water mark of the San Joaquin River, on both sides of the river, from Stewart Tract to the Stanislaus/San Joaquin County line.

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 multiple native nursery sites in the vicinity of the Planning Area due to the riparian woodland communities that have developed along the four main rivers in San Joaquin County, including the Mokelumne, San Joaquin, Calaveras, and Stanislaus rivers.

The closest native nursery site to the Planning Area is a known riparian brush rabbit population within Lathrop¹ near river bend. To protect this federally endangered riparian brush rabbit population, the San Joaquin River Oxbow Preserve was established in 2004 by Union Pacific Homes as mitigation for their development in Lathrop (USFWS, November 2012). This 30-acre riparian forest preserve is located adjacent to the San Joaquin River within Lathrop in San Joaquin County. As shown in Figure 3.4-1 and noted in Table 3.4-1, approximately 309.27 -acres of Valley Foothill Riparian habitat exists in the Planning Area adjacent to the San Joaquin River.

In addition, fish use the rivers in San Joaquin County for spawning, rearing, and migration. As previously stated, the San Joaquin River runs adjacent to the southwest corner of the Planning Area. Salmon and steelhead trout are anadromous fish species that are present in the Bay Delta and San Joaquin and Sacramento River Basins. Anadromous fish are born in freshwater rivers and streams, and then migrate to the Pacific Ocean to grow and mature before returning to their place of origin to spawn. The San Joaquin and Sacramento River system produces most of the Chinook salmon (*Oncorhynchus tshawytscha*) and a large percentage of the steelhead trout (*Oncorhynchus mykiss*) in California.

¹ USFWS. November 2012. *Proposed Expansion San Joaquin River National Wildlife Refuge* [pg. 53]

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.

LOCAL

San Joaquin County Multi-Species Habitat Conservation and Open Space Plan

A Habitat Conservation Plan (HCP) is a federal planning document that is prepared pursuant to Section 10 of the FESA. An approved HCP within a defined plan area allows for the incidental take of species and habitat that are otherwise protected under FESA during development activities.

A Natural Community Conservation Plan (NCCP) is a state planning document administered by CDFW. An approved NCCP within a defined plan area allows for the incidental take of species and habitat that are otherwise protected under CESA during growth and development activities.

BACKGROUND

The key purpose of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), is to provide a strategy for balancing the need to conserve Open Space and the need to Convert Open Space to non-Open Space uses while protecting the region's agricultural economy; preserving landowner property rights; providing for the long-term management of plant, fish and wildlife species, especially those that are currently listed, or may be listed in the future, under the Federal Endangered Species Act (ESA) or the CESA; providing and maintaining multiple-use Open Spaces which contribute to the quality of life of the residents of San Joaquin County; and accommodating a growing population while minimizing costs to Project Proponents and society at large.

San Joaquin County's past and future (2001-2051) growth has affected and will continue to affect 97 special status plant, fish and wildlife species in 52 vegetative communities scattered throughout San Joaquin County's 1,400+ square miles and 900,000+ acres, which include 43 percent of the Sacramento-San Joaquin Delta's Primary Zone. The SJMSCP, in accordance with ESA Section 10(a)(1)(B) and CESA Section 2081(b) Incidental Take Permits, provides compensation for the Conversion of Open Space to non-Open Space uses which affect the plant, fish and wildlife species covered by the Plan, hereinafter referred to as "SJMSCP Covered Species". In addition, the SJMSCP provides some compensation to offset the impacts of open space land conversions on non-wildlife related resources such as recreation, agriculture, scenic values and other beneficial Open Space uses.

The SJMSCP compensates for Conversions of Open Space for the following activities: urban development, mining, expansion of existing urban boundaries, non-agricultural activities occurring outside of urban boundaries, levee maintenance undertaken by the San Joaquin Area Flood Control Agency, transportation projects, school expansions, non-federal flood control projects, new parks and trails, maintenance of existing facilities for non-federal irrigation district projects, utility installation, maintenance activities, managing Preserves, and similar public agency projects. These activities will be undertaken by both public and private individuals and agencies throughout San Joaquin County and within the County's incorporated cities of Escalon, Manteca, Lathrop, Lodi, Manteca, Ripon, Stockton and Tracy. Public agencies including Caltrans (for transportation projects), and the San Joaquin Council of Governments (for transportation projects) also will undertake activities which will be covered by the SJMSCP. In addition, 5,340 acres is allocated for anticipated projects (e.g., annexations, general plan amendments)

The 97 SJMSCP Covered Species include 25 state and/or federally listed species. The SJMSCP Covered Species include 27 plants (6 listed), 4 fish (2 listed), 4 amphibians (1 listed), 4 reptiles (1 listed), 33 birds (7 listed), 15 mammals (3 listed) and 10 invertebrates (5 listed).

IMPLEMENTATION

The SJMSCP is administered by a Joint Powers Authority consisting of members of the San Joaquin County Council of Governments (SJCOG), the CDFW, and the USFWS. Development project applicants are given the option of participating in the SJMSCP as a way to streamline compliance with required local, State and federal laws regarding biological resources, and typically avoid having to approach each agency independently. According to the SJMSCP, adoption and implementation by local planning jurisdictions provides full compensation and mitigation for impacts to plants, fish and wildlife. Adoption and implementation of the SJMSCP also secures compliance pursuant to the state and federal laws such as CEQA, the National Environmental Policy Act (NEPA), the Planning and Zoning Law, the State Subdivision Map Act, the Porter-Cologne Act and the Cortese-Knox Act in regard to species covered under the SJMSCP.

Applicants pay mitigation fees on a per-acre basis, as established by the Joint Powers Authority according to the measures needed to mitigate impacts to the various habitat and biological resources. Different types of land require different levels of mitigation; i.e., one category requires that one acre of a similar land type be preserved for each acre developed, while another type requires that two acres be preserved for each acre developed. The entire County is mapped according to these categories so that landowners, project proponents and project reviewers are easily aware of the applicable SJMSCP fees for the proposed development.

The appropriate fees are collected by the City and remitted to SJCOG for administration. SJCOG uses the funds to preserve open space land of comparable types throughout the County, often coordinating with other private or public land trusts to purchase conservation easements or buy land outright for preservation. Development occurring on land that has been classified under the SJMSCP as “no-pay” would not be required to pay a fee. This category usually refers to already urbanized land and infill development areas. Although the fees are automatically adjusted on an annual basis, based on the construction cost index, they often cannot keep pace with the rapidly rising land prices in the Central Valley.

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 Lathrop, 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 three special status plant species within one mile of the Planning Area. The search revealed documented occurrences of 25 special status plant species (including three non-vascular plants) within approximately 9-quads of the Planning Area. Tables 3.4-2 and 3.4-3 provide a list of special-status plant species that are documented within one mile and 9-quads of the Planning Area, along with their current protective status. Figure 3.4-2 illustrates the special status

species located within one mile of the Planning Area. Figure 3.4-3 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 35 special status animal species within approximately a 9-quad search of the Planning Area. This includes: four amphibians, 13 birds, four fish, eight mammals, six reptile, and 9 invertebrates, including five insect species. Of these species, 9 are documented within approximately one mile of Lathrop. Tables 3.4-4, 3.4-5, and 3.4-6 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. Figure 3.4-2 illustrates the special status plant species located within the one-mile search area and Figure 3.4-3 illustrates the special status plant species located within approximately 9-quad of the Planning Area.

Subsequent development under the proposed General Plan could result in the direct loss of habitat areas associated with special status animal species, since suitable habitat for these species does occur in the region and may occur on or near future development project sites within Lathrop. 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 operational 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:

3.4 BIOLOGICAL RESOURCES

- 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 potential impacts. 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 Lathrop 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. Specifically, General Plan policies require City staff to continue to require projects to comply with the requirements of the SJMSCP when reviewing proposed public and private land use changes. The SJMSCP requires applicants to pay mitigation fees on a per-acre basis to mitigate impacts to the various habitat and biological resources within the Planning Area. For project proponents who opt not to participate in the SJMSCP, General Plan actions require project proponents to instead provide site-specific research and ground surveys for proposed development projects that include a detailed inventory of all biological resources onsite and appropriate mitigation measures for avoiding or reducing impact to these biological resources. 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 regulation provisions through consultations with the Permitting Agencies and local planning agencies.

While individual future development projects have 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 adherence to Federal and State regulations, would ensure that impacts to these resources are **less than significant**.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

RECREATION AND RESOURCES ELEMENT POLICIES

RR-2.1: Open Space Boundaries. Maintain existing open space lands within the city by carefully considering the impact of new development in established open space areas.

RR-2.2: Regional Partners. Coordinate with regional partners to maintain and preserve open space areas under overlapping jurisdiction or within nearby communities to protect all local and regional opportunities for recreation available to Lathrop residents.

RR-4.1: Sensitive Communities. Protect, conserve, and enhance Lathrop's biological resources, with a special focus on sensitive, rare, or endangered plant and wildlife species in accordance with state and federal resource agency requirements.

RR-4.2: Habitat Conservation. Support habitat conservation efforts to set aside and preserve suitable habitats, with priority given to habitats for rare and endangered species in accordance with state and federal resource agency requirements.

RR-4.3: Native Species. Conserve existing native trees and vegetation where possible and encourage the use of native species in development and infrastructure projects.

RR-4.4: Natural Water Bodies and Drainage Systems. Limit the disturbance of natural water bodies and drainage systems in Lathrop by conserving natural open space areas, protecting channels, and minimizing the impacts from stormwater and urban runoff.

RR-4.5: Aquatic Habitat. Work with San Joaquin County and the South San Joaquin Irrigation District to preserve wetlands, riparian corridors, and buffer zones in Lathrop by:

A. Requiring new development to protect streams and riparian habitats; and

B. Encouraging the use of water quality wetlands, biofiltration swales, watershed-scale retrofits, etc., where such measures are likely to be effective and technically and economically feasible.

RR-4.6: Urban Forest. To the extent feasible, build upon existing streetscapes and develop an urban forest along the City's major corridors and in residential neighborhoods to provide avian habitat, sequester carbon emissions, foster pedestrian activity, and provide shade.

RR-4.7: Wildlife Corridors. Participate in the planning of drainage channels and other areas that provide potential wildlife linkages between open space areas in the community and the vicinity.

RR-4.8: City Programs. Promote City programs that focus on habitat protection and biological conservation.

RR-4.9: Regional Coordination. Coordinate with county, state, and federal agencies and local nonprofits to protect and preserve biologic resources in Lathrop.

3.4 BIOLOGICAL RESOURCES

- RR-4.10: Local Coordination. Coordinate with private and public organizations within the region to implement strategies and programs that protect and preserve biological resources within Lathrop.
- RR-4.11: Development. Require that all new development identify potential impacts to existing biological resources and provide mitigation measures as necessary pursuant to CEQA in order to protect these resources from negative externalities.
- RR-4.12: Human Interaction. In areas where residents and sensitive biological resources interact, establish protective policies and/or implement design features to protect and insulate biological resources from human impacts.
- RR-7.3: Restoration. Promote protection of areas for habitat restoration, including remnants of riparian and aquatic habitat, particularly in the Delta.
- RR-7.4: Compatibility. Encourage compatibility between agricultural practices and wildlife habitat.
- RR-7.5: Beneficial Uses. Preserve and protect the water availability and quality of the Delta for designated beneficial uses and habitat protection.
- RR-7.6: Levee Projects. Encourage and promote the expansion of floodplains and riparian habitats in levee projects, outside areas already identified for development.
- RR-7.7: Climate Change. Recognize that climate change impacts may influence future guidance, and best available data, and continue to ensure that up-to-date information is consulted when reviewing projects for potential impacts to the Delta.
- RR-7.8: Delta Heritage. Support the long-term viability and success of the natural Delta ecosystems and the continuation of Delta heritage.

RECREATION AND RESOURCES ELEMENT ACTIONS

- RR-2b: Periodically coordinate with neighboring jurisdictions to share plans regarding open space protection and access.
- RR-4a: Cooperate with state, federal, and local agencies to ensure that development does not cause significant adverse impacts to existing riparian corridors.
- RR-4b: Require new development, infrastructure, long-range planning, and similar projects, to comply with the requirements of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan to ensure that potentially significant impacts to special-status species and sensitive resources are adequately addressed.
- RR-4c: Require new development which has the potential to result in water quality impacts to the City's waterways and the local groundwater basin to implement all feasible mitigation measures to reduce impacts.
- RR-4d: Publicize volunteer-based programs that organize community habitat restoration and/or cleanup events and provide public education regarding the benefits of city and regional water resources.

- RR-4e: Where sensitive biological habitats have been identified on or immediately adjacent to a project site, the project shall include appropriate mitigation measures identified by *SJMSCP*, which may include, but are not limited to the following:
- A. 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;
 - B. Construction barrier fencing shall be installed around sensitive resources and areas identified for avoidance or protection, and to reduce potential soil compaction in sensitive areas; and
 - C. Pre-Construction training of contractors and sub-contractors shall be conducted by a qualified biologist to identify and avoid protected species and habitat.
- RR-7a: Review all projects affecting areas within the Delta Secondary Zone to ensure they are consistent with the criteria and policies set forth by the Delta Stewardship Council's "Delta Plan". Recognize that areas already anticipated for development in the General Plan within the Secondary Zone are not subject to the Delta Plan.
- RR-7b: As applicable, provide opportunities for review of and comment by the Reclamation Districts, the Delta Stewardship Council, Delta Protection Commission, and SWRCB during project review.
- RR-7c: Review any projects located adjacent to priority habitat restoration areas, as identified in the Delta Plan, and consult the California Department of Fish and Wildlife as warranted, to ensure that any impacts do not have a significant effect on the opportunity to restore habitat as described in the Delta Plan.
- RR-7d: Review and regulate new development, infrastructure, and levee improvement projects to ensure consistency with Federal and State flood and floodway requirements, including BDCP and Delta Plan policies as applicable.

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 CDFW considers sensitive natural communities to have significant biotic value, with species of plants and animals unique to each community. The CNDDDB search revealed five sensitive natural communities within a 9-quad search of Lathrop. The sensitive natural communities within a 9-quad search are of Lathrop include Coastal and Valley Freshwater Marsh, Great Valley Cottonwood Riparian Forest, Great Valley Valley Oak Riparian Forest, and Elderberry Savanna. All four of these community types 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. Of these sensitive natural communities documented within a 9-quad radius of Lathrop, one (Great Valley Oak Riparian Forest) is located within one mile of the City limits.

3.4 BIOLOGICAL RESOURCES

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. Lathrop is located in a bioregion that includes vernal pools, valley sink scrub and saltbush, freshwater marsh, grasslands, arid plains, orchards, and oak savannah. Historically, millions of acres of wetlands flourished in the bioregion, but stream diversions for irrigation dried all but five percent. Due to Lathrop's agricultural history, agricultural irrigation ditches and canals are located in the Planning Area where active agricultural operations are found. A major area of riparian habitat is located on the west and southwest side of the Planning Area along the San Joaquin River. The riparian vegetation along Old River is contiguous with the southwestern Planning Area boundary. Additionally, seasonal wetland areas dispersed throughout the agricultural regions in the western portion of the Planning Area also support riparian vegetation and associated wildlife. These wetland areas are located within the SJMSCP Natural Lands Habitat Open Space category. Within the Planning Area these riparian areas located along river corridors are generally designated for conservation uses and are identified as resource conservation and open space land uses on the General Plan's Land Use Map.

As noted in Table 3.4-1, approximately 309 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 woodrat². 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 Lathrop 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. As previously stated, the General Plan requires City staff to continue to require projects to comply with the requirements of the SJMSCP, which requires the applicants to pay mitigation fees on a per-acre basis to mitigate impacts to the various habitat and biological resources within the Planning Area. Additionally, the SJMSCP requires developments along both sides of the San Joaquin River to be situated so as to maintain a 1,200-foot corridor encompassing 600 feet from the mean high-water mark of the river. Further, for the area on the east side of the river bordering lands in the Lathrop and Manteca planned land use areas as indicated on the SJMSCP Planned Land Use Map, the final setbacks shall be established after the completion of surveys for the riparian brush rabbit. The General Plan also includes several policies and actions related to habitat restoration and protection, including riparian and aquatic habitat. For example, RC-4.5 requires new developments in the vicinity of the San Joaquin River Delta to be conditioned to protect riparian habitat, wetlands, and other native vegetation and wildlife communities and habitats. Additionally, General Plan Action RC-4i

² USFWS. November 2012. *Proposed Expansion San Joaquin River National Wildlife Refuge* {pg. 1}

requires City staff to consult the California Department of Fish and Wildlife for projects located within or adjacent to priority habitat restoration areas to ensure that any impacts do not have a significant effect on the opportunity to restore habitat as described in the Delta Plan.

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 minimize impacts to these resources. Therefore, impacts would be considered **less than significant** relative to this environmental topic.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

RECREATION AND RESOURCES ELEMENT POLICIES

- RR-4.1: Sensitive Communities. Protect, conserve, and enhance Lathrop's biological resources, with a special focus on sensitive, rare, or endangered plant and wildlife species in accordance with state and federal resource agency requirements.
- RR-4.2: Habitat Conservation. Support habitat conservation efforts to set aside and preserve suitable habitats, with priority given to habitats for rare and endangered species in accordance with state and federal resource agency requirements.
- RR-4.3: Native Species. Conserve existing native trees and vegetation where possible and encourage the use of native species in development and infrastructure projects.
- RR-4.4: Natural Water Bodies and Drainage Systems. Limit the disturbance of natural water bodies and drainage systems in Lathrop by conserving natural open space areas, protecting channels, and minimizing the impacts from stormwater and urban runoff.
- RR-4.5: Aquatic Habitat. Work with San Joaquin County and the South San Joaquin Irrigation District to preserve wetlands, riparian corridors, and buffer zones in Lathrop by:
- A. Requiring new development to protect streams and riparian habitats; and
 - B. Encouraging the use of water quality wetlands, biofiltration swales, watershed-scale retrofits, etc., where such measures are likely to be effective and technically and economically feasible.
- RR-4.7: Wildlife Corridors. Participate in the planning of drainage channels and other areas that provide potential wildlife linkages between open space areas in the community and the vicinity.
- RR-4.9: Regional Coordination. Coordinate with county, state, and federal agencies and local nonprofits to protect and preserve biologic resources in Lathrop.
- RR-4.10: Local Coordination. Coordinate with private and public organizations within the region to implement strategies and programs that protect and preserve biological resources within Lathrop.

3.4 BIOLOGICAL RESOURCES

- RR-4.11: Development. Require that all new development identify potential impacts to existing biological resources and provide mitigation measures as necessary pursuant to CEQA in order to protect these resources from negative externalities.
- RR-4.12: Human Interaction. In areas where residents and sensitive biological resources interact, establish protective policies and/or implement design features to protect and insulate biological resources from human impacts.
- RR-7.3: Restoration. Promote protection of areas for habitat restoration, including remnants of riparian and aquatic habitat, particularly in the Delta.
- RR-7.5: Beneficial Uses. Preserve and protect the water availability and quality of the Delta for designated beneficial uses and habitat protection.
- RR-7.6: Levee Projects. Encourage and promote the expansion of floodplains and riparian habitats in levee projects, outside areas already identified for development.
- RR-7.7: Climate Change. Recognize that climate change impacts may influence future guidance, and best available data, and continue to ensure that up-to-date information is consulted when reviewing projects for potential impacts to the Delta.

RECREATION AND RESOURCES ELEMENT ACTIONS

- RR-4a: Cooperate with state, federal, and local agencies to ensure that development does not cause significant adverse impacts to existing riparian corridors.
- RR-4b: Require new development, infrastructure, long-range planning, and similar projects, to comply with the requirements of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan to ensure that potentially significant impacts to special-status species and sensitive resources are adequately addressed.
- RR-4e: Where sensitive biological habitats have been identified on or immediately adjacent to a project site, the project shall include appropriate mitigation measures identified by *SJMSCP*, which may include, but are not limited to the following:
- A. 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;
 - B. Construction barrier fencing shall be installed around sensitive resources and areas identified for avoidance or protection, and to reduce potential soil compaction in sensitive areas; and
 - C. Pre-Construction training of contractors and sub-contractors shall be conducted by a qualified biologist to identify and avoid protected species and habitat.
- RR-7a: Review all projects affecting areas within the Delta Secondary Zone to ensure they are consistent with the criteria and policies set forth by the Delta Stewardship Council's "Delta Plan". Recognize that areas already anticipated for development in the General Plan within the Secondary Zone are not subject to the Delta Plan.

RR-7b: As applicable, provide opportunities for review of and comment by the Reclamation Districts, the Delta Stewardship Council, Delta Protection Commission, and SWRCB during project review.

RR-7c: Review any projects located adjacent to priority habitat restoration areas, as identified in the Delta Plan, and consult the California Department of Fish and Wildlife as warranted, to ensure that any impacts do not have a significant effect on the opportunity to restore habitat as described in the Delta Plan.

RR-7d: Review and regulate new development, infrastructure, and levee improvement projects to ensure consistency with Federal and State flood and floodway requirements, including BDCP and Delta Plan policies as applicable.

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.

The San Joaquin River flows through the south-central portion and along the western boundary of the Planning Area. The Old River is a tributary to the San Joaquin River and runs contiguous with the southwestern boundary of the Planning Area. The majority of the Study Area has been historically leveled and any naturally occurring drainages have been channelized or otherwise disturbed. Some of the numerous Planning Area irrigation and drainage ditches/canals support riparian vegetation. Irrigation runoff impoundments may function as seasonal wetlands. If the Corps determines that the irrigation and drainage ditches/canals, or the irrigation water impoundments represent waters “adjacent” to the San Joaquin River, these features would be regulated pursuant to Section 404.

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 environment that would directly impact protected wetlands. However, the Project could have an indirect change on the physical environment through subsequently approved 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, 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.

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 Lathrop 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 impacts to protected water features, the implementation of the policies and actions listed below, as well as Federal and State regulations, would ensure impacts to these resources are reduced. Thus, implementation of the General Plan would result in a **less than significant** impact relative to this environmental topic.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

RECREATION AND RESOURCES ELEMENT POLICIES

RR-4.4: Natural Water Bodies and Drainage Systems. Limit the disturbance of natural water bodies and drainage systems in Lathrop by conserving natural open space areas, protecting channels, and minimizing the impacts from stormwater and urban runoff.

RR-4.5: Aquatic Habitat. Work with San Joaquin County and the South San Joaquin Irrigation District to preserve wetlands, riparian corridors, and buffer zones in Lathrop by:

A. Requiring new development to protect streams and riparian habitats; and

B. Encouraging the use of water quality wetlands, biofiltration swales, watershed-scale retrofits, etc., where such measures are likely to be effective and technically and economically feasible.

RR-4.9: Regional Coordination. Coordinate with county, state, and federal agencies and local nonprofits to protect and preserve biologic resources in Lathrop.

- RR-4.10: Local Coordination. Coordinate with private and public organizations within the region to implement strategies and programs that protect and preserve biological resources within Lathrop.
- RR-4.11: Development. Require that all new development identify potential impacts to existing biological resources and provide mitigation measures as necessary pursuant to CEQA in order to protect these resources from negative externalities.
- RR-7.3: Restoration. Promote protection of areas for habitat restoration, including remnants of riparian and aquatic habitat, particularly in the Delta.
- RR-7.5: Beneficial Uses. Preserve and protect the water availability and quality of the Delta for designated beneficial uses and habitat protection.
- RR-7.6: Levee Projects. Encourage and promote the expansion of floodplains and riparian habitats in levee projects, outside areas already identified for development.
- RR-7.7: Climate Change. Recognize that climate change impacts may influence future guidance, and best available data, and continue to ensure that up-to-date information is consulted when reviewing projects for potential impacts to the Delta.
- RR-7.8: Delta Heritage. Support the long-term viability and success of the natural Delta ecosystems and the continuation of Delta heritage.

RECREATION AND RESOURCES ELEMENT ACTIONS

- RR-4a: Cooperate with state, federal, and local agencies to ensure that development does not cause significant adverse impacts to existing riparian corridors.
- RR-4c: Require new development which has the potential to result in water quality impacts to the City's waterways and the local groundwater basin to implement all feasible mitigation measures to reduce impacts.
- RR-4e: Where sensitive biological habitats have been identified on or immediately adjacent to a project site, the project shall include appropriate mitigation measures identified by *SJMSCP*, which may include, but are not limited to the following:
- A. 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;
 - B. Construction barrier fencing shall be installed around sensitive resources and areas identified for avoidance or protection, and to reduce potential soil compaction in sensitive areas; and
 - C. Pre-Construction training of contractors and sub-contractors shall be conducted by a qualified biologist to identify and avoid protected species and habitat.
- RR-7a: Review all projects affecting areas within the Delta Secondary Zone to ensure they are consistent with the criteria and policies set forth by the Delta Stewardship Council's "Delta

3.4 BIOLOGICAL RESOURCES

Plan". Recognize that areas already anticipated for development in the General Plan within the Secondary Zone are not subject to the Delta Plan.

RR-7b: As applicable, provide opportunities for review of and comment by the Reclamation Districts, the Delta Stewardship Council, Delta Protection Commission, and SWRCB during project review.

RR-7c: Review any projects located adjacent to priority habitat restoration areas, as identified in the Delta Plan, and consult the California Department of Fish and Wildlife as warranted, to ensure that any impacts do not have a significant effect on the opportunity to restore habitat as described in the Delta Plan.

RR-7d: Review and regulate new development, infrastructure, and levee improvement projects to ensure consistency with Federal and State flood and floodway requirements, including BDCP and Delta Plan policies as applicable.

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.

As noted in Impact 3.4-2, the San Joaquin River flows through the south-central portion and along the west side of the Planning Area boundary. The Old River – a tributary to the San Joaquin River – runs contiguous with the southwestern boundary of the Planning Area. As shown in the proposed General Plan Land Use Map, Resource Conservation and Open Space land uses are found adjacent to the Old River, San Joaquin River and Paradise Creek in the west and southwest portions of the Planning Area. The areas designated for urban uses by the proposed Land Use Map near both creeks are generally developed with urban uses currently.

The Planning Area contains two riparian corridors – the land along the Old River and San Joaquin River – identified in the SJMSCP as important to maintaining connectivity between communities, habitat patches, and species populations or identified in the SJMSCP 2019 Annual Report as preserve areas. As previously discussed, a number of wildlife nursery sites exist in the vicinity of the Planning Area, including the San Joaquin River Oxbow Preserve. The San Joaquin River Oxbow Preserve is located adjacent to the San Joaquin River within Lathrop in San Joaquin County, which is a 30-acre riparian forest preserve established to protect the existing riparian brush rabbit population. As discussed in Impact 3.4-2, Valley Foothill Riparian habitat exists in the southwestern corner of the Planning Area in close proximity to the San Joaquin River Oxbow Preserve. Given the close proximity to the known native nursery site across the river, there is potential for riparian brush rabbit to utilize the Planning Area's riparian habitat as a nursery site.

3.4 BIOLOGICAL RESOURCES

As described previously, the San Joaquin River, is a natural movement corridor for native fish that are documented in the region including: Delta smelt (*Hypomesus transpacificus*), Central Valley steelhead (*Oncorhynchus mykiss*), Central Valley fall-/late fall-run Chinook salmon (*Oncorhynchus tshawytscha*), Longfin smelt (*Spirinchus thaleichthys*), Sacramento splittail (*Pogonichthys macrolepidotus*), River lamprey (*Lampetra ayresii*), Hardhead (*Mylopharodon conocephalus*).

The land uses within the Plan Area would not have any direct disturbance to the San Joaquin River or its tributaries, and therefore, would not have any direct disturbance to these fish species.

Construction activities associated with buildout of the Proposed General Plan Land Use Map could have indirect impacts on these fish species from the potential for sedimentation and other pollution to enter into the San Joaquin River during construction and ongoing operational activities. Construction of future projects will require authorization from the USACE, RWQCB, and CDFW through the regulatory permit processes. These regulatory agencies will impose standard conditions that include best management practices that are aimed at minimizing pollution associated with construction activities.

The ongoing operation of the City's stormwater infrastructure network requires discharge of stormwater into the San Joaquin River. The discharge of stormwater could result in indirect impacts to special status fish and wildlife if stormwater was not appropriately treated through BMPs prior to its discharge to the San Joaquin River. The Lathrop Municipal Code provides rules and regulations to protect water courses (Chapter 12.28) and to manage and control stormwater and discharge (Chapter 13.28). Section 13.28.130 specifically provides requirement to prevent, control and reduce stormwater pollutants. This includes requirements to implement best management practices to the extent they are technologically achievable to prevent and reduce pollutants.

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 Lathrop 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. For example, the General Plan requires projects located on or immediately adjacent to areas where sensitive biological habitats have been identified to incorporate appropriate mitigation measures identified by a qualified biologist through the preparation of a site-specific technical report. 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. In addition, within riparian areas located in the Planning Area and along river corridors the General Plan generally identified these areas on the Land Use Map for conservation uses including resource conservation and open space land uses.

While future development has the potential to result in impacts to protected movement corridors, the implementation of the policies and action listed below, as well as adherence with Federal and State regulations, impacts would be considered **less than significant** relative to the environmental topic.

GENERAL PLAN POLICIES AND ACTION THAT MINIMIZE POTENTIAL IMPACTS

RECREATION AND RESOURCE ELEMENT POLICIES

- RR-4.1: Sensitive Communities. Protect, conserve, and enhance Lathrop’s biological resources, with a special focus on sensitive, rare, or endangered plant and wildlife species in accordance with state and federal resource agency requirements.
- RR-4.2: Habitat Conservation. Support habitat conservation efforts to set aside and preserve suitable habitats, with priority given to habitats for rare and endangered species in accordance with state and federal resource agency requirements.
- RR-4.3: Native Species. Conserve existing native trees and vegetation where possible and encourage the use of native species in development and infrastructure projects.
- RR-4.4: Natural Water Bodies and Drainage Systems. Limit the disturbance of natural water bodies and drainage systems in Lathrop by conserving natural open space areas, protecting channels, and minimizing the impacts from stormwater and urban runoff.
- RR-4.5: Aquatic Habitat. Work with San Joaquin County and the South San Joaquin Irrigation District to preserve wetlands, riparian corridors, and buffer zones in Lathrop by:
- A. Requiring new development to protect streams and riparian habitats; and
 - B. Encouraging the use of water quality wetlands, biofiltration swales, watershed-scale retrofits, etc., where such measures are likely to be effective and technically and economically feasible.
- RR-4.6: Urban Forest. To the extent feasible, build upon existing streetscapes and develop an urban forest along the City’s major corridors and in residential neighborhoods to provide avian habitat, sequester carbon emissions, foster pedestrian activity, and provide shade.
- RR-4.7: Wildlife Corridors. Participate in the planning of drainage channels and other areas that provide potential wildlife linkages between open space areas in the community and the vicinity.
- RR-4.8: City Programs. Promote City programs that focus on habitat protection and biological conservation.
- RR-4.9: Regional Coordination. Coordinate with county, state, and federal agencies and local nonprofits to protect and preserve biologic resources in Lathrop.
- RR-4.10: Local Coordination. Coordinate with private and public organizations within the region to implement strategies and programs that protect and preserve biological resources within Lathrop.
- RR-4.11: Development. Require that all new development identify potential impacts to existing biological resources and provide mitigation measures as necessary pursuant to CEQA in order to protect these resources from negative externalities.

RR-4.12: Human Interaction. In areas where residents and sensitive biological resources interact, establish protective policies and/or implement design features to protect and insulate biological resources from human impacts.

RESOURCE CONSERVATION ELEMENT ACTIONS

RR-4a: Cooperate with state, federal, and local agencies to ensure that development does not cause significant adverse impacts to existing riparian corridors.

RR-4b: Require new development, infrastructure, long-range planning, and similar projects, to comply with the requirements of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan to ensure that potentially significant impacts to special-status species and sensitive resources are adequately addressed.

RR-4c: Require new development which has the potential to result in water quality impacts to the City's waterways and the local groundwater basin to implement all feasible mitigation measures to reduce impacts.

RR-4d: Publicize volunteer-based programs that organize community habitat restoration and/or cleanup events and provide public education regarding the benefits of city and regional water resources.

RR-4e: Where sensitive biological habitats have been identified on or immediately adjacent to a project site, the project shall include appropriate mitigation measures identified by *SJMSCP*, which may include, but are not limited to the following:

A. 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;

B. Construction barrier fencing shall be installed around sensitive resources and areas identified for avoidance or protection, and to reduce potential soil compaction in sensitive areas; and

C. Pre-Construction training of contractors and sub-contractors shall be conducted 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. The General Plan does not contain any provisions that would conflict with local requirements addressing the maintenance and removal of existing trees, that provide for the protection of biological resources. In fact, the General Plan Policies such as Policy RR-4.3 (described previously under Impact 3.4-4) prioritizes conserving existing native trees and vegetation and the use of native trees in development and infrastructure projects. The General Plan provides for the continued

implementation of local requirements, including policies and ordinances, related to protection of biological resources. Therefore, this is considered a **less than significant** impact relative to this environmental topic.

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)

As noted previously, the City of Lathrop is a participant in SJMSCP. The SJMSCP was approved in 2000 and the City of Lathrop is a signatory to the SJMSCP.

The proposed General Plan Land Use Map does not re-designate any land currently designated for resource conservation and open space or lands identified for habitat protection. As such, the proposed General Plan and the Land Use Map are consistent with the adopted SJMSCP in terms of land uses and habitat protection. Implementation of the General Plan would not conflict with the provisions of an adopted HCP/NCCP, or other approved local, regional, or State habitat conservation plan.

Future projects that do not comply with the SJMSCP could result in potentially significant impacts. As described previously, Action RR-4b requires new development, infrastructure, long-range planning, and similar projects, to comply with the requirements of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan to ensure that potentially significant impacts to special-status species and sensitive resources are adequately addressed. Through implementation of the General Plan including policies and actions aimed at provided for consistency with and review of the local HCP, the General Plan would have a **less than significant** impact relative to this topic.

GENERAL PLAN POLICES AND ACTION THAT MINIMIZES POTENTIAL IMPACTS

RECREATION AND RESOURCES ELEMENT POLICIES

RR-4.9: Regional Coordination. Coordinate with county, state, and federal agencies and local nonprofits to protect and preserve biologic resources in Lathrop.

RR-4.10: Local Coordination. Coordinate with private and public organizations within the region to implement strategies and programs that protect and preserve biological resources within Lathrop.

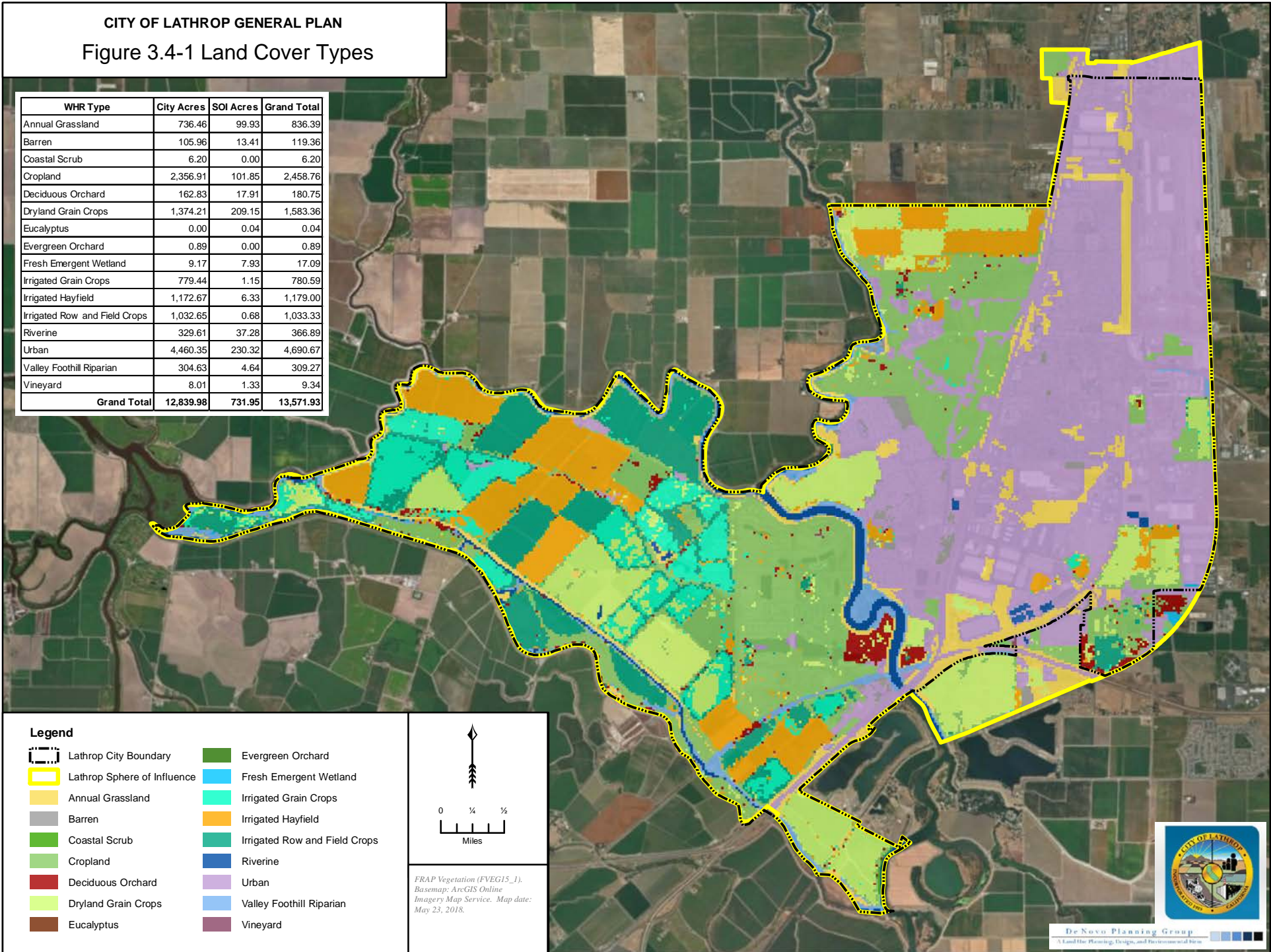
RECREATION AND RESOURCES ELEMENT ACTIONS

RR-4b: Require new development, infrastructure, long-range planning, and similar projects, to comply with the requirements of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan to ensure that potentially significant impacts to special-status species and sensitive resources are adequately addressed.

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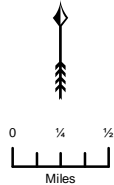
CITY OF LATHROP GENERAL PLAN
Figure 3.4-1 Land Cover Types

WHR Type	City Acres	SOI Acres	Grand Total
Annual Grassland	736.46	99.93	836.39
Barren	105.96	13.41	119.36
Coastal Scrub	6.20	0.00	6.20
Cropland	2,356.91	101.85	2,458.76
Deciduous Orchard	162.83	17.91	180.75
Dryland Grain Crops	1,374.21	209.15	1,583.36
Eucalyptus	0.00	0.04	0.04
Evergreen Orchard	0.89	0.00	0.89
Fresh Emergent Wetland	9.17	7.93	17.09
Irrigated Grain Crops	779.44	1.15	780.59
Irrigated Hayfield	1,172.67	6.33	1,179.00
Irrigated Row and Field Crops	1,032.65	0.68	1,033.33
Riverine	329.61	37.28	366.89
Urban	4,460.35	230.32	4,690.67
Valley Foothill Riparian	304.63	4.64	309.27
Vineyard	8.01	1.33	9.34
Grand Total	12,839.98	731.95	13,571.93

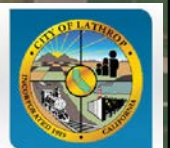


Legend

- Lathrop City Boundary
- Lathrop Sphere of Influence
- Annual Grassland
- Barren
- Coastal Scrub
- Cropland
- Deciduous Orchard
- Dryland Grain Crops
- Eucalyptus
- Evergreen Orchard
- Fresh Emergent Wetland
- Irrigated Grain Crops
- Irrigated Hayfield
- Irrigated Row and Field Crops
- Riverine
- Urban
- Valley Foothill Riparian
- Vineyard

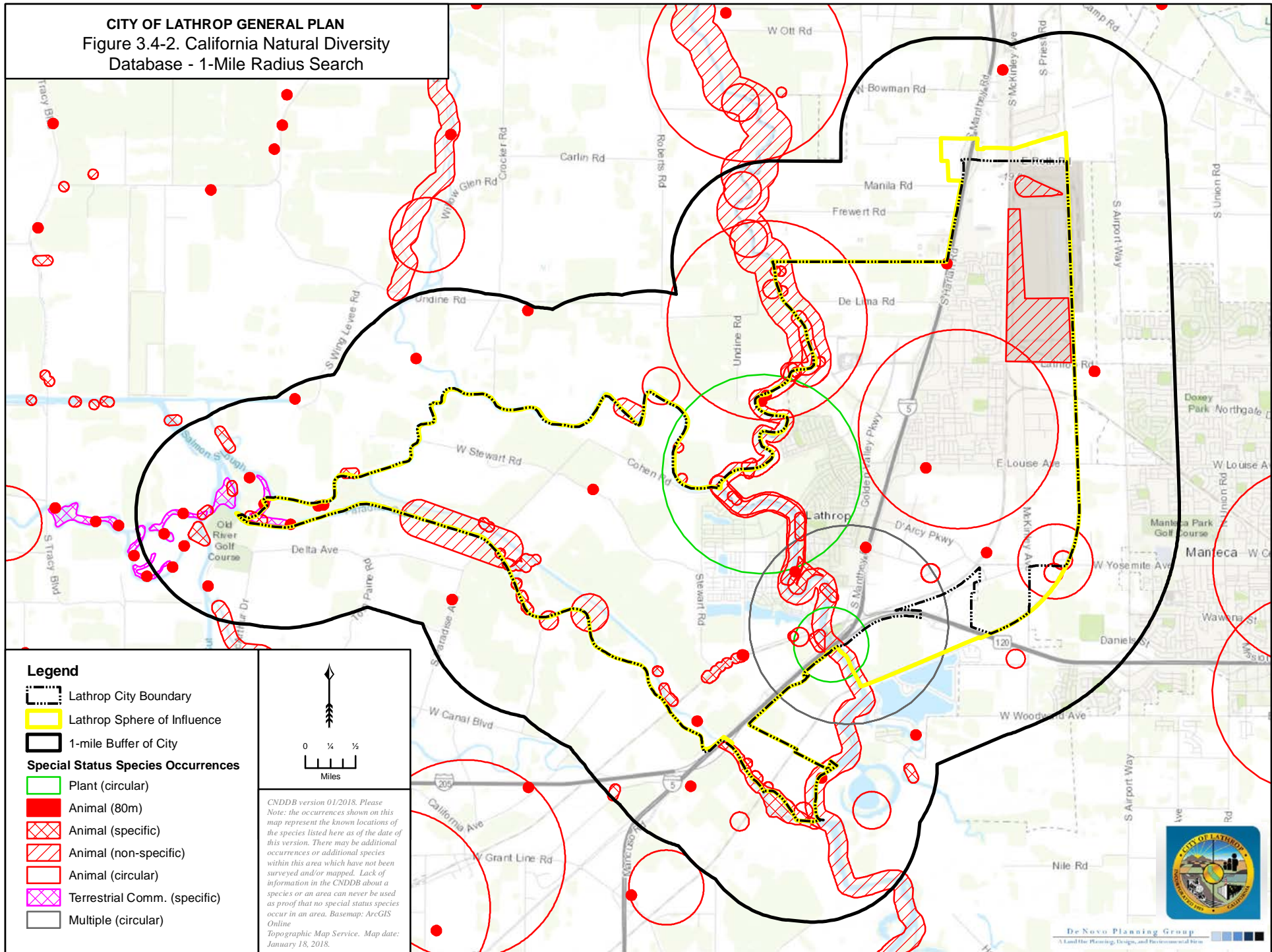


FRAP Vegetation (FVEG15_1).
 Basemap: ArcGIS Online
 Imagery Map Service. Map date:
 May 23, 2018.

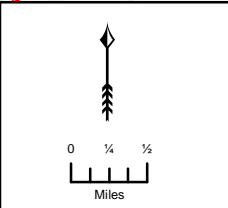


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CITY OF LATHROP GENERAL PLAN
Figure 3.4-2. California Natural Diversity
Database - 1-Mile Radius Search



- Legend**
- Lathrop City Boundary
 - Lathrop Sphere of Influence
 - 1-mile Buffer of City
 - Special Status Species Occurrences**
 - Plant (circular)
 - Animal (80m)
 - Animal (specific)
 - Animal (non-specific)
 - Animal (circular)
 - Terrestrial Comm. (specific)
 - Multiple (circular)



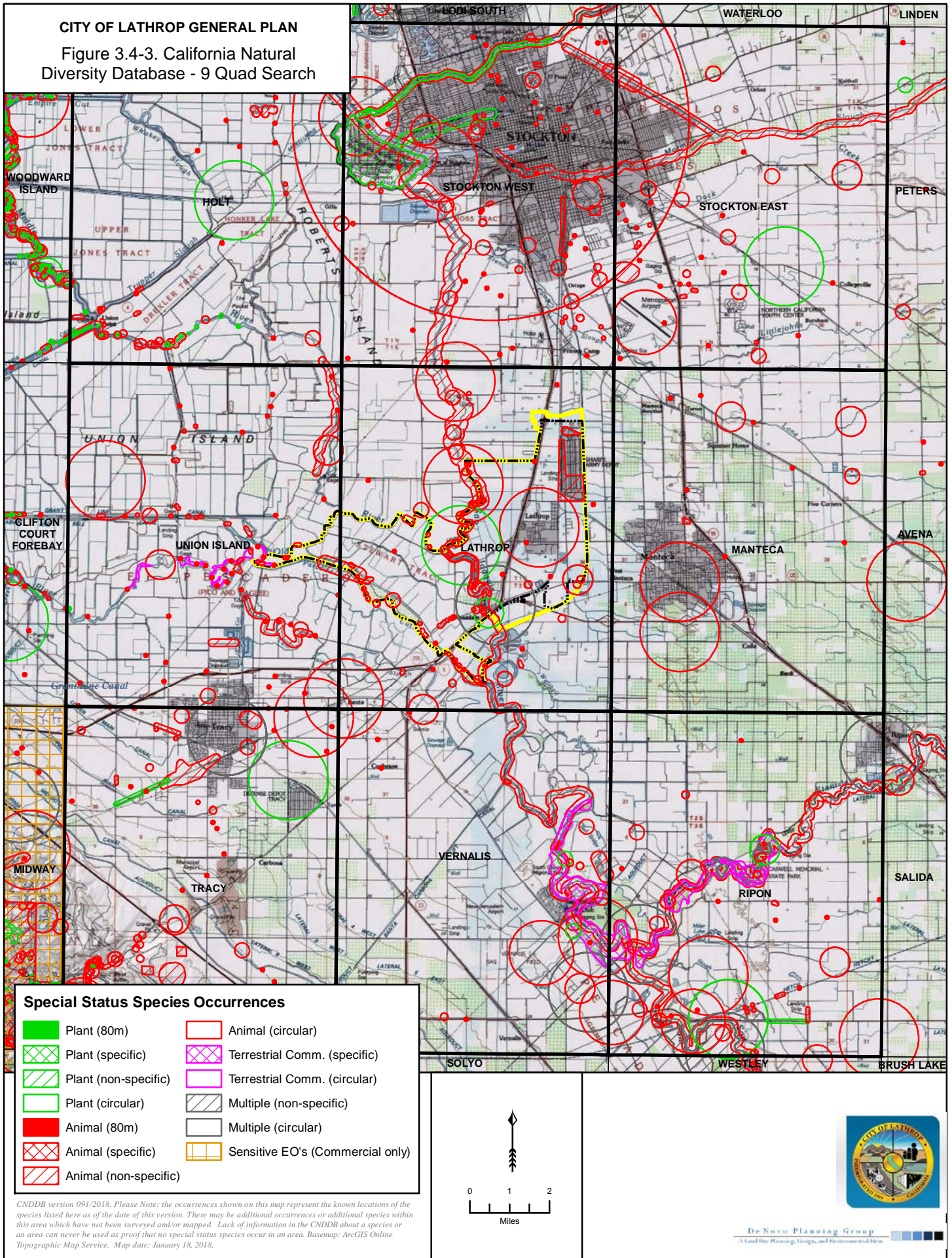
CNDDDB version 01/2018. Please Note: the occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not been surveyed and/or mapped. Lack of information in the CNDDDB about a species or an area can never be used as proof that no special status species occur in an area. Basemap: ArcGIS Online Topographic Map Service. Map date: January 18, 2018.



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CITY OF LATHROP GENERAL PLAN

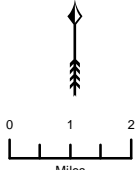
Figure 3.4-3. California Natural Diversity Database - 9 Quad Search



Special Status Species Occurrences

- | | |
|-----------------------|----------------------------------|
| Plant (80m) | Animal (circular) |
| Plant (specific) | Terrestrial Comm. (specific) |
| Plant (non-specific) | Terrestrial Comm. (circular) |
| Plant (circular) | Multiple (non-specific) |
| Animal (80m) | Multiple (circular) |
| Animal (specific) | Sensitive EO's (Commercial only) |
| Animal (non-specific) | |

CNDDDB version 091/2018. 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 CNDDDB about a species or an area can never be used as proof that no special status species occur in an area. Basemap: ArcGIS Online Topographic Map Service. Map date: January 18, 2018.



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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 Lathrop. 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 three responses received during the 30-day NOP comment period are summarized below.

- On October 12, 2021, Ms. Katy Sanchez, Associate Environmental Planner, of the NAHC responded with information that outlined the consultation requirements of SB 18 and AB 52. Additionally, the NAHC highlighted their recommendations for conducting cultural resources assessments.
- On October 19, 2021, Ms. Katherine Perez, of the Northern Valley Yokut/Ohlone/Bay Mewuk Tribe, responded with an email and associated attachments which outlined additional Tribal mitigation measures. Ms. Perez expressed concern over the potential for inadvertent discoveries of human remains within the City of Lathrop. She made the request that any proposed projects be monitored by a Tribal monitor affiliated with the Northern Valley Yokut/Ohlone/Bay Mewuk Tribe.
- On October 26, 2021, Ms. Silvia Burley, Chairperson of the California Valley Miwok Tribe, responded with a letter expressing concerns related to government-to-government consultation with the City of Lathrop. Ms. Burley reiterated that the City of Lathrop should consult directly with the California Valley Miwok Tribe as opposed to hiring a third-party to initiate consultation. The letter referenced Section 65351 of the California Environmental Quality Act (CEQA) as requiring the local agency and not a third party to provide opportunities for Indian Tribes to be involved in the preparation or amendment of a General Plan. Additionally, Ms. Burley defined consultation as a good faith, two-way communication between governments with the mutual intent to seek agreement rather than an exercise in collecting information from the Tribe.

City staff sent a consultation letter (dated 11/24/21) to Ms. Burley via Certified Mail. USPS tracking shows Ms. Burley received and signed the Certified Mail on 11/26/21. No further comments or response were received.

All comments received during the NOP comment period are included in Appendix A.

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 Central Valley region was among the first in the state to attract intensive fieldwork, and research has continued to the present day. This has resulted in a substantial accumulation of data.

In the early decades of the 1900s, E.J. Dawson explored numerous sites near Stockton and Lodi, later collaborating with W.E. Schenck (Schenck and Dawson 1929). By 1933, the focus of work was directed to the Cosumnes locality, where survey and excavation studies were conducted by the Sacramento Junior College (Lillard and Purves 1936). Excavation data, in particular from the stratified Windmill site (CA-Sac-107), suggested two temporally distinct cultural traditions. Later work at other mounds by Sacramento Junior College and the University of California, Berkeley, enabled the investigators to identify a third cultural tradition, intermediate between the previously postulated Early and Late Horizons. The three-horizon sequence, based on discrete changes in ornamental artifacts and mortuary practices, as well as on observed differences in soils within sites (Lillard, Heizer and Fenenga 1939), was later refined by Beardsley (1954). An expanded definition of artifacts diagnostic of each time period was developed, and its application extended to parts of the central California coast. Traits held in common allow the application of this system within certain limits of time and space to other areas of prehistoric central California.

The Windmill Culture (Early Horizon) is characterized by ventrally-extended burials (some dorsal extensions are known), with westerly orientation of heads; a high percentage of burials with grave goods; frequent presence of red ocher in graves; large projectile points, of which 60 percent are of materials other than obsidian; rectangular *Haliotis* beads; *Olivella* shell beads (types A1a and L); rare use of bone; some use of baked clay objects; and well-fashioned charmstones, usually perforated.

The Cosumnes Culture (Middle Horizon) displays considerable changes from the preceding cultural expression. The burial mode is predominately flexed, with variable cardinal orientation and some

cremations present. There are a lower percentage of burials with grave goods, and ocher staining is common in graves. *Olivella* beads of types C1, F and G predominate, and there is abundant use of green *Haliotis* sp. rather than red *Haliotis* sp. Other characteristic artifacts include perforated and canid teeth; asymmetrical and "fishtail" charmstones, usually unperforated; cobble mortars and evidence of wooden mortars; extensive use of bone for tools and ornaments; large projectile points, with considerable use of rock other than obsidian; and use of baked clay.

Hotchkiss Culture (Late Horizon) -- The burial pattern retains the use of the flexed mode, and there is wide spread evidence of cremation, lesser use of red ocher, heavy sue of baked clay, *Olivella* beads of Types E and M, extensive use of *Haliotis* ornaments of many elaborate shapes and forms, shaped mortars and cylindrical pestles, bird-bone tubes with elaborate geometric designs, clam shell disc beads, small projectile points indicative of the introduction of the bow and arrow, flanged tubular pipes of steatite and schist, and use of magnesite (Moratto 1984:181-183). The characteristics noted are not all-inclusive, but cover the more important traits.

Schulz (1981), in an extensive examination of the central California evidence for the use of acorns, used the terms Early, Middle and Late Complexes, but the traits attributed to them remain generally the same. While it is not altogether clear, Schulz seemingly uses the term "Complex" to refer to the particular archeological entities (above called "Horizons") as defined in this region. Ragir's (1972) cultures are the same as Schulz's complexes.

Bennyhoff and Hughes (1984) have presented alternative dating schemes for the Central California Archeological Sequence. The primary emphasis is a more elaborate division of the horizons to reflect what is seen as cultural/temporal changes within the three horizons and a compression of the temporal span.

There have been other chronologies proposed, including Fredrickson (1973), and since it is correlated with Bennyhoff's (1977) work, it does merit discussion. The particular archeological cultural entities Fredrickson has defined, based upon the work of Bennyhoff, are patterns, phases and aspects. Bennyhoff's (1977) work in the Plains Miwok area is the best definition of the Cosumnes District, which likely conforms to Fredrickson's pattern. Fredrickson also proposed periods of time associated heavily with economic modes, which provides a temporal term for comparing contemporary cultural entities. It corresponds with Willey and Phillips' (1958) earlier "tradition", although it is tied more specifically to the archeological record in California.

ETHNOLOGY

The City of Lathrop General Plan Study Area lies within the northern portion of the ethnographic territory of the Yokuts people. The Yokuts were members of the Penutian language family which held all of the Central Valley, San Francisco Bay Area, and the Pacific Coast from Marin County to near Point Sur. The Yokuts differed from other ethnographic groups in California as they had true tribal divisions with group names (Kroeber 1925; Latta 1949). Each tribe spoke a particular dialect, common to its members, but similar enough to other Yokuts that they were mutually intelligible (Kroeber 1925).

3.5 CULTURAL AND TRIBAL RESOURCES

The Yokuts held portions of the San Joaquin Valley from the Tehachapis in the south to Stockton in the north. On the north they were bordered by the Plains Miwok, and on the west by the Saclan or Bay Miwok and Costanoan peoples. Although neighbors were often from distinct language families, differences between the people appear to have been more influenced by environmental factors as opposed to linguistic affinities. Thus, the Plains Miwok were more similar to the nearby Yokuts than to foothill members of their own language group. Similarities in cultural inventory co-varied with distance from other groups and proximity to culturally diverse people. The material culture of the southern San Joaquin Yokuts was therefore more closely related to that of their non-Yokuts neighbors than to that of Delta members of their own language group.

Trade was well developed, with mutually beneficial interchange of needed or desired goods. Obsidian, rare in the San Joaquin Valley, was obtained by trade with Paiute and Shoshoni groups on the eastern side of the Sierra Nevada, where numerous sources of this material are located, and to some extent from the Napa Valley to the north. Shell beads, obtained by the Yokuts from coastal people, and acorns, rare in the Great Basin, were among many items exported to the east by Yokuts traders (Davis 1961).

Economic subsistence was based on the acorn, with substantial dependency on gathering and processing of wild seeds and other vegetable foods. The rivers, streams, and sloughs that formed a maze within the valley provided abundant food resources such as fish, shellfish, and turtles. Game, wild fowl, and small mammals were trapped and hunted to provide protein augmentation of the diet. In general, the eastern portion of the San Joaquin Valley provided a lush environment of varied food resources, with the estimated large population centers reflecting this abundance (Cook 1955; Baumhoff 1963).

Settlements were oriented along the water ways, with their village sites normally placed adjacent to these features for their nearby water and food resources. House structures varied in size and shape (Latta 1949; Kroeber 1925), with most constructed from the readily available tules found in the extensive marshes of the low-lying valley areas. The housepit depressions for the structures ranged in diameter from 3 meters to 18 meters (Wallace 1978:470).

HISTORIC PERIOD BACKGROUND

The northern section of the City of Lathrop on a portion of the Rancho Campo de los Franceses, the ranch named for the early camp first occupied by French-Canadian trappers employed by the Hudson's Bay Company in 1832. The site of the present-day location of French Camp was the terminus of the Oregon Trail used by the trappers between 1832 and 1845. In 1843, William Gulnac, likely one of the trappers who had become a Mexican citizen, with Charles Weber, later founder of Stockton, organized a company of 12 men for the purpose of forming a colony at French Camp. Gulnac filed for a land grant, and was awarded a large tract of land including French Camp and the later site of Stockton by the Mexican government.

Much of the remainder of the land is a portion of the El Pescadero land grant. The Mexican land grant of 35,546 acres, lying in portions of what is now San Joaquin and Alameda counties, was awarded in 1843 to Antonio Maria Pico. Pico sold one half of the property to Henry Morris Naglee

in 1849. Pico sold one half of the remainder of the property in 1852 to John C. Frémont. After California became a state, a claim was filed for the grant in 1852 and rejected in 1854, but ultimately the land grant was patented to Pico and Naglee in 1865. The land grant was settled by numerous squatters, and Fremont sold his land to Charles McLaughlin in 1867.

Lathrop first was a station on the Central Pacific, established in 1869 when the last stretch of the transcontinental railroad was built from Sacramento through this region, and crossing the San Joaquin River at Mossdale to reach the Bay Area.

The site of Lathrop was first known as Wilson's Station, and included a store and a schoolhouse on land belonging to Thomas A. Wilson. Due to conflicts in the City of Stockton that infuriated Leland Stanford, the Central Pacific Railroad switched many operations to Wilson's Station, later renamed for Charles Lathrop, brother-in-law of Leland Stanford. The town drew significant commerce away from the City of Stockton. The railroad's machine shops and roundhouse were built here, and the town became an important division point and major stop on the railroad line beginning in 1871. The Visalia Division of the Southern Pacific Railroad was completed at that time, serving the San Joaquin Valley. Lathrop became an important shipping point for agricultural products.

The early major building in Lathrop was the 1871 Central Pacific Railroad restaurant, serving passengers from trains from the Bay Area to Sacramento, and passengers travelling to the San Joaquin Valley. In 1889, in this restaurant, attorney David S. Terry was shot and killed by Field's bodyguard after he struck a United States Supreme Court Justice Stephen Field.

Lathrop remained important for the railroads, and in 1890, had about 500 residents. Daily, there were twelve passenger and 44 freight trains passing through. But that changed in the early 1890s with the growth of Tracy, and the transfer of the machine shop and roundhouse to that community. The completion of the Western Pacific railroad in 1909 did not affect the town, with the local station located about $\frac{3}{4}$ miles from the town.

In 1942, the Lathrop Holding and Reconsignment Point was established in the Lathrop vicinity on what had been a sheep ranch, holding supplies for shipment through Bay Area ports. As many as 450 railroad cars would be loaded and unloaded each day.

The facility has gone through many changes with the changing needs of the military during times of conflict. After the end of World War II, the depot went through administrative and supply mission changes, a new name applied in 1948: Sharpe General Depot. The conflict in Korea brought a demand for increased services as the staffing, shipments and missions doubled during the three years of the war. The Army curtailed supply operations, and the Sharpe site began providing medical supplies and subsistence items on a larger scale. In 1962, the facility became the Sharpe Army Depot.

In 1965, with the escalation of the war in Vietnam, Sharpe became the major conduit for supplies moving to Southeast Asia. The Sharpe facility has continued to operate with a large part of the staffing switched to the Tracy facility beginning in 1999.

3.5 CULTURAL AND TRIBAL RESOURCES

In the 1950s, several industrial plants were built in the Lathrop area, providing additional employment in the region. Beginning in the 1980s, improvements to community infrastructure and the attractive pricing of homes brought even more growth. The pattern of rapid growth continues to this day, with industrial and commercial development in the area, as well as many residents commuting daily to the Bay Area. The City of Lathrop incorporated in 1989.

CULTURAL RESOURCES IN THE LATHROP PLANNING AREA

California Historic Resources Inventory System

One hundred and seventy-two cultural resources have been identified within the City of Lathrop General Plan Study Area, according to files maintained by the Central California Information Center (CCIC) of the California Historical Resources Information System (CHRIS). The one hundred and seventy-two recorded cultural resources span both the prehistoric and historic periods and range from a Native American village site to historic period railroads, a school, buildings and single-family homes (see Table 3.5-1). The recorded resources include a Point of Historical Interest and two California Historical Landmarks. The greatest number of recorded cultural resources are buildings at the Sharpe facility.

TABLE 3.5-1: RESOURCES LISTED WITH THE CENTRAL CALIFORNIA INFORMATION CENTER FILE DIRECTORY

PROPERTY #	ADDRESS	PERIOD/TYPE	NAME
P-39-000002 (CA-SJO-250H)	Not Listed	Historic/ Railroad	Southern Pacific Railroad in San Joaquin County
P-39-000007 (CA-SJO-255)	Not Listed	Prehistoric/ Artifact scatter	Not Listed
P-39-000008	Not Listed	Historic/ Object	Not Listed
P-39-000009	Not Listed	Prehistoric/ Isolated Artifact	Not Listed
P-39-000010	Not Listed	Prehistoric/ Isolated Artifact	Not Listed
P-39-000011	Not Listed	Prehistoric/ Isolated Artifact	Not Listed
P-39-000012	Not Listed	Prehistoric/ Isolated Artifact	Not Listed
P-39-000013	Not Listed	Historic/ Farm Equipment	Not Listed
P-39-000014 (CA-SJO-19/H)	Not Listed	Prehistoric/ Village Historic/ Single Family Residence	18880 South Quierolo Road
P-39-000098 (CA-SJO-292H)	Not Listed	Historic/ Railroad	Western Pacific Railroad / Union Pacific Railroad
P-39-000130	Not Listed	Historic/ Building	Flammable Materials Storehouse (Building Number 39)
P-39-000131	Not Listed	Historic/ Building	Flammable Materials House Building (Building Number 40)
P-39-000132	Not Listed	Historic/ Building	Lumber Shed (Building Number 45)
P-39-000133	Not Listed	Historic/ Railroad, Buildings	Sharpe Facility Railroad System (Structures Number 101, 273, 573 and remaining rail lines)
P-39-000134	Not Listed	Historic/ Building	Water Supply/Treatment Building Number 121
P-39-000135	Not Listed	Historic/ Building	Water Pumphouses (Buildings Number 124, 137, 145)
P-39-000136	Not Listed	Historic/ Building	Sewage Pump Station (Building Number 313)
P-39-000137	Not Listed	Historic/ Building	Storm Water Pump Station (Building Number 442)
P-39-000138	Not Listed	Historic/ Building	Flammable Materials Storehouse (Building Number 691)
P-39-000141 (CA-SJO-3)	Not Listed	Prehistoric/ Village	Mossdale Wye
P-39-000517 (POI-SJO-006)	Not Listed	Historic/ Building	Eldon H. Gordon House
P-39-000531 (CHL-437)	Not Listed	Historic/ Site	First Landing Place of Sailing Launch "Comet"
P-39-000538 (CHL-780-7)	Not Listed	Historic/ Railroad Bridge	Union Pacific Railroad Bridge
P-39-000573	Not Listed	Historic/ Building	Auto Garage Building Number 116
P-39-000574	Not Listed	Historic/ Building	Fire Station Building Number 135
P-39-000575	Not Listed	Historic/ Building	Skill Development Center Building Number 161

3.5 CULTURAL AND TRIBAL RESOURCES

<i>PROPERTY #</i>	<i>ADDRESS</i>	<i>PERIOD/TYPE</i>	<i>NAME</i>
P-39-000576	Not Listed	Historic/ Building	Motor Repair Shop Building Number 171
P-39-000577	Not Listed	Historic/ Building	Maintenance Shop Building Number 179
P-39-000578	Not Listed	Historic/ Building	Administration Building Number 108
P-39-000579	Not Listed	Historic/ Building	Administration Building Number 290
P-39-000580	Not Listed	Historic/ Building	Motor Repair Shop Building Number 227
P-39-000581	Not Listed	Historic/ Building	Building 208
P-39-000582	Not Listed	Historic/ Building	Post Building Number 458
P-39-000583	Not Listed	Historic/ Building	Warehouse Building Number 404
P-39-000584	Not Listed	Historic/ Building	Aircraft Hanger Building Number 585
P-39-000585	Not Listed	Historic/ Building	Building Number 661
P-39-000586	Not Listed	Historic/ Building	FE Maintenance Shop Building Number 48
P-39-000587	Not Listed	Historic/ Building	Sewage Treatment Plant Building Number 307
P-39-000588	Not Listed	Historic/ Building	Police Administration Building Number 6
P-39-000589	Not Listed	Historic/ Building	Post Headquarters Building Number 1
P-39-000590	Not Listed	Historic/ Building	FE Facility Building Number 42
P-39-000591	Not Listed	Historic/ Building	General Storehouse Building Number 44
P-39-000592	Not Listed	Historic/ Building	FE Facility Building Number 41
P-39-000593	Not Listed	Historic/ Building	Warehouse Building Number 67
P-39-000594	Not Listed	Historic/ Building	Vehicle Storage Building Number 50
P-39-000595	Not Listed	Historic/ Building	Building Number 100
P-39-000596	Not Listed	Historic/ Building	Building Number 10
P-39-000597	Not Listed	Historic/ Building	Community Center Building Number 25
P-39-000598	Not Listed	Historic/ Building	Warehouse Building Number 640
P-39-000599	Not Listed	Historic/ Building	Administration Building Number 211
P-39-000600	Not Listed	Historic/ Building	Warehouse Building Number 486
P-39-000601	Not Listed	Historic/ Building	Building Number 648
P-39-000602	Not Listed	Historic/ Building	NCO Housing Building Number 27
P-39-000603	Not Listed	Historic/ Building	Housing Building Number 26
P-39-000604	Not Listed	Historic/ Building	Signal Field Maintenance Building Number 684

<i>PROPERTY #</i>	<i>ADDRESS</i>	<i>PERIOD/TYPE</i>	<i>NAME</i>
P-39-000605	Not Listed	Historic/ Building	Railroad Equipment Maintenance Building Number 101
P-39-000606	Not Listed	Historic/ Building	Civilian Personnel Building Number 3
P-39-000607	Not Listed	Historic/ Building	Dispensary Building Number 7
P-39-000608	Not Listed	Historic/ Building	Post Chapel Building Number 11
P-39-000609	Not Listed	Historic/ Building	Enlisted Men's Barracks
P-39-000610	Not Listed	Historic/ Buildings	Quinones AFRC Buildings Numbers 75 and 76
P-39-000611	Not Listed	Historic/ Building	Building Number 655
P-39-000612	Not Listed	Historic/ District	Sharpe Army Depot, California
P-39-000616	Not Listed	Historic/ Building	Care and Preservation Building Number 649
P-39-004234 (CA-SJO-274H)	Not Listed	Historic/ Concrete Pylons	MD-1 / The Pylon Site
P-39-004235	Not Listed	Prehistoric/ Isolated Artifact	Iso-1
P-39-004333 (CA-SJO-280)	Not Listed	Prehistoric/ Village	River Islands Site 1
P-39-004334	Not Listed	Historic/ Railroad Bridge	Union Pacific Railroad Bridge
P-39-004335	Not Listed	Prehistoric/ Isolated Artifact	River Islands Isolate 1
P-39-004336	Not Listed	Prehistoric/ Isolated Artifact	River Islands Isolate 2
P-39-004339 (CA-SJO-300H)	Not Listed	Historic/ Refuse Scatter	Moss-1
P-39-004340 (CA-SJO-281H)	Not Listed	Historic/ Buildings, Refuse Scatter	Moss-2
P-39-004341	Not Listed	Prehistoric/ Isolated Artifact	Moss Isolate 1
P-39-004342	Not Listed	Historic/ Isolated Artifact	Moss Isolate 2
P-39-004343	Not Listed	Historic/ Isolated Artifact	Moss Isolate 3
P-39-004344	Not Listed	Historic/ Pump	Moss Isolate 4
P-39-004345	Not Listed	Prehistoric/ Isolated Artifact	Moss Isolate 5
P-39-004346	Not Listed	Historic/ Isolated Artifact	Moss Isolate 6
P-39-004347	Not Listed	Prehistoric/ Isolated Artifact	Moss Isolate 7
P-39-004357	Not Listed	Historic/ Bridge	San Joaquin River Mossdale Bridge 29C-127
P-39-004504	Not Listed	Historic/ Farm Complex	Armstrong #1
P-39-004510	Not Listed	Historic/ Bridge	W 120-S5 Connector OH Bridge 29-0016F
P-39-004547 (CA-SJO-304H)	Not Listed	Historic/ Single Family Residence	EC-06-02

3.5 CULTURAL AND TRIBAL RESOURCES

<i>PROPERTY #</i>	<i>ADDRESS</i>	<i>PERIOD/TYPE</i>	<i>NAME</i>
P-39-004548 (CA-SJO-395H)	Not Listed	Historic/ Buildings	EC-06-03
P-39-004549	Not Listed	Historic/ Brick Wall Fragment	IO-1
P-39-004562	Not Listed	Historic/ Building	Building 51
P-39-004563	Not Listed	Historic/ Building	Union Office (AFGE Local 145) Building Number 110
P-39-004564	Not Listed	Historic/ Structure	Water Reservoir 500,00 gallons Building Number 123
P-39-004565	Not Listed	Historic/ Structure	Elevated Water Tank Building Number 131
P-39-004566	Not Listed	Historic/ Building	Storage Building Number 178
P-39-004567	Not Listed	Historic/ Building	Maintenance Shop, General Purpose Building Number 179
P-39-004568	Not Listed	Historic/ Building	Sewage Pump Building Number 215
P-39-004569	Not Listed	Historic/ Building	DLA Quality Assurance Facility/Warehouse Building Number 404
P-39-004570	Not Listed	Historic/ Building	Storage Building Number 412
P-39-004571	Not Listed	Historic/ Building	Sewage Pump Building Number 413
P-39-004572	Not Listed	Historic/ Building	Sewage Pump Building Number 650
P-39-004573	Not Listed	Historic/ Building	Care and Preservation Shop Building Number 653
P-39-004574	Not Listed	Historic/ Building	Compressor Building Number 666
P-39-004597	Not Listed	Historic/ Building	Paint Shop Building Number 53
P-39-004602	Not Listed	Historic/ Building	Silveria Complex
P-39-004603 (CA-SJO-313H)	Not Listed	Historic/ Refuse Scatter	EC-06-52
P-39-004604 (CA-SJO-314H)	Not Listed	Historic/ Water Conveyance System	EC-06-53
P-39-004605	Not Listed	Prehistoric/ Isolated Artifact	South Lathrop, South Village, Iso 1
P-39-004606	Not Listed	Prehistoric/ Isolated Artifact	South Lathrop, South Village, Iso 2
P-39-004607	Not Listed	Prehistoric/ Isolated Artifact	South Lathrop, South Village, Iso 3
P-39-004608	Not Listed	Prehistoric/ Isolated Artifact	South Lathrop, South Village, Iso 4
P-39-004609	Not Listed	Historic/ Water Trough	South Lathrop, South Village, Iso 5
P-39-004610	Not Listed	Historic/ Water Pump	South Lathrop, South Village, Iso 6
P-39-004611	Not Listed	Historic/ Building	EC-06-21

<i>PROPERTY #</i>	<i>ADDRESS</i>	<i>PERIOD/TYPE</i>	<i>NAME</i>
P-39-004612	Not Listed	Historic/ Building	EC-06-30
P-39-004613	Not Listed	Historic/ Building	EC-06-31
P-39-004614	Not Listed	Historic/ Building	EC-06-32
P-39-004615	Not Listed	Historic/ Building	EC-06-34
P-39-004616	Not Listed	Historic/ Building	EC-06-35
P-39-004617	Not Listed	Historic/ Building	EC-06-36
P-39-004618	Not Listed	Historic/ Building	EC-06-37
P-39-004619	Not Listed	Historic/ Building	EC-06-38
P-39-004620	Not Listed	Historic/ Building	EC-06-39
P-39-004621	Not Listed	Historic/ Building	EC-06-40
P-39-004622	Not Listed	Historic/ Building	EC-06-41
P-39-004623	Not Listed	Historic/ Building	EC-06-42
P-39-004624	Not Listed	Historic/ Building	EC-06-43
P-39-004625	Not Listed	Historic/ Building	EC-06-44
P-39-004626	Not Listed	Historic/ Building	EC-06-45
P-39-004627	Not Listed	Historic/ Building	EC-06-46
P-39-004628	Not Listed	Historic/ Building	EC-06-47
P-39-004629	Not Listed	Historic/ Building	EC-06-48
P-39-004630	Not Listed	Historic/ Building	EC-06-49
P-39-004631	Not Listed	Historic/ Building	EC-06-50
P-39-004632	Not Listed	Historic/ Building	EC-06-51
P-39-004633	Not Listed	Historic/ Building	EC-06-54
P-39-004634	Not Listed	Historic/ Building	EC-06-55
P-39-004635	Not Listed	Historic/ Building	EC-06-56
P-39-004636	Not Listed	Historic/ Building	EC-06-57
P-39-004637	Not Listed	Historic/ Building	EC-06-58
P-39-004638	Not Listed	Historic/ Building	EC-06-59
P-39-004688	5600 West Stewart Road	Historic/ Buildings	R1-1H
P-39-004649	5100 West Stewart Road	Historic/ Single Family	R1-2H

3.5

CULTURAL AND TRIBAL RESOURCES

<i>PROPERTY #</i>	<i>ADDRESS</i>	<i>PERIOD/TYPE</i>	<i>NAME</i>
		Residence, Sheds	
P-39-004650	5100 West Stewart Road	Historic/ Single Family Residence, Shed	R1-3H
P-39-004651	4200 West Stewart Road	Historic/ Outbuilding, Cattle Chute	R1-4H
P-39-004652	16426 Cohen Road	Historic/ Single Family Residence, Sheds	R1-6H
P-39-004653	16777 South Cohen Road	Historic/ Single Family Residence, Shed	R1-7H
P-39-004654	1710 Stewart Road	Historic/ Single Family Residence, Sheds	R1-8H
P-39-004655	1417 Stewart Road	Historic/ Single Family Residence, Sheds	R1-9H
P-39-004656	Not Listed	Historic/ Silos	R1-10H
P-39-004657	454 West Stewart Road	Historic/ Sheds	R1-11H
P-39-004658	Not Listed	Historic/ Silos	R1-12H
P-39-004659	294 West Stewart Road	Historic/ Single Family Residence, Sheds	R1-14H
P-39-004660	301 West Stewart Road	Historic/ Single Family Residence, Garage	R1-15H
P-39-004661	Not Listed	Water Conveyance Features (Canals)	R1-16H to 32H
P-39-004857	Not Listed	Historic/ Structure	Old River Levees
P-39-005029	Not Listed	Historic/ Building	Bachelor Officers Quarters Building Number 4
P-39-005045	Not Listed	Historic/ School	Mossdale Middle School, Moulder, Mt. Carmel School
P-39-005084	Not Listed	Historic/ Levee	Paradise Cut Levee
P-39-005085	Not Listed	Historic/ Levee	San Joaquin River Levee
P-39-005086	Not Listed	Historic/ Levee	RD 17 West Levee, Walthall Slough Dry Land Levee
P-39-005096	Not Listed	Historic/ School	Lathrop School
P-39-005108	Not Listed	Historic/ Structure	Paved Open Storage, Former Fixed-Wing Aircraft Runway and Aircraft Holding Apron

<i>PROPERTY #</i>	<i>ADDRESS</i>	<i>PERIOD/TYPE</i>	<i>NAME</i>
			Buildings Number 595/597
P-39-005140	Not Listed	Historic/ Building	Industrial Waste Treatment Building Number 306
P-39-005227 (CA-SJO-355H)	Not Listed	Historic/ Water Conveyance Feature (Ditch)	AW-1
P-39-005249	Not Listed	Historic/ Building	Building Number 26
P-39-005251	Not Listed	Historic/ Building	Building Number 21
P-39-005252	Not Listed	Historic/ Building	Building Number 29
P-39-005253	Not Listed	Historic/ Building	Building Number 32
P-39-005254	Not Listed	Historic/ Building	Building Number 28
P-39-005255	Not Listed	Historic/ Building	Building Number 30
P-39-005256	Not Listed	Historic/ Building	Building Number 31
P-39-005257	Not Listed	Historic/ Building	Building Number 33
P-39-005258	Not Listed	Historic/ Building	Building Number 34
P-39-005259	Not Listed	Prehistoric/ Isolated Artifacts	Prehistoric Artifacts
P-39-005260	Not Listed	Historic/ Foundation	Feature SD-1

There are no properties or districts currently listed on the National Register of Historic Places or California Register of Historic Places for the City of Lathrop Study Area (www.nationalregisterofhistoricplaces.com).

NATIVE AMERICAN CONSULTATION

During the onset of the general plan update, while preparing the General Plan Existing Conditions Report, consultation letters were sent to: The Native American Heritage Commission; Mr. Randy Yonemura, Lone Band of Miwok Indians; Ms. Katherine Erolinda Perez, Northern Valley Yokuts Tribe; Mr. Gene Whitehouse, Chairman, United Auburn Indian Community of the Auburn Rancheria; Ms. Rhonda Morningstar Pope, Chairperson, Buena Vista Rancheria of Me-Wuk Indians; Ms. Crystal Martinez, Chairperson, Lone Band of Miwok Indians; Ms. Lois Martinez, Chairperson, Southern Sierra Miwuk Nation; Mr. Raymond Hitchcock, Chairperson, Wilton Rancheria; and, California Valley Miwok Tribe. The Native American Heritage Commission responded with a letter dated December 14, 2017. The NAHC letter stated that a record search of the NAHC Sacred Lands File was completed for the area of potential project effect (APE) with negative results, and notes that the absence of specific site information in the Sacred Lands File does not indicate the absence of Native American cultural resources in any APE.

Consultation letters were then resent to the Northern Valley Yokuts, Buena Vista Rancheria Me-Wuk Indians, and California Valley Miwok Tribe on October 11, 2021 due the City updating their AB 52 list. The City received three response letters related to the NOP. The Native American Heritage Commission (NAHC) submitted a letter, dated October 12, 2021, the California Miwok Tribe submitted a letter dated October 26, 2021, and the Northern Valley Yokut/Ohlone/Bay Mewuk submitted an e-mail with attachments dated October 19, 2021. The NAHC comment letter provided an overview of tribal consultation requirements, and recommended approaches to reducing potential impacts to cultural and tribal resources. The California Miwok Tribe letter emphasized that the City of Lathrop engage in government-to-government consultation with the Tribe as opposed to relying on a third party to collect information for the EIR. The letter also mentioned that there are significant Tribal cultural resources within the city as highlighted in previous letter sent to the Planning Commission in May 2021 and the City staff in July 2021. The Northern Valley Yokut/Ohlone/Bay Mewuk email provided mitigation recommendations for when specific projects are implemented in the future and emphasized the need to hire Tribal monitors during construction activities. In response, City staff sent a consultation letter (dated 11/24/21) to Ms. Burley via Certified Mail. USPS tracking shows Ms. Burley received and signed the Certified Mail on 11/26/21. No further comments or response were received.

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

3.5 CULTURAL AND TRIBAL RESOURCES

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

3.5 CULTURAL AND TRIBAL RESOURCES

- 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.

LOCAL

Chapter 17.38 Historic Lathrop Overlay District

The historic Lathrop residential overlay district is intended for use in the historic Lathrop area. This district is intended:

- A. To prevent neighborhood deterioration in the R one-family existing subdivided lots;
- B. To create the opportunity for small lot subdivisions of parcels in the R one-family zone for affordable single-family housing;
- C. To create affordable attached and detached RM multifamily housing. (Ord. 05-252 § 1)

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;
- 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 Table 3.5-1, and it is expected that additional undiscovered sites may be located in various areas of the city as well.

The City of Lathrop currently has 172 previously recorded archaeological sites (18 prehistoric sites and 154 historic archaeological sites) identified by the CCIC. Among these sites are a Native American village, historic railroad sites, and a host of historic buildings. The Sharpe facility contains the greatest number of building sites. The Native American village site is associated with the San Joaquin River which supports the increased likelihood of additional Native American sites being adjacent to the river.

The General Plan does not directly propose any adverse impacts to historic, archaeological, or cultural resources within the city. The General Plan does identify where future development may occur which could affect both known and yet to be identified historic and archaeological resources. This is considered a potentially significant impact, which would be minimized through the implementation of the policies and actions listed below that include review requirement for future projects.

As the City considers future development and infrastructure projects, each project will be evaluated to ensure conformance with the City’s General Plan, Municipal Code, and applicable State and local regulations. Development and infrastructure projects would also be analyzed individually for potential environmental impacts as required by CEQA. The General Plan includes policies and actions that would both reduce impacts to and conserve cultural, historic, and archaeological resources. Adoption and implementation of the policies and actions listed below, combined with CEQA review requirements, and would ensure that impacts to historic and archaeological resources are **less than significant**.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

RECREATION AND RESOURCES ELEMENT POLICIES

- RR-3.1 Preservation. Protect areas containing significant historic, archaeological, and paleontological resources, as defined by the California Public Resources Code.
- RR-3.2 San Joaquin County Coordination. Coordinate with San Joaquin County to preserve local historic resources, conserve historical assets within the City, and allow for local community events to occur at these special locations.

RECREATION AND RESOURCES ELEMENT ACTIONS

- RR-3a: Require a cultural and archaeological survey prior to approval of any project which would require excavation in an area that is sensitive for cultural, tribal, or archaeological resources. If significant cultural, tribal, or archaeological resources, including historic and prehistoric resources, are identified, appropriate measures shall be implemented, such as documentation and conservation, to reduce adverse impacts to the resource. If resources are known or reasonably anticipated to be encountered during construction, the City shall require a detailed mitigation plan which shall require monitoring during grading and other earthmoving activities in undisturbed sediments, and provide a treatment plan for potential resources that may be encountered.
- RR-3c City staff shall require applicants for future proposed projects that would alter or demolish intact extant building(s) listed, or eligible to be listed on the California Register of Historical Resources to provide a historic resource technical study evaluating the significance and data potential of the resource. If significance criteria are met, detailed mitigation recommendations are required as part of the technical study. All work will be performed by a qualified architectural historian meeting Secretary of the Interior Standards
- RR-3d Require all development, infrastructure, and other ground-disturbing projects to comply with the following conditions in the event of an inadvertent discovery of a paleontological resource:
- A. If construction or grading activities result in the discovery of significant prehistoric archaeological artifacts or unique paleontological resources, all work within 100 feet of the discovery shall cease, the Community Development Director shall be notified, the resources shall be examined by a qualified archaeologist, paleontologist, or historian for appropriate protection and preservation measures; and work may only resume when appropriate protections are in place and have been approved by the Community Development Director.

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 San Joaquin County 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. This is considered a potentially significant impact, which minimized through the implementation of the policies and actions listed below, that ensures 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

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

RECREATION AND RESOURCES ELEMENT POLICIES

RR-3.3 Human Remains. 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.

RECREATION AND RESOURCES ELEMENT ACTIONS

RR-3.3b Require all new development, infrastructure, and other ground-disturbing projects to comply with the following conditions in the event of an inadvertent discovery of cultural resources or human remains:

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- A. If construction or grading activities result in the discovery of significant historic or prehistoric archaeological artifacts or unique paleontological resources, all work within 100 feet of the discovery shall cease, the Community Development Director shall be notified, the resources shall be examined by a qualified archaeologist, paleontologist, or historian for appropriate protection and preservation measures; and work may only resume when appropriate protections are in place and have been approved by the Community Development Director; and
- B. If human remains are discovered during any ground disturbing activity, work shall stop until the Community Development Director and the San Joaquin County Coroner have been contacted. If the human remains are determined to be of Native American origin, the Native American Heritage Commission and the most likely descendants shall be consulted; and work may only resume when appropriate measures have been taken and approved by the Community Development Director.

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 Lathrop conducted consultations with Native American Tribes under Senate Bill 18 (Chapter 905, Statutes of 2004), which requires local governments to consult with Tribes prior to making certain planning decisions. Senate Bill 18 (SB 18) also requires consultation and notice for a general and specific plan adoption or amendments with the purpose of preserving or mitigating impacts on cultural places that may be affected. The City also conducted Tribal consultations under the California Environmental Quality Act (CEQA) ((Public Resources Code section 21080.3.1 subdivisions (b), (d) and (e)), also known as AB52, provisions which requires consulting for projects within the City of Lathrop's jurisdiction and that are within the traditional territory of the Tribal Organizations who have previously requested AB52 consultations with the City.

As described previously, initial letters were sent to: The Native American Heritage Commission; Mr. Randy Yonemura, Ione Band of Miwok Indians; Ms. Katherine Erolinda Perez, Northern Valley Yokuts Tribe; Mr. Gene Whitehouse, Chairman, United Auburn Indian Community of the Auburn Rancheria; Ms. Rhonda Morningstar Pope, Chairperson, Buena Vista Rancheria of Me-Wuk Indians; Ms. Crystal Martinez, Chairperson, Ione Band of Miwok Indians; Ms. Lois Martinez, Chairperson, Southern Sierra Miwuk Nation; Mr. Raymond Hitchcock, Chairperson, Wilton Rancheria; and, California Valley Miwok Tribe. The Native American Heritage Commission responded with a letter dated December 14, 2017.

Consultation letters were then resent to the Northern Valley Yokuts, Buena Vista Rancheria Me-Wuk Indians, and California Valley Miwok Tribe on October 11, 2021 due the City updating their AB 52 list. The City received three response letters related to the NOP. The Native American Heritage Commission (NAHC) submitted a letter, dated October 12, 2021, the California Miwok Tribe submitted a letter dated October 26, 2021, and the Northern Valley Yokut/Ohlone/Bay Mewuk submitted an e-mail with attachments dated October 19, 2021. The NAHC comment letter provided an overview of tribal consultation requirements, and recommended approaches to reducing potential impacts to cultural and tribal resources. The California Miwok Tribe letter emphasized that the City of Lathrop engage in government-to-government consultation with the Tribe as opposed to relying on a third party to collect information for the EIR. The letter also mentioned that there are significant Tribal cultural resources within the City as highlighted in previous letter sent to the Planning Commission in May 2021 and the City staff in July 2021. The Northern Valley Yokut/Ohlone/Bay Mewuk email provided mitigation recommendations for when specific projects are implemented in the future and emphasized the need to hire Tribal monitors during construction activities.

City staff sent a consultation letter (dated 11/24/21) to Ms. Burley via Certified Mail. USPS tracking shows Ms. Burley received and signed the Certified Mail on 11/26/21. No further comments or response were received.

The General Plan and local CEQA guidelines require tribal consultation and the protections of any identified archeological and tribal resources. This is considered a potentially significant impact, which would be minimized through the implementation of the policies and actions listed below.

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, impacts from future development could impact unknown archaeological resources including Native American artifacts and human remains. Impacts would be minimized 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

RECREATION AND RESOURCES ELEMENT POLICIES

RR-3.4 Tribal Consultation. Consult with Native American tribes that may be impacted by proposed development, as necessary, and in accordance with state, local, and tribal intergovernmental consultation requirements.

RECREATION AND RESOURCES ELEMENT ACTIONS

RR-3a Require a cultural and archaeological survey prior to approval of any project which would require excavation in an area that is sensitive for cultural, tribal, or archaeological resources. If significant cultural, tribal, or archaeological resources, including historic and prehistoric resources, are identified, appropriate measures shall be implemented, such as documentation and conservation, to reduce adverse impacts to the resource. If resources are known or reasonably anticipated to be encountered during construction, the City shall require a detailed mitigation plan which shall require monitoring during grading and other earthmoving activities in undisturbed sediments, and provide a treatment plan for potential resources that may be encountered.

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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.

There were no comment letters related to this environmental topic during the NOP comment period. All comments received during the NOP comment period are included in Appendix A.

3.6.1 ENVIRONMENTAL SETTING

GEOMORPHIC PROVINCE

The Planning Area is located in the central portion of the Great Valley Geomorphic Province of California. The Great Valley Province is a broad structural trough bounded by the tilted block of the Sierra Nevada on the east and the complexly folded and faulted Coast Ranges on the west. The San Joaquin River is located just south and west of the City. This major river drains the Great Valley Province into the San Joaquin Delta to the north, ultimately discharging into the San Francisco Bay to the northwest.

REGIONAL GEOLOGY

The Planning Area lies in the San Joaquin Valley in central California. The San Joaquin Valley is located in the central portion of the Great Valley Geomorphic Province. The Great Valley, also known as the Central Valley, is a topographically flat, northwest-trending, structural trough (or basin) about 50 miles wide and 450 miles long. It is bordered by the Tehachapi Mountains on the south, the Klamath Mountains on the north, the Sierra Nevada on the east, and the Coast Ranges on the west.

The San Joaquin Valley is filled with thick sedimentary rock sequences that were deposited as much as 130 million years ago. Large alluvial fans have developed on each side of the Valley. The larger and more gently sloping fans are on the east side of the San Joaquin Valley and overlie metamorphic and igneous basement rocks. These basement rocks are exposed in the Sierra Nevada foothills and consist of meta-sedimentary, volcanic, and granitic rocks.

The Planning Area is relatively flat with natural gentle slope from east to west. The Planning Area's topography ranges in elevation from approximately 50 to 20 feet above sea level. Figure 3.6-1 shows the USGS Lathrop Quadrangle Topographic view.

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

3.6 GEOLOGY AND SOILS

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, San Joaquin 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

MM	EFFECTS
I	Movement is imperceptible
II	Movement may be perceived (by those at rest or in tall buildings)
III	Many feel movement indoors; may not be perceptible outdoors
IV	Most feel movement indoors; Windows, doors, and dishes will rattle
V	Nearly everyone will feel movement; sleeping people may be awakened
VI	Difficulty walking; Many items fall from shelves, pictures fall from walls
VII	Difficulty standing; Vehicle shaking felt by drivers; Some furniture breaks
VIII	Difficulty steering vehicles; Houses may shift on foundations
IX	Well-built buildings suffer considerable damage; ground may crack
X	Most buildings and foundations and some bridges destroyed
XI	Most buildings collapse; Some bridges destroyed; Large cracks in ground
XII	Large scale destruction; Objects can be thrown into the air

SOURCE: USGS GENERAL INTEREST PUBLICATION 1989-288-913.

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; however, significant earthquakes are documented in the region. Table 3.6-3 presents the significant earthquakes in the region.

TABLE 3.6-3: SIGNIFICANT EARTHQUAKES IN THE REGION

<i>MAGNITUDE</i>	<i>INTENSITY</i>	<i>LOCATION</i>	<i>YEAR</i>
7.1	N/A	Ridgecrest	2019
6.5	N/A	Ferndale Offshore	2016
6.0	VIII	South Napa	2014
5.6	VI	San Jose	2007
5.0	VII	Napa	2000
6.9	IX	Loma Prieta (San Andreas)	1989
5.4	N/A	Santa Cruz County	1989
6.2	N/A	Morgan Hill	1984
5.8	VII	Livermore	1980
5.7	N/A	Coyote Lake	1979
5.7	N/A	Santa Rosa	1969
5.3	N/A	Daly City	1957
5.4	N/A	Concord	1954
6.5	N/A	Calaveras fault	1911
7.9	IX	San Francisco	1906
6.8	N/A	Mendocino	1898
6.2	N/A	Mare Island	1898
6.3	N/A	Calaveras fault	1893
6.2	VIII	Winters	1892
6.4	N/A	Vacaville	1892
6.8	VII	Hayward	1868
6.5	VIII	Santa Cruz Mountains	1865
6.8	N/A	San Francisco Peninsula	1838

SOURCE: UNITED STATE GEOLOGICAL SURVEY, 2020.

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

Faults are classified as Historic, Holocene, Late Quaternary, Quaternary, and Pre-Quaternary according to the age of most recent movement. These classifications are described as follows:

- **Historic:** faults on which surface displacement has occurred within the past 200 years;
- **Holocene:** shows evidence of fault displacement within the past 11,000 years, but without historic record;
- **Late Quaternary:** shows evidence of fault displacement within the past 700,000 years, but may be younger due to a lack of overlying deposits that enable more accurate age estimates;
- **Quaternary:** shows evidence of displacement sometime during the past 1.6 million years;
- **Pre-Quaternary:** without recognized displacement during the past 1.6 million years.

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 U.S. Geological Survey identifies potential seismic sources within 5 miles of the Planning Area. The closest known faults classified as active by the U.S. Geological Survey include an unnamed fault east of the City of Tracy, located approximately 3 miles to the southwest of Lathrop, and the San Joaquin fault, located approximately 12 miles to the southwest of Lathrop. The Midway fault is located approximately 15 miles to the west. Other faults that could potentially affect Lathrop include the Corral Hollow-Carnegie fault, the Greenville fault, the Antioch fault, and the Los Positas fault. 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. Lathrop does not have surface expression of active faults and fault rupture is not anticipated. Figure 3.6-2 shown regional faults in relation to Lathrop.

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 zone, is located approximately 20 miles west of Lathrop.

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 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 2017) suggests that the potential for liquefaction ranges from low to high within the Planning Area given that many soils are high in sand and the water table is moderately high.

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 City is relatively

3.6 GEOLOGY AND SOILS

flat and areas susceptible to landslides are anticipated to be in the more sloped portions of the Planning Area.

OTHER GEOLOGIC 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 3.6-4 below identifies the type and range of soils found in the Planning Area.

TABLE 3.6-4: PLANNING AREA SOILS

<i>NAME</i>	<i>ACRES</i>	<i>PERCENT OF AOI</i>
Bisgani loamy coarse sand, partially drained, 0 to 2 percent slopes	162.1	1%
Boggiano clay loam, 0 to 2 percent slopes	5.4	0%
Columbia fine sandy loam, channeled, partially drained, 0 to 2 percent slopes, frequently flooded	79.8	1%
Columbia fine sandy loam, clayey substratum, partially drained, 0 to 2 percent slopes	1,385.8	10%
Columbia fine sandy loam, drained, 0 to 2 percent slopes	127.0	1%
Columbia fine sandy loam, partially drained, 0 to 2 percent slopes, occasionally flooded	328.7	2%
Delhi loamy sand, 0 to 2 percent slopes, MLRA 17	226.3	2%
Dello clay loam, drained, 0 to 2 percent slopes, overwashed	109.3	1%
Dello loamy sand, drained, 0 to 2 percent slopes	50.5	0%
Dello sand, partially drained, 0 to 2 percent slopes, occasionally flooded	14.5	0%
Dello sandy loam, clayey substratum, drained, 0 to 2 percent slopes	267.5	2%
Egbert silty clay loam, partially drained, 0 to 2 percent slopes	2,356.8	17%
Grangeville clay loam, partially drained, 0 to 2 percent slopes	330.5	2%
Grangeville fine sandy loam, partially drained, 0 to 2 percent slopes	333.1	2%
Guard clay loam, drained, 0 to 2 percent slopes	148.9	1%
Honcut sandy loam, 0 to 2 percent slopes	17.1	0%
Manteca fine sandy loam, 0 to 2 percent slopes	653.2	5%
Merritt silty clay loam, partially drained, 0 to 2 percent slopes	1,266.0	9%
Merritt silty clay loam, partially drained, 0 to 2 percent slopes, occasionally flooded	307.7	2%
Scribner clay loam, partially drained, 0 to 2 percent slopes	121.0	1%
Timor loamy sand, 0 to 2 percent slopes	471.9	3%
Tinnin loamy coarse sand, 0 to 2 percent slopes	1,588.5	12%
Urban land	1,164.7	9%
Valdez silt loam, organic substratum, partially drained, 0 to 2 percent slopes	66.5	0%
Veritas fine sandy loam, 0 to 2 percent slopes	1,560.8	11%
Water	433.7	3%

<i>NAME</i>	<i>ACRES</i>	<i>PERCENT OF AOI</i>
Total	13,577.3	100%

SOURCE: NRCS CUSTOM SOIL SURVEY 2018.

As shown in Table 3.6-4, the majority of soils within the Planning Area consist of course and fine sands and sandy loams. Below is a brief description of prominent soils within the Planning Area.

Columbia fine sandy loam, clayey substratum, partially drained. The Columbia series consists of deep, moderately well drained soils formed in alluvium from mixed sources. These soils are on flood plains and natural levees. The mean annual precipitation is 12 to 25 inches, (305 to 635 mm) and the mean annual temperature is about 61 degrees F, (16 degrees C). These soils are used for irrigated hay, small grain, and orchard and row crops. Vegetation consists of a fairly dense cover of oaks, cottonwoods, willows, vines, shrubs and grasses near stream channels, but more open away from the channels. These soils occur in the central valley of California. The soils are moderately extensive.

Merritt silty clay loam, partially drained. Merritt soils are on nearly level recent alluvial fans and flood plains at elevations of 5 feet below sea level to 60 feet above. The Merritt series consists of deep, poorly drained soils formed in alluvium from sedimentary rocks. Generally the soils are poorly drained; slow runoff; and have moderately slow permeability. Merritt soils are accocoated with recent alluvial fans and flood plains and have slopes of 0 to 2 percent. The mean annual precipitation is about 16 inches and the mean annual temperature is about 60 degrees F. The soils under intensive cultivation and are irrigated, producing a wide variety of field and row crops.

Egbert silty clay loam, partially drained. This very deep, poorly drained, nearly level soil formed in alluvium. Permeability is slow in this soil. Runoff is slow, and the hazard of water erosion is slight. The shrink-swell potential of this soil is moderate to high. The risk of corrosion is high for uncoated steel, and moderate for concrete. Soil limitations on building site development are considered moderate to severe, due to shrink-swell and flooding potential.

Manteca fine sandy loam. This moderately well drained, nearly level soil formed in alluvium. Permeability is moderate in this soil. Runoff is slow, and the hazard of water erosion is slight. The shrink-swell potential of this soil is low. The risk of corrosion is high for uncoated steel, and low for concrete. Soil limitations on building site development are considered moderate to severe, due to flooding potential and the existence of cemented pan.

Tinnin loamy coarse sand. This series consists of well drained soils on low fan terraces and alluvial fans. These soils are very deep, and form in alluvium derived from granitic rock sources. Slopes range from 0 to 2 percent. This series is characterized as well draining, slow runoff, and rapid permeability. Common uses for this series are irrigated cropland growing primarily almonds, alfalfa, onions, tomatoes, small grains, grapes and pasture. Vegetation consists of red brome, filaree, soft chess, wildoats, rippgut brome and scattered valley oaks.

Veritas fine sandy loam. This series consists of deep to duripan, moderately well drained soils. They formed in alluvium derived from mixed rock sources. Veritas soils are on low fan terraces.

They have slow runoff and moderately rapid permeability. Common uses for this series include irrigated cropland. Alfalfa, barley and corn are the principal crops. Vegetation is annual grasses, forbs and scattered valley oaks.

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.

The State of California designates faults as active, potentially active, and inactive depending on how recent the movement that can be substantiated for a fault. Table 3.6-5 presents the California fault activity rating system.

TABLE 3.6-5: FAULT ACTIVITY RATING

<i>FAULT ACTIVITY RATING</i>	<i>GEOLOGIC PERIOD OF LAST RUPTURE</i>	<i>TIME INTERVAL (YEARS)</i>
Active (A)	Holocene	Within last 11,000 years
Potentially Active (PA)	Quaternary	11,000-1.6 Million Years
Inactive (I)	Pre-Quaternary	Greater than 1.6 Million

SOURCE: CALIFORNIA GEOLOGICAL SURVEY

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 closest known faults classified as active by the California Geological Survey are the Greenville fault, located approximately 20 miles to the west. The Vernalis Fault located approximately 6 miles to the southwest has had movement as recently as the Quaternary Period (Pliocene Epoch 2.588 million years ago to 11.7 thousand years ago), thus, is considered a potentially active fault. Other faults that could potentially affect the Planning Area include the Mount Diablo, Calaveras, Hayward, Ortigalita and San Andreas Faults. Figure 3.6-2 provides a map of known area faults.

Erosion

Erosion naturally occurs on the surface of the earth as surface materials (i.e. rock, soil, debris, etc.) is loosened, dissolved, or worn away, and transported from one place to another by gravity. Two common types of soil erosion include wind erosion and water erosion. The steepness of a slope is an important factor that affects soil erosion. Erosion potential in soils is influenced primarily by loose soil texture and steep slopes. Loose soils can be eroded by water or wind forces, whereas soils with high clay content are generally susceptible only to water erosion. The potential for

erosion generally increases as a result of human activity, primarily through the development of facilities and impervious surfaces and the removal of vegetative cover.

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 K 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 0.02 to 0.37, which is considered a low to moderate 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 soils vary from a low shrink-swell potential to a moderate shrink-swell potential. 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. The potential for liquefaction is moderate to high in many areas of the city, however because the Planning Area is essentially flat lateral spreading of soils has not been observed 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.

Landslides include rockfalls, deep slope failure, and shallow slope failure. Factors such as the geological conditions, drainage, slope, vegetation, and others directly affect the potential for landslides. One of the most common causes of landslides is construction activity that is associated with road building (i.e. cut and fill). The Planning Area is essentially flat; therefore, the potential for a landslides is generally low.

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. Naturally occurring asbestos is not identified within San Joaquin County, although it is all located to the east and west of the Planning Area in mountainous areas in Contra Costa and Calaveras Counties. There is no naturally occurring asbestos mapped within Lathrop.

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 Lathrop, 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

SAN JOAQUIN VALLEY

The following summary of the geological evolution of San Joaquin County and the potential for paleontological resources is based on the San Joaquin County General Plan Draft EIR. During the Mesozoic Era (208–65 million years ago), the Sierra Nevada formed, but the region that would become the San Joaquin Valley lay several thousand feet below the surface of the Pacific Ocean. During the Late Cretaceous Period (75–65 million years ago [mya]), flowering plants, early dinosaurs, and the first birds and mammals appeared. The basic form of the Great Central Valley took shape during the Cenozoic period, first as islands, then as mountains. During the late Cenozoic Era (65–2 mya), the Sierra Nevada eroded to mere hills compared to their earlier appearance, the Coast Ranges rose, and the San Joaquin Valley began to form.

During the Paleocene Epoch (65–53 mya), dinosaurs became extinct and mammals gradually evolved as the dominant group of animal life. During the Eocene Epoch (53–39 mya), the western edges of the San Joaquin Valley rose above sea level. Sedimentation and tectonic uplift of geological formations continued until two million years ago. In the subsequent Oligocene Epoch (39–23 mya), sedimentation continued, and during the Miocene Epoch (23–5 mya) the Diablo Range was uplifted. The Pliocene Epoch (5–2 mya) was a time of tremendous uplift, and great quantities of sediment eroded from the nearby mountain ranges accumulated in the valley, eventually forming a deposit thousands of feet thick. In the Pleistocene Epoch (2 million to 10,000 years ago), the Sierra Nevada range was increasingly elevated and glaciated, resulting in the formation of spectacular features such as Yosemite Valley. During the Holocene Epoch (10,000 years ago to the present), the San Joaquin Valley was above sea level and achieved its present appearance, 466 miles long and 19 to 50 miles wide, enclosed by the Siskiyou, Sierra Nevada, Tehachapi, and Coast Ranges on the north, east, south, and west, respectively. The valley contained fresh water lakes and rivers attractive to herds of prehistoric grazing animals, including Columbian Mammoth, camel, bison, and native horse. The fossil remains of these creatures have been found in San Joaquin County and adjacent areas. The vast majority of paleontological specimens from San Joaquin County have been found in rock formations in the foothills of the Diablo Mountain Range. However, remains of extinct animals such as mammoth, could be found

virtually anywhere in the county, especially along watercourses such as the San Joaquin River and its tributaries.

PLANNING AREA

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 Quaternary Alluvium "Q" which is younger alluvium that consists of marine and nonmarine (continental) sedimentary rocks from the Pleistocene through Holocene Epochs that are composed of alluvium, lake, playa, and terrace deposits, both unconsolidated and semi-consolidated. This type is mostly nonmarine deposits but does include marine deposits near the coast.

According to a records search of the University of California Museum of Paleontology (UCMP) Collections Date, eighty fossils have been found and recorded within San Joaquin County. Over half of them are dated to the tertiary period, with quaternary being the second most frequent period. These are the first and second periods of the Cenozoic Era respectively, during which modern flora, apes, large mammals, and eventually humans developed. The majority of fossils found within the Lathrop area have been vertebrate in nature. These fossils include mammoth/mastodon, horse, pocket gopher, and other unspecified rodents, and unidentified artiodactyl (hoofed mammal) bone.

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.

The California Building Code, Title 24, Part 2, Chapter 16 addresses structural design, Chapter 17 addresses structural tests and special inspections, and Chapter 18 addresses soils and foundations. Section 1610 provides structural design standards for foundation walls and retaining walls to ensure resistance to lateral soil loads. Section 1613 provides structural design standards for earthquake loads. Section 1704.7 requires special inspections for existing site soil conditions, fill placement and load-bearing requirements during the construction as specified in Table 1704.7 of this section. Sections 1704.8 through 1704.16 provide inspection and testing requirements for various foundation types, and construction material types. Section 1803.1.1.1 requires each city and county enact an ordinance which requires a preliminary soil report and that the report be based upon adequate test borings or excavations, of every subdivision, where a tentative and final map is required pursuant to Section 66426 of the Government Code. Section 1803.5.3 defines expansive soils and specifies that in areas likely to have expansive soil, the building official shall require soil tests to determine where such soils do exist. Section 1803.5.4 specifies that a subsurface soil investigation must be performed to determine whether the existing ground-water table is above or within 5 feet (1524 mm) below the elevation of the lowest floor level where such floor is located below the finished ground level adjacent to the foundation. Section 1803.5.8 provides specific standards where shallow foundations will bear on compacted fill material more than 12 inches (305 mm) in depth. Sections 1803.5.11 and 1803.5.12 provide requirements for geotechnical investigations for structures assigned varying Seismic Design Categories in accordance with Section 1613. Section 1804 provides standards and requirements for excavation, grading, and fill. Sections 1808, 1809, and 1810 provide standards and requirements for the construction of varying foundations.

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.

LOCAL

City of Lathrop Municipal Code

Chapter 15.04 of the Lathrop Municipal Code adopts the 2019 CBSC, with amendments to address administrative provisions, additional requirements to address connection of existing slabs to new construction, as the building code of the City. Additionally, Chapter 15.54 of the Lathrop Municipal Code describes when a geotechnical report would be required.

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;
- 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. These include an unnamed fault east of the City of Tracy, the San Joaquin fault, the Midway fault, the Corral Hollow-Carnegie fault, the Greenville fault, the Antioch fault, and the Los Positas fault. 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 Lathrop may expose people or structures to potential adverse effects associated with a seismic event, including strong ground shaking and seismic-related ground failure.

3.6 GEOLOGY AND SOILS

While there are no known active faults located within the Planning Area, the area could experience considerable ground shaking generated by faults outside Lathrop. For example, Lathrop could experience an intensity of MM V to VII generated by seismic events. The effect of this intensity level could have structural damage. Soil data from the NRCS Web Soil Survey (NRCS 2020) suggests that the potential for liquefaction ranges from low to high within the Planning Area given that many soils are high in sand and the water table is moderately high.

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. Policy PS-1.1 requires the City's geologic and seismic hazards map be monitored in concert with updates from the California Geologic Survey and local surveys. Policy PS-1.2 calls for enforcement of State seismic design standards and guidelines and all relevant building codes to reduce the risk of damage associated with seismic activity. Additionally, Policy PS-1.3 requires special site-specific studies, generally including but not limited to, soil compaction tests and geotechnical reports, for development projects and City improvement projects to determine the nature and extent of possible liquefaction, landslides, and geologic hazards, and to identify engineering and development siting measures to permit development to occur. Furthermore, Action PS-1a requires that development proposals are reviewed to ensure compliance with current State building standards; 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; and Lathrop Municipal Code drainage.

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 GOALS, POLICIES, AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS**GOALS**

- PS-1 Prepare the community for natural hazards related to landslides, geologic instability, and seismic activity to minimize loss of life, injury, and property damage, and disruption of vital services.

POLICIES

- PS-1.1 Prepare the community for natural hazards related to landslides, geologic instability, and seismic activity to minimize loss of life, injury, and property damage, and disruption of vital services. Geologic Hazard Identification. Review and monitor geologic and seismic hazards maps in concert with updates from the California Geologic Survey and local surveys.
- PS-1.2 Earthquake Protection. Enforce State seismic design standards and guidelines and all relevant building codes to reduce the risk of damage associated with seismic activity.
- PS-1.3 Development. Require special site-specific studies, generally including but not limited to, soil compaction tests and geotechnical reports, for development projects and City improvement projects to determine the nature and extent of possible liquefaction, landslides, and geologic hazards, and to identify engineering and development siting measures to permit development to occur.
- PS-1.4 Development Inspection. Require professional inspection of foundation, excavation, earthwork, and other geotechnical aspects of site development during constructions on those sites specified in geotechnical studies as being prone to seismic or geologic hazard.
- PS-1.5 Risk Inventories. Develop inventories of:
- A. At-risk public buildings and infrastructure and evaluate potential mitigation projects to address risks, as financially feasible.
 - B. Private buildings which are unsound under conditions of "moderate" seismic activity. Structures determined by the City's Building Official to be structurally unsound are to be reported to the owner and recorded with the County Recorder to ensure that future owners are made aware of hazardous conditions and risks. Buildings that have questionable structural resistance should be considered for either rehabilitation or demolition.
- PS-1.6 Title 24 Compliance. Require all structures located within areas containing expansive soils to be designed and engineered to comply with the California Code of Regulations (CCR), Title 24.
- PS-1.7 Critical Facilities. Require new critical infrastructure and facilities, including but not limited to, hospitals, fire and police stations, and other public or semi-public buildings that house critical first responders or emergency management personnel that may be built in the City to incorporate site specific seismic structural design as required by applicable building codes. This is intended to ensure that the infrastructure and facilities are designed to withstand the "maximum" probable" earthquake and remain in service.

3.6 GEOLOGY AND SOILS

- PS-1.8 Public Facilities. Ensure that all public facilities, including buildings, water tanks, and reservoirs, are structurally sound and able to withstand seismic shaking and the effects of seismically-induced ground failure, consistent with the California Building Standards Codes and other applicable standards.
- PS-1.9 Public Education. Educate the public through programs and outreach materials on natural threats pertaining to the city and best practices for reducing damage and personal harm.

IMPLEMENTATION ACTIONS

- PS-1a Review development proposals to ensure compliance with:
- A. Current State building standards;
 - B. 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; and
 - C. Lathrop Municipal Code drainage and erosion standards.
- PS-1b Require new public and critical uses buildings to adhere to the requirements of CCR, Title 24, ensuring that the buildings are not located in areas susceptible to potential natural hazards.
- PS-1c Update building, zoning, and grading codes as needed to ensure adopted standards comply with State requirements. Require preparation of soil compaction tests and geotechnical reports by the proper certified professions for proposed development projects, public projects, and all critical structures. The reports should include, but not be limited to: evaluation of and recommendations to mitigate the effects of fault displacement, ground shaking, uncompacted fill, expansive soils, liquefaction, subsidence, and settlement. Recommendations from the report shall be incorporated into the development project to address seismic and geologic risks identified in the report.
- PS-1d Establish an inventory of potentially hazardous buildings and require any development or change in occupancy proposals to address hazards, through measures such as strengthening buildings, changing the use of the buildings to an acceptable occupancy level, or demolishing or rehabilitating the building.
- PS-1e Regularly review the structural integrity of existing City facilities, and if any facilities are found to be structurally unsatisfactory, take steps to mitigate the unsatisfactory conditions.
- PS-1f As applications for building permits are received, identify and inspect seismically unsafe buildings and structures, including unreinforced masonry buildings.
- PS-1g Consider utilizing programs and funding sources that would encourage, assist, or provide incentives to property owners to retrofit their buildings for seismic safety, such as the Unreinforced Masonry (URM) program.
- PS-1h Monitor the withdrawal of groundwater, oil, and gas, maintain land elevation records, and regulate overdraft to prevent subsidence.

- PS-1i Ensure that all abandoned wells are permitted through the County, and regulate removal of abandoned underground irrigation and drainage systems.
- PS-1j Consider a public relations and education program to increase public awareness on potential geologic and seismic hazards in the community, their associated risks, and preparedness strategies.

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.

As noted previously, soil erosion data for the City of Lathrop was obtained from the NRCS. As identified by the NRCS web soil survey, the erosion factor K within the City of Lathrop varies widely. The NRCS does not provide erosion factors for the urban land soils in the City, however, the erosion potential for the urban land soils in the City is considered to be 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 a range of policies and actions related to minimizing discharge of materials (including eroded soils) into the storm drain system, which would minimize the potential impacts related to erosion or the loss of topsoil. 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 GOALS, POLICIES, AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

GOALS

- PS-1 Prepare the community for natural hazards related to landslides, geologic instability, and seismic activity to minimize loss of life, injury, and property damage, and disruption of vital services.

POLICIES

3.6 GEOLOGY AND SOILS

PS-1.3 Development. Require special site-specific studies, generally including but not limited to, soil compaction tests and geotechnical reports, for development projects and City improvement projects to determine the nature and extent of possible liquefaction, landslides, and geologic hazards, and to identify engineering and development siting measures to permit development to occur.

PS-1.4 Development Inspection. Require professional inspection of foundation, excavation, earthwork, and other geotechnical aspects of site development during constructions on those sites specified in geotechnical studies as being prone to seismic or geologic hazard.

IMPLEMENTATION ACTIONS

PS-1a Review development proposals to ensure compliance with:

- A. Current State building standards;
- B. 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; and
- C. Lathrop Municipal Code drainage

PS-1b Require new public and critical uses buildings to adhere to the requirements of CCR, Title 24, ensuring that the buildings are not located in areas susceptible to potential natural hazards.

PS-1c Update building, zoning, and grading codes as needed to ensure adopted standards comply with State requirements. Require preparation of soil compaction tests and geotechnical reports by the proper certified professions for proposed development projects, public projects, and all critical structures. The reports should include, but not be limited to: evaluation of and recommendations to mitigate the effects of fault displacement, ground shaking, uncompacted fill, expansive soils, liquefaction, subsidence, and settlement. Recommendations from the report shall be incorporated into the development project to address seismic and geologic risks identified in the report.

PS-1h Monitor the withdrawal of groundwater, oil, and gas, maintain land elevation records, and regulate overdraft to prevent subsidence.

PS-1i Ensure that all abandoned wells are permitted through the County, and regulate removal of abandoned underground irrigation and drainage systems.

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)

Development allowed under the General Plan could result in the exposure of people and structures to conditions that have the potential for adverse effects associated with ground

instability or failure. Soils and geologic conditions in the Lathrop Planning Area have the potential for landslides, lateral spreading, subsidence, liquefaction, or collapse. Each are discussed below:

LANDSLIDE

The Planning Area is essentially flat; therefore, the potential for a landslides is low. However, the landslide potential increases in the portions of the City for which there is increased elevation change.

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 liquefaction is moderate to high in many areas of the city, however because the Planning Area is essentially flat lateral spreading of soils has not been observed within the Planning Area.

SUBSIDENCE

Drainage sufficient to create subsidence is uncommon within the City of Lathrop. Subsidence has not been identified as an issue in the Planning Area.

LIQUEFACTION

Areas along existing waterways, such as San Joaquin River, are defined as having the greatest potential for liquefaction.

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 Lathrop, 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 goals, 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 GOALS, POLICIES, AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

GOALS

PS-1 Prepare the community for natural hazards related to landslides, geologic instability, and seismic activity to minimize loss of life, injury, and property damage, and disruption of vital services.

POLICIES

PS-1.3 Development. Require special site-specific studies, generally including but not limited to, soil compaction tests and geotechnical reports, for development projects and City improvement projects to determine the nature and extent of possible liquefaction, landslides, and geologic hazards, and to identify engineering and development siting measures to permit development to occur.

PS-1.4 Development Inspection. Require professional inspection of foundation, excavation, earthwork, and other geotechnical aspects of site development during constructions on those sites specified in geotechnical studies as being prone to seismic or geologic hazard.

IMPLEMENTATION ACTIONS

PS-1a Review development proposals to ensure compliance with:

- A. Current State building standards;
- B. 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; and
- C. Lathrop Municipal Code drainage and erosion standards.

PS-1b Require new public and critical uses buildings to adhere to the requirements of CCR, Title 24, ensuring that the buildings are not located in areas susceptible to potential natural hazards.

- PS-1c Update building, zoning, and grading codes as needed to ensure adopted standards comply with State requirements. Require preparation of soil compaction tests and geotechnical reports by the proper certified professions for proposed development projects, public projects, and all critical structures. The reports should include, but not be limited to: evaluation of and recommendations to mitigate the effects of fault displacement, ground shaking, uncompacted fill, expansive soils, liquefaction, subsidence, and settlement. Recommendations from the report shall be incorporated into the development project to address seismic and geologic risks identified in the report.
- PS-1h Monitor the withdrawal of groundwater, oil, and gas, maintain land elevation records, and regulate overdraft to prevent subsidence.
- PS-1i Ensure that all abandoned wells are permitted through the County, and regulate removal of abandoned underground irrigation and drainage systems.

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 Lathrop ranges from low to moderate. Figure 3.6-4 illustrates the shrink-swell potential of soils in the Planning Area. The majority of the Planning Area has soils with a low potential for expansion, including most of the developed land. The areas with moderate expansive soils represent only a small portion of the Planning Area, and would require special design considerations due to shrink-swell potentials.

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 Public 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 GOALS, POLICIES, AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

GOALS

PS-1 Prepare the community for natural hazards related to landslides, geologic instability, and seismic activity to minimize loss of life, injury, and property damage, and disruption of vital services.

POLICIES

PS-1.3 Development. Require special site-specific studies, generally including but not limited to, soil compaction tests and geotechnical reports, for development projects and City improvement projects to determine the nature and extent of possible liquefaction, landslides, and geologic hazards, and to identify engineering and development siting measures to permit development to occur.

PS-1.4 Development Inspection. Require professional inspection of foundation, excavation, earthwork, and other geotechnical aspects of site development during constructions on those sites specified in geotechnical studies as being prone to seismic or geologic hazard.

IMPLEMENTATION ACTIONS

PS-1a Review development proposals to ensure compliance with:

- A. Current State building standards;
- B. 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; and
- C. Lathrop Municipal Code drainage and erosion standards.

PS-1b Require new public and critical uses buildings to adhere to the requirements of CCR, Title 24, ensuring that the buildings are not located in areas susceptible to potential natural hazards.

- PS-1c Update building, zoning, and grading codes as needed to ensure adopted standards comply with State requirements. Require preparation of soil compaction tests and geotechnical reports by the proper certified professions for proposed development projects, public projects, and all critical structures. The reports should include, but not be limited to: evaluation of and recommendations to mitigate the effects of fault displacement, ground shaking, uncompacted fill, expansive soils, liquefaction, subsidence, and settlement. Recommendations from the report shall be incorporated into the development project to address seismic and geologic risks identified in the report.
- PS-1h Monitor the withdrawal of groundwater, oil, and gas, maintain land elevation records, and regulate overdraft to prevent subsidence.
- PS-1i Ensure that all abandoned wells are permitted through the County, and regulate removal of abandoned underground irrigation and drainage systems.

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)

Wastewater service is provided by the City of Lathrop via their network of collection and treatment infrastructure. Wastewater from the City of Lathrop is currently treated at the Manteca Water Quality Control Facility (MWQCF) and the Lathrop Consolidated Treatment Facility (LCTF). The MWQCF treats most of the City's wastewater generated in areas east of Interstate Highway 5 (I-5), excluding the Crossroads development area. The LCTF treats the wastewater generated west of I-5 and in the Crossroads, Gateway, and South Lathrop development areas. In 2016, the City generated a total average annual flow of 1.46 mgd with 0.92 mgd treated at the MWQCF and 0.54 mgd treated at the LCTF as documented in the City's IWRMP.

The City's wastewater collection system consists of approximately 72 miles of gravity mains ranging from 6 to 36 inches, 21 miles of force mains ranging from 4 to 18 inches, and 12 pump stations. Approximately 63 percent of gravity mains are polyvinyl chloride pipes, which is the City's current standard pipe material. The remaining 37 percent of pipes are vitrified clay pipes that are in Historic Lathrop and Crossroad Business Park areas. The City has a supervisory control and data acquisition (SCADA) system for control and monitoring of facilities. The City's wastewater collection system service area is generally contiguous with the city limits.

The City currently provides wastewater service to approximately 6,100 residential, commercial, industrial and institutional/governmental properties. However, there are areas within the city limits that are not served by the wastewater system. Many large facilities (e.g., Simplot, and former Carpenter Company facility) have historically self-managed their wastewater. Some of these areas have been planned to move to City service, as they are re-developed. Some residential homes and businesses in the central portion of Lathrop (e.g. Lathrop Industrial and South Lathrop) are served by a septic system.

3.6 GEOLOGY AND SOILS

LCTF and MWQCF have independent sewer sheds except at the 8-inch Mossdale Intertie. The Mossdale Intertie crosses beneath I-5 on River Islands Parkway and Louise Avenue. The Mossdale intertie is not routinely operated, but could potentially be utilized in the future to reroute a portion of flows from the Mossdale Pump Station to the MWQCF collection system.

MANTECA WATER QUALITY CONTROL FACILITY

The City owns 14.7 percent of the MWQCF capacity by contract with the City of Manteca. The City does not participate in the operation of the facility, nor does it receive recycled water from the facility. As discussed in the City's Municipal Service Review and Sphere of Influence Plan, the City is allocated 1.45 mgd of the total 9.87 mgd facility capacity. The MWQCF is permitted for future expansions of up to 26.97 mgd, of which the City would be allocated a maximum of 14.7 percent capacity or 3.97 mgd. Treatment at the MWQCF consists of primary sedimentation followed by roughing biotowers, conventional activated sludge, secondary clarification, tertiary filtration, and ultraviolet disinfection. Disinfected tertiary effluent is discharged to the San Joaquin River. A portion of the secondary effluent is not disinfected and is used to irrigate medians and agricultural fields.

LATHROP CONSOLIDATED TREATMENT FACILITY

The LCTF is City-owned but operated by a private contractor, Veolia Water NA. The LCTF's treatment capacity was expanded to 2.5 mgd, with the completion of recent recycled water disposal facilities. However, capacity is currently limited to 1.55 mgd by off-site recycled water storage and disposal capacity. The LCTF is planned to be expanded to a future permitted capacity of 6.0 mgd.

Wastewater treatment and disposal at the LCTF is regulated under the California Regional Quality Control Board Central Valley Region Waste Discharge Requirements. LCTF applies the effluent to land rather than discharging to a water body, and is therefore not subject to the NPDES requirements. The wastewater treatment processes at the LCTF includes secondary treatment, tertiary infiltration, and disinfection prior to storage and disposal. The LCTF produces disinfected tertiary recycled water suitable for irrigation at parks, landscape strips, median islands, pond berms, and agricultural fields.

Wastewater treatment processes at the LCTF include secondary treatment, tertiary filtration, disinfection, and reuse for irrigation of agricultural and landscape use areas. The following major components make up the LCTF:

- Raw wastewater undergoes screening and grit removal prior to entering the influent pump station. A 0.95 MG steel tank provides diurnal flow equalization and short-term emergency storage. Wastewater in the tank is automatically returned to the influent pump station as treatment capacity becomes available.
- From the influent pump station, wastewater is distributed evenly to two Membrane Bioreactor treatment trains for a combined treatment capacity of 1.0 mgd. Each Membrane Bioreactor train includes an anoxic basin, recirculation mixers, an aeration

basin, anoxic pumps, aeration and membrane blowers, membrane modules, a membrane tank, mixed liquor recycle pumps, and filtrate pumps.

- Disinfection is accomplished using sodium hypochlorite solution in a chlorine contact tank that provides more than 32 minutes of modal contact time. If disinfection fails, the effluent is rerouted back to the emergency storage basin and retreated.
- Tertiary treated effluent is discharged into Pond S5 for immediate storage, and is then transferred to off-site storage in Ponds S1, S2, S3, S6, S16, and the Crossroads Wastewater Treatment Effluent Storage Ponds A, B, and C.
- Waste activated sludge generated from LCTF is pumped to the solids handling facility located at the adjacent Crossroads Wastewater Treatment Facility. The solids handling facility includes a 0.19 MG aerobic sludge storage tank, two belt filter presses, and a concrete drying bed used for supplemental air drying of dewatered sludge when conditions permit. Air-dried sludge is temporarily stored on the drying bed until transportation to the City of Merced for land application.
- The City's existing recycled water system is governed by State Discharge Requirements outlined in Order R5-2018-0023 and supports the disposal of the effluent produced by the LCTF at eight agricultural land application areas (LAAs): A23, A28, A30, A31, A35, A35b, A35c, and A36. The distribution system consists of nine storage ponds; S1, S2, S3, S5, S6, S16, S-28, A, B, and C, their associated pump stations PMP1, PMP2, PMP3, PMP10, PMP12, and the Crossroads PMP. The City has approximately 30.3 miles of recycled water pipeline, as of 2018.
- The RWQCB approved a San Joaquin River Discharge NPDES in 2020 and expires 31 March 2025. The City is constructing the required modifications to the LCTF to add required de-chlorination facilities and have awarded a contract to construct an outfall pipeline from the LCTF to the San Joaquin River. Developer Funding Agreements for the NPDES facilities will, upon operation of the NPDES facilities in late 2022, return storage ponds and spray fields to the developers who funded the NPDES project, except for Ponds S5, S6, A, B and C located at the LCTF plus Pond S16 on Stewart Tract which will all be retained as part of the permanent recycled water system.

DEMANDS

The Central Valley Regional Water Quality Control Board and the IWRMP guide the long-term strategy for meeting future discharge and capacity requirements. From 2009 to 2016, total per capita average dry weather flow (ADWF) varied between 60 and 69 gallons of wastewater per capita per day. It is anticipated that the City's total ADWF in 2040 will be 5.69 mgd, and increase to 7.07 mgd at buildout in 2050. Of this total, the MWQCF is projected to treat ADWFs of 1.39 mgd from Central Lathrop in 2040 and 1.47 mgd at buildout. Areas served by the LCTF have larger increases in planned development and are projected to treat ADWFs of 4.30 mgd in 2040 and 5.61 mgd at buildout.

CONCLUSION

All new wastewater generated from General Plan land uses will be collected and transmitted to the MWQCF and LCTF for treatment. There will be no septic tanks or alternative waste water disposal systems utilized for new development planned under the General Plan. 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. While no formations in the Planning Area are assigned a very high sensitivity, 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 actions would ensure steps would be taken to reduce impacts to paleontological resources in the event that they are discovered during construction, and thus, would ensure impacts are a **less than significant** relative to this environmental topic.

GENERAL PLAN GOALS, POLICIES, AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

GOALS

RR-3 Preserve and protect prehistoric, historic, archaeological, and paleontological resources, to bolster community identify and protect sensitive resources.

POLICIES

RR-3.1 Preservation. Protect areas containing significant historic, archaeological, and paleontological resources, as defined by the California Public Resources Code.

IMPLEMENTING ACTIONS

RR-3a Require a cultural and archaeological survey prior to approval of any project which would require excavation in an area that is sensitive for cultural, tribal, or archaeological resources. If significant cultural, tribal, or archaeological resources, including historic and prehistoric resources, are identified, appropriate measures shall be implemented, such as documentation and conservation, to reduce adverse impacts to the resource. If resources are known or reasonably anticipated to be encountered during construction, the City shall require a detailed mitigation plan which shall require monitoring during grading and other

3.6 GEOLOGY AND SOILS

earthmoving activities in undisturbed sediments, and provide a treatment plan for potential resources that may be encountered.

RR-3b Require all new development, infrastructure, and other ground-disturbing projects to comply with the following conditions in the event of an inadvertent discovery of cultural resources or human remains:

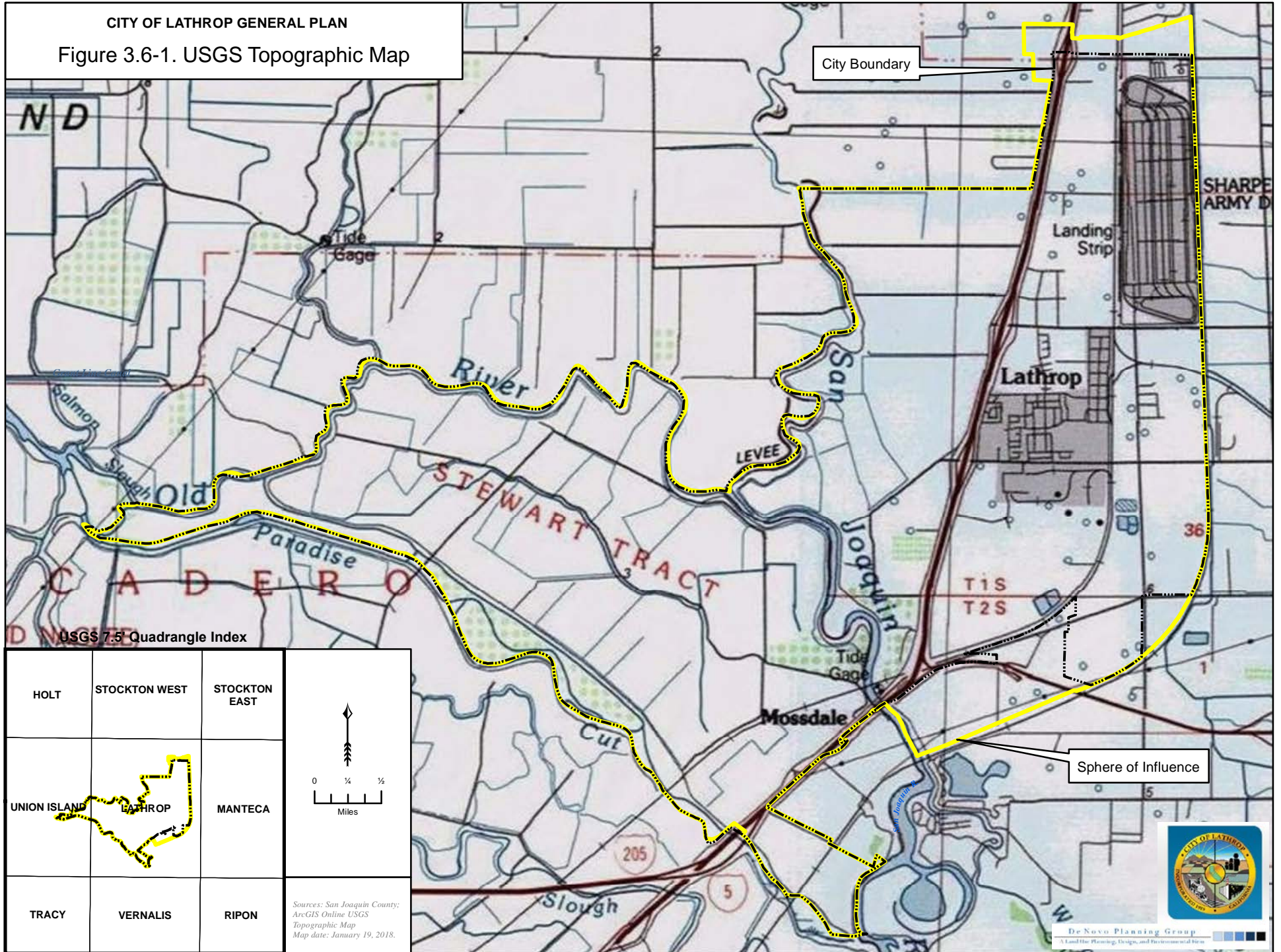
- A. If construction or grading activities result in the discovery of significant historic or prehistoric archaeological artifacts or unique paleontological resources, all work within 100 feet of the discovery shall cease, the Community Development Director shall be notified, the resources shall be examined by a qualified archaeologist, paleontologist, or historian for appropriate protection and preservation measures; and work may only resume when appropriate protections are in place and have been approved by the Community Development Director; and
- B. If human remains are discovered during any ground disturbing activity, work shall stop until the Community Development Director and the San Joaquin County Coroner have been contacted. If the human remains are determined to be of Native American origin, the Native American Heritage Commission and the most likely descendants shall be consulted; and work may only resume when appropriate measures have been taken and approved by the Community Development Director.

RR-3d Require all development, infrastructure, and other ground-disturbing projects to comply with the following conditions in the event of an inadvertent discovery of a paleontological resource:

- A. If construction or grading activities result in the discovery of significant prehistoric archaeological artifacts or unique paleontological resources, all work within 100 feet of the discovery shall cease, the Community Development Director shall be notified, the resources shall be examined by a qualified archaeologist, paleontologist, or historian for appropriate protection and preservation measures; and work may only resume when appropriate protections are in place and have been approved by the Community Development Director.

CITY OF LATHROP GENERAL PLAN

Figure 3.6-1. USGS Topographic Map



USGS 7.5 Quadrangle Index

HOLT	STOCKTON WEST	STOCKTON EAST
UNION ISLAND	LATHROP	MANTECA
TRACY	VERNALIS	RIPON

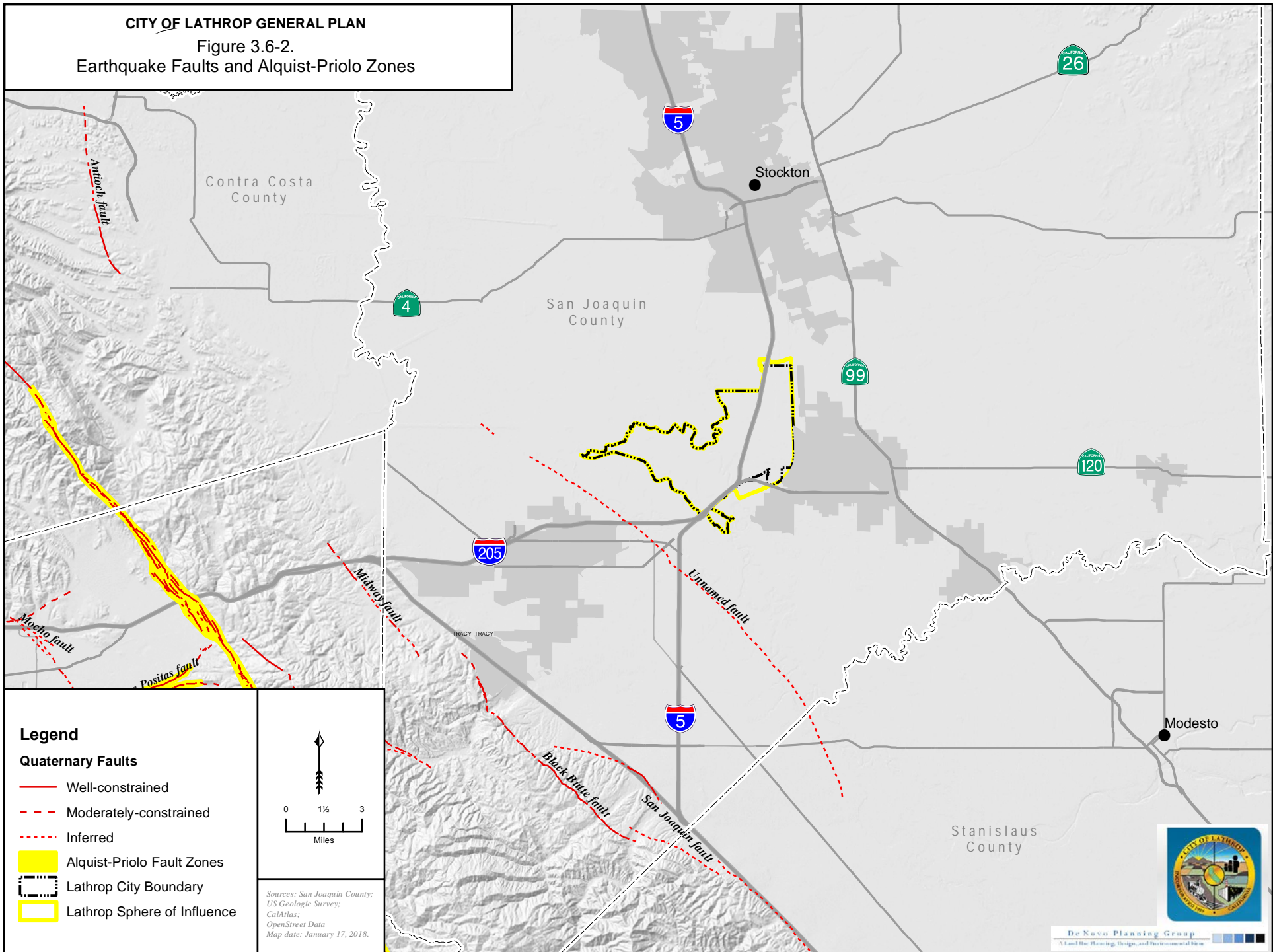
0 1/4 1/2 Miles

Sources: San Joaquin County; ArcGIS Online USGS Topographic Map Map date: January 19, 2018.



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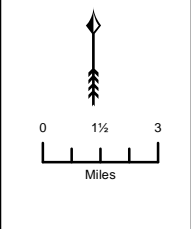
CITY OF LATHROP GENERAL PLAN
Figure 3.6-2.
Earthquake Faults and Alquist-Priolo Zones



Legend

Quaternary Faults

- Well-constrained
- - - Moderately-constrained
- . . . Inferred
- Alquist-Priolo Fault Zones
- Lathrop City Boundary
- Lathrop Sphere of Influence



Sources: San Joaquin County;
 US Geologic Survey;
 CaAtlas;
 OpenStreet Data
 Map date: January 17, 2018.



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Legend

Lathrop City Boundary

Lathrop Sphere of Influence

NRCS Soil Description

109 - Bigani loamy coarse sand, partially drained

110 - Boggiano clay loam

130 - Columbia fine sandy loam, drained

131 - Columbia fine sandy loam, partially drained, occasionally flooded

132 - Columbia fine sandy loam, channeled, partially drained, frequently flooded

133 - Columbia fine sandy loam, clayey substratum, partially drained

142 - Delhi loamy sand, MLRA 17

144 - Dello sand, partially drained, occasionally flooded

145 - Dello loamy sand, drained

147 - Dello sandy loam, clayey substratum, drained

148 - Dello clay loam, drained, overwashed

153 - Egbert silty clay loam, partially drained

166 - Grangeville fine sandy loam, partially drained

167 - Grangeville clay loam, partially drained

169 - Guard clay loam, drained

175 - Honcut sandy loam

196 - Manteca fine sandy loam

197 - Merritt silty clay loam, partially drained

198 - Merritt silty clay loam, partially drained, 0 to 2 percent slopes,

243 - Scribner clay loam, partially drained

254 - Timor loamy sand

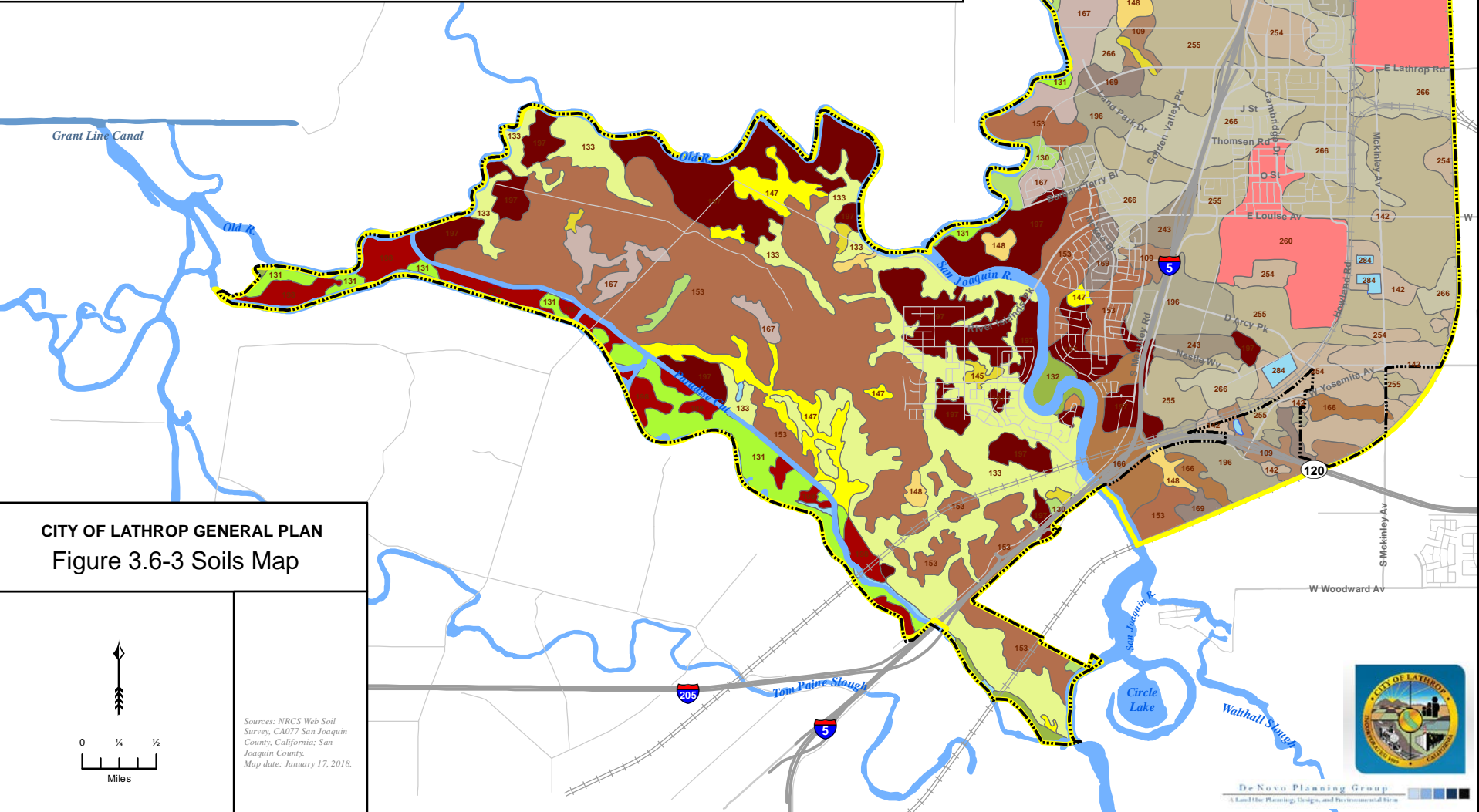
255 - Tinnin loamy coarse sand

261 - Valdez silt loam, organic substratum, partially drained

266 - Veritas fine sandy loam

260 - Urban land

284 - Water



CITY OF LATHROP GENERAL PLAN
Figure 3.6-3 Soils Map

Sources: NRCS Web Soil Survey, CA077 San Joaquin County, California; San Joaquin County.
 Map date: January 17, 2018.

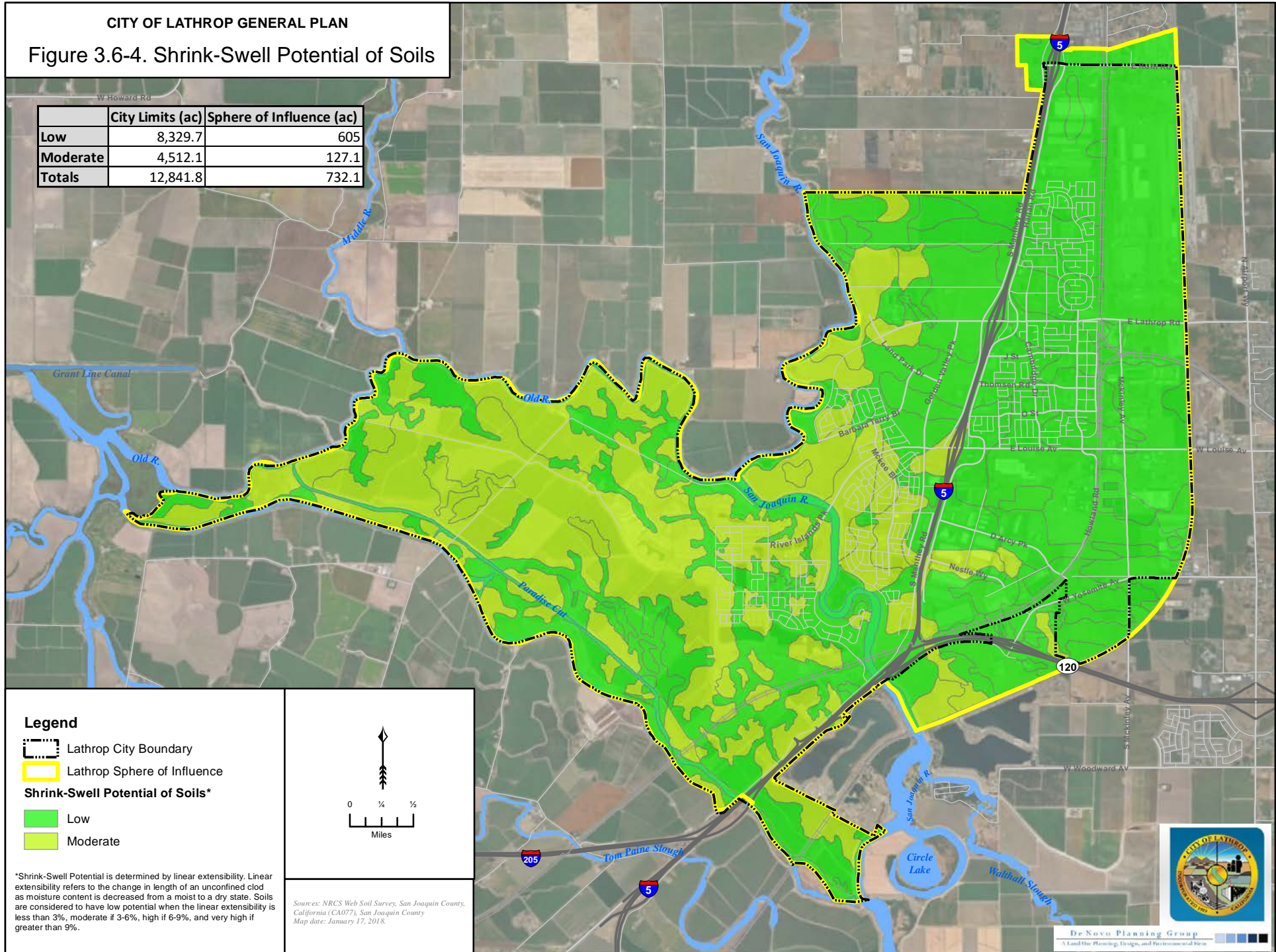


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CITY OF LATHROP GENERAL PLAN

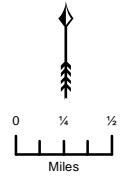
Figure 3.6-4. Shrink-Swell Potential of Soils

	City Limits (ac)	Sphere of Influence (ac)
Low	8,329.7	605
Moderate	4,512.1	127.1
Totals	12,841.8	732.1



Legend

- Lathrop City Boundary
- Lathrop Sphere of Influence
- Shrink-Swell Potential of Soils***
- Low
- Moderate



*Shrink-Swell Potential is determined by linear extensibility. Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Soils are considered to have low potential when the linear extensibility is less than 3%, moderate if 3-6%, high if 6-9%, and very high if greater than 9%.

Sources: NRCS Web Soil Survey, San Joaquin County, California (CA077), San Joaquin County Map date: January 17, 2018.



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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 Lathrop. 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.

There was one comment letter (San Joaquin Valley Air Pollution Control District – November 2, 2021) related to this environmental topic during the NOP comment period. All comments received during the 30-day NOP comment period are included within Appendix A.

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

3.7 GREENHOUSE GASES, CLIMATE CHANGE, AND ENERGY

prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO₂), methane (CH₄), ozone (O₃), water vapor, nitrous oxide (N₂O), and chlorofluorocarbons (CFCs).

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 sources 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 requires the State to derive at least 33% of electricity generated from renewable resources by 2020, 60 percent by 2030, and to achieve zero-carbon emissions by 2045 (as passed in September 2018, under AB 100).

Overall, in 2018, California's per capita energy usage was ranked fourth-lowest in the nation (U.S. EIA, 2020b). California's per capita rate of energy usage has remained relatively constant since the 1970's. Many State regulations since the 1970's, including new building energy efficiency standards, vehicle fleet efficiency measures, as well as growing public awareness, have helped to keep per capita energy usage in the State in check.

The consumption of non-renewable energy (i.e. fossil fuels) associated with the operation of passenger, public transit, and commercial vehicles, results in GHG emissions that contribute to global climate change. Alternative 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 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 San Joaquin County was 5,583 GWh (California Energy Commission, 2020).

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.

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 San Joaquin County area, including the City of Lathrop. In 2018, natural gas consumption in San Joaquin County was 259 million therms (California Energy Commission, 2020).

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.

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

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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 2030, 60 percent of the electricity generated in California should be from renewable sources, with increased generation capacity 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.

Cap and Trade Program

In 2011, CARB adopted the final cap-and-trade program for California (See California Code of Regulations, Title 17, Sections 95801-96022.) The California cap-and-trade program creates a market-based system with an overall emissions limit for affected sectors. The program is intended to regulate more than 85 percent of California’s emissions and staggers compliance requirements according to the following schedule: (1) electricity generation and large industrial sources (2012); (2) fuel combustion and transportation (2015).

According to 2012 CARB guidance, “[t]he Cap-and-Trade Program will reduce GHG emissions from major sources (covered entities) by setting a firm cap on statewide GHG emissions while employing market mechanisms to cost-effectively achieve the emission-reduction goals. The statewide cap for GHG emissions from major sources, which is measured in metric tons of carbon dioxide equivalent (MTCO_{2e}), will commence in 2013 and decline over time, achieving GHG emission reductions throughout the program’s duration. Each covered entity will be required to surrender one permit to emit (the majority of which will be allowances, entities are also allowed to use a limited number of CARB offset credits) for each ton of GHG emissions they emit. Some covered entities will be allocated some allowances and will be able to buy additional allowances at auction, purchase allowances from others, or purchase offset credits.”

The guidance goes on to say that “[s]tarting in 2012, major GHG-emitting sources, such as electricity generation (including imports), and large stationary sources (e.g., refineries, cement production facilities, oil and gas production facilities, glass manufacturing facilities, and food

processing plants) that emit more than 25,000 MTCO₂e per year will have to comply with the Cap-and-Trade Program. The program expands in 2015 to include fuel distributors (natural gas and propane fuel providers and transportation fuel providers) to address emissions from transportation fuels, and from combustion of other fossil fuels not directly covered at large sources in the program's initial phase." In early April 2017, the Third District Court of Appeal upheld the lawfulness of the cap-and-trade program as a "fee" rather than a "tax." (See *California Chamber of Commerce et al. v. State Air Resources Board et al.* (2017) 10 Cal.App.5th 604.)

AB 398 (Stats. 2017, ch. 135) extended the life of the existing Cap and Trade Program through December 2030.

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;

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- 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.

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 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.

The most recent Title 24 standards are the 2019 Title 24 standards. The 2019 Building Energy Efficiency Standards improve upon the 2016 Energy Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. Buildings permitted on or after January 1, 2020, must comply with the 2019 Standards. The California Energy Commission updates the standards every three years.

Single-family homes built with the 2019 standards will use about 7 percent less energy due to energy efficiency measures versus those built under the 2016 standards. Once rooftop solar

electricity generation is factored in, homes built under the 2019 standards will use about 53 percent less energy than those under the 2016 standards. This will reduce greenhouse gas emissions by 700,000 metric tons over three years, equivalent to taking 115,000 fossil fuel cars off the road. Nonresidential buildings will use about 30 percent less energy due mainly to lighting upgrades.

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.

CEQA Direction

In 2008, the Office of Planning and Research (OPR), issued Guidance regarding assessing significance of GHGs in California Environmental Quality Act (CEQA) documents; that Guidance stated that the adoption of appropriate significance thresholds was a matter of discretion for the lead agency. The OPR Guidance states:

“[T]he global nature of climate change warrants investigation of a statewide threshold of significance for GHG emissions. To this end, OPR has asked the CARB technical staff to recommend a method for setting thresholds which will

encourage consistency and uniformity in the CEQA analysis of GHG emissions throughout the state. Until such time as state guidance is available on thresholds of significance for GHG emissions, we recommend the following approach to your CEQA analysis.”

Determine Significance

- When assessing a project’s GHG emissions, lead agencies must describe the existing environmental conditions or setting, without the project, which normally constitutes the baseline physical conditions for determining whether a project’s impacts are significant.
- As with any environmental impact, lead agencies must determine what constitutes a significant impact. In the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a “significant impact,” individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice.
- The potential effects of a project may be individually limited but cumulatively considerable. Lead agencies should not dismiss a proposed project’s direct and/or indirect climate change impacts without careful consideration, supported by substantial evidence. Documentation of available information and analysis should be provided for any project that may significantly contribute new GHG emissions, either individually or cumulatively, directly or indirectly (e.g., transportation impacts).
- Although climate change is ultimately a cumulative impact, not every individual project that emits GHGs must necessarily be found to contribute to a significant cumulative impact on the environment. CEQA authorizes reliance on previously approved plans and mitigation programs that have adequately analyzed and mitigated GHG emissions to a less than significant level as a means to avoid or substantially reduce the cumulative impact of a project.

The OPR Guidance did not require Executive Order S-3-05 to be used as a significance threshold under CEQA. Rather, OPR recognized that, until the CARB establishes a statewide standard, selecting an appropriate threshold was within the discretion of the lead agency.

In 2010, the California Natural Resources Agency added Section 15064.4 to the CEQA Guidelines, providing new legal requirements for how agencies should address GHG-related impacts in their CEQA documents. As amended in 2019, Section 15064.4 provides as follows:

- (a) The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in section 15064. A lead agency shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency

shall have discretion to determine, in the context of a particular project, whether to:

- (1) Quantify greenhouse gas emissions resulting from a project; and/or
- (2) Rely on a qualitative analysis or performance-based standards.

(b) In determining the significance of a project's greenhouse gas emissions, the lead agency should focus its analysis on the reasonably foreseeable incremental contribution of the project's emissions to the effects of climate change. A project's incremental contribution may be cumulatively considerable even if it appears relatively small compared to statewide, national or global emissions. The agency's analysis should consider a timeframe that is appropriate for the project. The agency's analysis also must reasonably reflect evolving scientific knowledge and state regulatory schemes. A lead agency should consider the following factors, among others, when determining the significance of impacts from greenhouse gas emissions on the environment:

- (1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;

- (2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.

- (3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions (see, e.g., section 15183.5(b)). Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project. In determining the significance of impacts, the lead agency may consider a project's consistency with the State's long-term climate goals or strategies, provided that substantial evidence supports the agency's analysis of how those goals or strategies address the project's incremental contribution to climate change and its conclusion that the project's incremental contribution is not cumulatively considerable.

(c) A lead agency may use a model or methodology to estimate greenhouse gas emissions resulting from a project. The lead agency has discretion to select the model or methodology it considers most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change. The lead agency must support its selection of a model or

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methodology with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use.

Section 15126.4, subdivision (c), provides guidance on how to formulate mitigation measures addressing GHG-related impacts:

Consistent with section 15126.4(a), lead agencies shall consider feasible means, supported by substantial evidence and subject to monitoring or reporting, of mitigating the significant effects of greenhouse gas emissions. Measures to mitigate the significant effects of greenhouse gas emissions may include, among others:

- (1) Measures in an existing plan or mitigation program for the reduction of emissions that are required as part of the lead agency's decision;
- (2) Reductions in emissions resulting from a project through implementation of project features, project design, or other measures, such as those described in Appendix F;
- (3) Off-site measures, including offsets that are not otherwise required, to mitigate a project's emissions;
- (4) Measures that sequester greenhouse gases;
- (5) In the case of the adoption of a plan, such as a general plan, long range development plan, or plans for the reduction of greenhouse gas emissions, mitigation may include the identification of specific measures that may be implemented on a project-by-project basis. Mitigation may also include the incorporation of specific measures or policies found in an adopted ordinance or regulation that reduces the cumulative effect of emissions.

California Supreme Court Decisions

THE "NEWHALL RANCH" CASE

On November 30, 2015, the California Supreme Court released its opinion on *Center for Biological Diversity v. California Department of Fish and Wildlife* (2015) 62 Cal.4th 204 (hereafter referred to as the Newhall Ranch Case).

Because of the importance of the Supreme Court as the top body within the California Judiciary, and because of the relative lack of judicial guidance regarding how GHG issues should be addressed in CEQA documents, the opinion provides very important legal guidance to agencies charged with preparing EIRs.

The case involved a challenge to an EIR prepared by the California Department of Fish and Wildlife (CDFW) for the Newhall Ranch development project in Los Angeles County, which consists of approximately 20,000 dwelling units as well as commercial and business uses, schools, golf courses, parks and other community facilities in the City of Santa Clarita.

In relation to GHG analysis, the Newhall Ranch Case illustrates the difficulty of complying with statewide GHG reduction targets at the local level using CEQA to determine whether an individual project's GHG emissions will create a significant environmental impact triggering an EIR, mitigation, and/or statement of overriding consideration. The EIR utilized compliance with AB 32's GHG reduction goals as a threshold of significance and modelled its analysis on the CARB's business-as-usual (BAU) emissions projections from the 2008 Scoping Plan. The EIR quantified the project's annual emissions at buildout and projected emissions in 2020 under a BAU scenario, in which no additional regulatory actions were taken to reduce emissions. Since the Scoping Plan determined a reduction of 29 percent from BAU was needed to meet AB 32's 2020 reduction goal, the EIR concluded that the project would have a less-than-significant impact because the project's annual GHG emissions were projected to be 31 percent below its BAU estimate.

The Supreme Court concluded that the threshold of significance used by the EIR was permissible; however, the BAU analysis lacked substantial evidence to demonstrate that the required percentage reduction from BAU is the same for an individual project as for the entire State. The court expressed skepticism that a percentage reduction goal applicable to the State as a whole would apply without change to an individual development project, regardless of its size or location. Therefore, the Supreme Court determined that the EIR's GHG analysis was not sufficient to support the conclusion that GHG impacts would be less than significant.

In addition, the Supreme Court provided the following guidance regarding potential alternative approaches to GHG impact assessment at the project level for lead agencies:

1. The lead agency determination of what level of GHG emission reduction from business-as-usual projection that a new land development at the proposed location would need to achieve to comply with statewide goals upon examination of data behind the Scoping Plan's business-as-usual emission projections. The lead agency must provide substantial evidence and account for the disconnect between the Scoping Plan, which dealt with the State as a whole, and an analysis of an individual project's land use emissions (the same issues with CEQA compliance addressed in this case);
2. The lead agency may use a project's compliance with performance based standards – such as high building energy efficiency – adopted to fulfill a statewide plan to reduce or mitigate GHG emissions to assess consistency with AB 32 to the extent that the project features comply with or exceed the regulation (See Guidelines Section 15064.4(a)(2), (b)(3); see also Guidelines Section 15064(h)(3)). A significance analysis would then need to account for the additional GHG emissions – such as transportation emissions – beyond the regulated activity. Transportation emissions are in part a function of the location, size, and density or intensity of a project, and thus can be affected by local governments' land use decision making. Additionally, the lead agency may use a programmatic effort including a general plan, long range development plan, or a separate plan to reduce GHG emissions (such as Climate Action Plan or a SB 375 metropolitan regional transportation impact Sustainable Communities Strategy) that accounts for specific geographical GHG emission reductions to streamline or tier project level CEQA analysis pursuant to Guidelines

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15183.5(a)-(b) for land use and Public Resources Code Section 21155.2 and 21159.28 and Guidelines Section 15183.5(c) for transportation.

3. The lead agency may rely on existing numerical thresholds of significance for GHG emissions (such as the Bay Area Air Quality Management District's proposed threshold of significance of 1,100 MT CO₂E in annual emission for CEQA GHG emission analysis on new land use projects). The use of a numerical value provides what is "normally" considered significant but does not relieve a lead agency from independently determining the significance of the impact for the individual project (See Guidelines Section 15064.7).

THE SANDAG CASE

In *Cleveland National Forest Foundation v. San Diego Association of Governments* (2017) 3 Cal.5th 497 (*SANDAG*), the Supreme Court addressed the extent to which, if any, an EIR for a Regional Transportation Plan (RTP) with a Sustainable Communities Strategy (SCS) must address the proposed project's consistency with the 2050 target set forth in Executive Order S-03-05 (i.e., 80 percent below 1990 levels). The Court held that SANDAG did not abuse its discretion by failing to treat the 2050 GHG emissions target as a threshold of significance. The Court cautioned, however, that its decision applies narrowly to the facts of the case and that the analysis in the challenged EIR should not be used as an example for other lead agencies to follow going forward. Notably, the RTP itself covered a planning period that extended all the way to 2050.

The Court acknowledged the parties' agreement that "the Executive Order lacks the force of a legal mandate binding on SANDAG[.]" (*Id.* at p. 513.) This conclusion was consistent with the Court's earlier decision in *Professional Engineers in California Government v. Schwarzenegger* (2010) 50 Cal.4th 989, 1015, which held the Governor had acted in excess of his executive authority in ordering the furloughing of State employees as a money-saving strategy. In that earlier case, which is not mentioned in the *SANDAG* decision, the Court held that the decision to furlough employees was legislative in character, and thus could only be ordered by the Legislature, and not the Governor, who, under the State constitution, may only exercise executive authority. In *SANDAG*, the Court thus impliedly recognized that Governors do not have authority to set statewide legislative policy, particularly for decades into the future. Even so, however, the Court noted, and did not question, the parties' agreement that "the Executive Order's 2050 emissions reduction target is grounded in sound science." (3 Cal.5th at p. 513.) Indeed, the Court emphasized that, although "the Executive Order 'is not an adopted GHG reduction plan' and that 'there is no legal requirement to use it as a threshold of significance,'" the 2050 goal nevertheless "expresses the pace and magnitude of reduction efforts that the scientific community believes necessary to stabilize the climate.

This scientific information has important value to policymakers and citizens in considering the emission impacts of a project like SANDAG's regional transportation plan." (*Id.* at p. 515.) Towards the end of the decision, the Court even referred to "the state's 2050 climate goals" as though the 2050 target from E.O. S-03-05 had some sort of standing under California law. (*Id.* at p. 519.) The Court seemed to reason that, because the Legislature had enacted both AB 32 and SB 32, which followed the downward GHG emissions trajectory recommended in the Executive Order, the

Legislature, at some point, was also likely to adopt the 2050 target as well: “SB 32 ... reaffirms California's commitment to being on the forefront of the dramatic greenhouse gas emission reductions needed to stabilize the global climate.” (*Id.* at p. 519.) Finally, the Court explained that “planning agencies like SANDAG must ensure that CEQA analysis stays in step with evolving scientific knowledge and state regulatory schemes.” (*Ibid.*)

In sum, the Court recognized that the Executive Order did not carry the force of law, but nevertheless considered it to be part of “state climate policy” because the Legislature, in enacting both AB 32 and SB 32, seems to be following both the IPCC recommendations for reducing GHG emissions worldwide and evolving science. Nothing in the decision, however, suggests that all projects, regardless of their buildout period, must address the 2050 target or treat it as a significance threshold.

LOCAL

San Joaquin Valley Air Pollution Control District Climate Change Action Plan

In August 2008, the SJVAPCD adopted its Climate Change Action Plan. The Climate Change Action Plan directed the SJVAPCD's Air Pollution Control Officer to develop guidance to assist APCD staff, Valley businesses, land use agencies and other permitting agencies in addressing GHG emissions as part of the CEQA process. Regarding CEQA guidance, some of the goals of the Climate Change Action Plan are to assist local land use agencies, developers and the public by identifying and quantifying GHG emission reduction measures for development projects and by providing tools to streamline evaluation of project-specific GHG effects, and to assist Valley businesses in complying with State law related to GHG emissions.

A product of this direction to provide CEQA guidance is the Final Staff Report – Climate Change Action Plan: Addressing GHG Emissions Impacts, presented to the APCD Board in December 2009. A central component of the Final Staff Report is the establishment of Best Performance Standards, which are specifications or project design elements that identify effective, feasible GHG emission reduction measures. Emission reductions achieved through Best Performance Standards implementation would be pre-quantified, thus negating the need for project-specific quantification of GHG emissions.

For projects not implementing Best Performance Standards, demonstration of a 29% reduction in GHG emissions from business-as-usual conditions is required to determine that a project would have a less than cumulatively significant impact. Appendix J of the Final Staff Report provides a table of GHG emission reduction measures for development projects, along with a point value that corresponds to a percentage decrease in GHG emissions when available.

San Joaquin County Regional Transportation Plan/Sustainable Communities Strategy (SCS/RTP)

The 2014 San Joaquin County Regional Transportation Plan, which has been named “Valley Visions San Joaquin,” was the first RTP in San Joaquin County to contain a SCS, the result of the Sustainable Communities and Climate Protection Act of 2008 (i.e., SB 375). The SCS coordinates future transportation investments and land use strategies to prioritize a multi-modal investment plan covering a 27-year period extending out to 2040. An update to the 2014 RTP/SCS was adopted in June 2018 (the 2018 RTP/SCS).

The RTP is a long-range transportation plan that guides the region’s transportation improvements over a minimum of 20-years and is updated every four. Using growth forecasts and economic trends projected out over study timeframe, the RTP considers the role of transportation in the broader context of economic, environmental, and quality-of-life goals for the future, identifying regional transportation strategies to address our mobility needs. The RTP addresses all transportation modes including motor vehicles, transit (commuter and local), rail (commuter and inter-regional), goods movement (rail, truck, and water), bicycle and pedestrian facilities, aviation systems, transportation systems management (TSM) and transportation demand management (TDM) programs, and other projects considered over the planning horizon of 2042. Regional transportation improvement projects proposed to be funded, in whole or in part, in the state transportation improvement program must be included in the adopted RTP.

The eight counties of the San Joaquin Valley are coordinating on some aspects of these planning efforts to maximize resources, with each area’s Metropolitan Planning Organization (MPO) developing a separate plan. MPOs are responsible for setting transportation policy and priorities for a region and documenting how transportation funds will be spent in a Regional Transportation Plan. The policies contained in the 2018 RTP/SCS are as follows:

- Enhance the Environment for Existing and Future Generations and Conserve Energy
- Maximum Mobility and Accessibility
- Increase Safety and Security
- Preserve the Efficiency of the Existing Transportation System
- Support Economic Vitality
- Promote Interagency Coordination and Public Participation for Transportation Decision-Making and Planning Efforts
- Maximize Cost-Effectiveness
- Improve the Quality of Life for Residents

The Greenhouse Gas Reduction Targets for the 2018 San Joaquin County RTP are as follows:

- 5% per capita reduction from 2005 levels by 2020
- 10% per capita reduction from 2005 levels by 2035

3.7.3 IMPACTS AND MITIGATION MEASURES

Thresholds of Significance

GREENHOUSE GAS EMISSIONS/CLIMATE CHANGE

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.
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The vast majority of individual projects do not generate sufficient GHG emissions to create a project-specific impact through a direct influence on climate change; therefore, the issue of climate change typically involves an analysis of whether a project's contribution towards an impact is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines, Section 15355).

The SJVAPCD's has evaluated different approaches for estimating impacts and summarizing potential GHG emission reduction measures. The SJVAPCD staff has concluded that "*existing science is inadequate to support quantification of impacts that project specific GHG emissions have on global climatic change.*" This is readily understood when one considers that global climatic change is the result of the sum total of GHG emissions, both man-made and natural that occurred in the past; that is occurring now; and will occur in the future. The effects of project specific GHG emissions are cumulative, and unless reduced or mitigated, their incremental contribution to global climatic change could be considered significant.

The *Final Draft Guidance for Assessing and Mitigating Air Quality Impacts* (SJVAPCD, 2015) provides an approach to assessing a Project's impacts on greenhouse gas emissions by evaluating the Project's emissions to the "reduction targets" established in ARB's AB 32 Scoping Plan. For instance, the SJVAPCD's guidance recommends that projects should demonstrate that "*project specific GHG emissions would be reduced or mitigated by at least 29%, compared to Business as Usual (BAU), including GHG emission reductions achieved since the 2002-2004 baseline period, consistent with GHG emission reduction targets established in ARB's AB 32 Scoping Plan. Projects achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG.*"

Subsequent to the SJVAPCD's approval of the *Final Draft Guidance for Assessing and Mitigating Air Quality Impacts* (SJVAPCD 2015), the California Supreme Court issued an opinion that affects the conclusions that should/should not be drawn from a GHG emissions analysis that is based on consistency with the AB 32 Scoping Plan. More specifically, in *Center for Biological Diversity v. California Department of Fish and Wildlife*, the Court ruled that showing a "project-level reduction" that meets or exceeds the Scoping Plan's overall statewide GHG reduction goal is not necessarily

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sufficient to show that the project's GHG impacts will be adequately mitigated: *"the Scoping Plan nowhere related that statewide level of reduction effort to the percentage of reduction that would or should be required from individual projects..."* According to the Court, the lead agency cannot simply assume that the overall level of effort required to achieve the statewide goal for emissions reductions will suffice for a specific project.

Given this Court decision, reliance on a 29 percent GHG emissions reduction from projected BAU levels compared to the Project's estimated 2020 levels as recommended in the SJVAPCD's guidance documents will not be the basis for an impact conclusion in this EIR. Given that the SJVAPCD staff has concluded that *"existing science is inadequate to support quantification of impacts that project specific GHG emissions have on global climatic change,"* this EIR will instead rely on a qualitative approach for this analysis.

ENERGY CONSERVATION

The proposed Project would result in a significant impact on energy use if it would:

- 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 that occurs because of implementation of the proposed Project 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 Lathrop are expected to be more days of extreme heat over longer periods, as well as potential for flooding. Short-term and long-term emissions typically associated with construction and operations of future development projects, which may occur because of implementation of the proposed Project, are further described below.

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 Lathrop 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. As such, SJVAPCD recommends in its draft threshold to amortize project-specific construction emissions over a 30-year operational lifetime of a project. This normalizes construction emissions so that they can be grouped with operational emissions to generate a precise project GHG inventory. However, the SJVAPCD does not have a current 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 Lathrop. 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 the SJVAPCD.

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. The most significant GHG emission from natural gas usage will be 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.

As shown in Table 2.0-2 in Chapter 2.0 of this Draft EIR, buildout of the City's existing General Plan would result in a projected population increase of 66,562 new residents, and an increase of 49,250

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new jobs. The population growth is an approximately 233.5% increase compared to the city's existing population.

Table 3.7-1 summarizes VMT per dwelling unit, VMT per resident (per capita), VMT per employee, and VMT per service population (which includes both residents and employees). As shown in the table, upon full buildout of the proposed General Plan, VMT levels per dwelling unit and per capita would decrease under the proposed General Plan compared to baseline conditions, while VMT per employee and per service population would increase.

TABLE 3.7-1: VMT PER DWELLING UNIT, PER CAPITA, AND PER EMPLOYEE FOR EXISTING CONDITION AND PROPOSED GENERAL PLAN

LAND USE	UNITS	EXISTING CONDITION (2020 BASELINE)	PROPOSED GENERAL PLAN
Single family	VMT per dwelling unit	111.5	64.5
Multi family	VMT per dwelling unit	86.0	54.6
Age restricted	VMT per dwelling unit	47.5	27.3
Restaurant	VMT per employee ¹	215.2	248.9
Industrial	VMT per employee	77.8	79.1
Office	VMT per employee	36.5	47.3
Retail	VMT per employee	135.3	211.5
All residential	VMT per dwelling unit	108.3	58.9
All residential	VMT per resident ²	27.9	15.2
All employment	VMT per employee	85.8	101.6
All land uses	VMT per service population ^{2,3}	42.9	47.4
Total VMT	VMT	1,497,700	7,503,700

NOTES: ¹VMT PER EMPLOYEE RATIOS INCLUDE ALL TRIPS BY EMPLOYEES, CUSTOMERS, AND DELIVERIES

²BASED ON 3.88 RESIDENTS/DWELLING UNIT (CALIFORNIA DEPARTMENT OF FINANCE, E-5 CITY/COUNTY POPULATION AND HOUSING ESTIMATES, 1/1/2020)

³SERVICE POPULATION INCLUDES RESIDENTS AND EMPLOYEES

⁴VMT INCLUDES FULL LENGTH OF ALL TRIPS WITH EITHER AN ORIGIN OR DESTINATION WITHIN THE PLANNING AREA

⁵NA = NOT APPLICABLE, METRIC FOR INFORMATIONAL PURPOSES ONLY

SOURCE: FEHR & PEERS, 2021

The “per service population” metric, which accounts for both population and employment, is a common way to analyze the GHG efficiency of new development in comparison to an existing baseline. The land use modifications and policies proposed as part of the proposed General Plan would result in an overall approximately 22.9% increase in per service population vehicle miles traveled compared to the existing baseline condition, upon full buildout.

Separately, it is noted that upon full buildout of the existing Lathrop General Plan Land Use Map, there would be an approximately 10.4% increase in per service population vehicle miles traveled compared to the existing baseline condition.

As discussed in Chapter 2.0, growth projections for the General Plan should not be considered a 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. As such, the total population and growth numbers presented in this EIR are likely an overstatement of the level of growth that will occur in Lathrop over the next 20 years.

The City of Lathrop has not developed or adopted a Climate Action Plan (CAP). However, 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. For example, Goal CIR-2 encourages the creation of a system of pedestrian, bicycle, and transit facilities that enables non-automotive accessibility, thereby limiting greenhouse gas emissions. Additionally, Policy LU-3.3 requires that climate change and adaptation planning principles are integrated into future updates of the Zoning Code, and other related long-range utilities and facilities planning documents. Additionally, Policy LU-4.2 emphasizes efforts to reduce regional vehicle miles traveled (VMT) by supporting land use patterns and site designs that promote active modes of transportation, and public transit. Policy CIR-2.1 requires consideration of all modes of travel in design (i.e. complete streets). Furthermore, Policy RR-6.9 requires consideration and implementation as feasible of new policies and programs that will help to provide energy efficient alternatives to fossil fuel use and reduce consumption in order to reduce greenhouse gas emissions. Moreover, Policy RR-6.8 establishes the following per capita GHG reduction targets, in order to meet the requirements established by the state under AB 32 and SB 32, consistent with the CARB's 2017 Scoping Plan.

- 3.99 MT CO₂e per capita by 2030
- 2.66 MT CO₂e per capita by 2040; and
- 1.33 MT CO₂e per capita by 2050

General Plan Action RR-6e requires the City to monitor GHG emissions generated by the community over time for consistency with the established GHG reduction targets, and to update the City's GHG inventory every five years. In the event the City determines that ongoing efforts to reduce GHG emissions are not on track to reach the City's adopted per capita GHG reduction targets, the City shall establish and adopt new and/or revised GHG reduction measures that will effectively meet the established GHG reduction targets.

These General Plan policies and implementing actions would minimize potential impacts associated with GHG emissions in the Planning Area, and would comply with state 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 Lathrop 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.

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In addition, the General Plan will not conflict with the implementation of the policies and supportive strategies in San Joaquin Council of Governments' (SJCOG) 2018 Regional Transportation Plan and Sustainable Communities Strategy (2018 RTP/SCS). The 2018 RTP/SCS policies and supportive strategies are identified in Table ES.2 of the RTP/SCS. The policies include:

- Enhance the environment for existing and future generations and conserve energy
- Maximize mobility and accessibility
- Increase safety and security
- Preserve the efficiency of the existing transportation system
- Support economic vitality
- Promote interagency coordination and public participation for transportation decision-making and planning efforts
- Maximize cost effectiveness
- Improve quality of life for residents

As demonstrated in the list of General Plan goals, policies, and actions listed below, the proposed Lathrop General Plan is supportive and complimentary of the policies and strategies included in the 2018 RTP/SCS, and would not conflict with implementation of this plan.

The 2018 RTP/SCS relied upon the existing Lathrop General Plan to determine population, employment, and VMT increases associated with General Plan buildout in Lathrop as part of the RTP/SCS's overall analysis of per capita GHG emissions throughout the region. As noted on page 5-5 of the 2018 RTP/SCS, the Plan meets and exceeds the GHG targets established by the CARB. As further noted on page 5-5 of the RTP/SCS, the SJCOG Plan Area is projected to have a VMT per capita of 21.98 in year 2042, compared to the 2015 baseline per capita VMT of 24.61.

As noted above, under Table 3.7-1, Lathrop's baseline per capita VMT is 27.9, and the projected future per capita VMT from the proposed General Plan is 15.2, which is a 46% reduction in per capita VMT for Lathrop residents.

Separately, the proposed General Plan would not conflict with any of the other provisions of the CARB Scoping Plan or applicable regulations related to GHG reductions because the General Plan includes a comprehensive approach to expanding transit access, increasing mobility options, promoting a pedestrian- and bicycle-oriented urban development pattern, developing complete neighborhoods that accommodate a variety of housing types and are proximate to shopping, services, and jobs, and encourages development of infill sites. All of these comprehensive policy approaches serve to support regional and statewide efforts to reduce GHG emissions, including CARB's Scoping Plan and SJCOG's 2018 RTP/SCS through energy efficiency, green building, land use development, and the other 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. 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 GOALS, POLICIES, AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

GOALS

- LU-1 Accommodate a mix of land uses that meet the needs of residents, businesses, and visitors with places to live, work, shop, be entertained and culturally engaged.
- LU-2 Promote objectives and development in special planning areas consistent with adopted specific plans, overlay districts, Master Plans and density bonus provisions.
- LU-3 Participate in coordinated local and regional land use planning activities.
- LU-4 Coordinate and integrate land use planning and transportation objectives.
- LU-5 Ensure that new development is compatible with existing development.
- CIR-1 Develop and maintain a roadway system that accommodates all users.
- CIR-2 Create a system of pedestrian, bicycle, and transit facilities that enables non-automotive accessibility and increases the health and livability of the community.
- CIR-4 Plan for the future of transportation to ensure accessibility for all, reduce the environmental impacts of Transportation, and improve the quality of life.
- RR-6 Provide the community with optimal air quality.

POLICIES

- LU-1.1 Support a full spectrum of conveniently located residential, commercial, industrial, public, and quasi-public uses that support business development, regional transportation objectives and the livability of residential neighborhoods.
- LU-1.3 Maintain a supply of developable lands sufficient to meet desired levels of housing, jobs, economic, educational, and recreational needs of the city over the planning horizon.
- LU-1.4 Continue to support the development of a variety of housing types and densities that meet the needs of individuals and families, and offers residents of all income levels, age groups and special needs sufficient housing opportunities and choices. (Additional policies specifically related to Housing are included in the General Plan's Housing Element)
- LU-1.8 Recognize that the General Plan and Land Use Map may be amended in accordance with State law in order to ensure that there is an adequate supply of commercial, industrial, public facility, parks, residential, and other desired land uses to serve the City's needs.

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- LU-3.1 Support regional efforts that promote higher densities and intensities near major transit and travel facilities, and reduce regional vehicle miles traveled by supporting active modes of transportation including walking, biking, and public transit.
- LU-3.2 Utilize planning tools and objectives that promote transit-oriented and mixed-use development objectives near future ACE and Valley Link Transit Facilities. Land use plans for these areas should complement transit facilities to accommodate transit oriented development (TOD) developments and/or park-and-ride facilities near ACE stations and future Valley Link station.
- LU-3.3 Integrate climate change and adaptation planning principles into future updates of the Zoning Code, and other related long-range utilities and facilities planning documents. (See the Safety Element for additional policies related to climate change and resiliency planning).
- LU-3.4 Promote logical City boundaries and work with surrounding jurisdictions to encourage complementary uses. Specifically, work with the City of Manteca and San Joaquin County to ensure development of complementary and compatible uses adjacent to Lathrop.
- LU-4.2 Emphasize efforts to reduce regional vehicle miles traveled (VMT) by supporting land use patterns and site designs that promote active modes of transportation, and public transit.
- LU-4.3 Encourage the development of new industrial and business park which facilitate efficient circulation patterns that reduce truck traffic near residential uses.
- LU-5.1 Require new development to be compatible and complementary to existing development. Where appropriate and feasible, promote connections between neighborhoods and services and facilities.
- LU-5.2 Prohibit the establishment or encroachment of incompatible uses into industrial-designated lands. Examples include, but are not limited to, new residential uses in areas designated for industrial development, which may be subject to existing and future nuisance impacts associated with industrial operations and associated activities.
- LU-5.3 Require that new residential development be designed to protect residents from potential conflicts with adjacent land uses, and other features including rail corridors, and high-volume roadways.
- LU-5.4 In industrial areas located within 1,000 feet of existing and planned sensitive receptors, promote industrial uses that are environmentally sustainable with limited potential to create nuisances such as noise and odors.
- LU-5.5 Ensure that industrial development projects, including warehouse, distribution, logistics, and fulfillment projects, mitigate adverse impacts (including health risks and nuisances) to nearby residential land uses and other existing and planned sensitive receptors.
- CIR-1.2 Complete Streets. Consider all modes of travel in planning, design, and construction of all transportation projects to create safer, more livable, and more inviting environments for pedestrians, bicyclists, motorists and public transit users of all ages and capabilities.

- CIR-2.1 Bicycle and Pedestrian Networks. Establish a network of identified bicycle and pedestrian routes connecting residential areas with schools, recreation, shopping, and employment areas within the City.
- CIR-2.3 Safe Routes to School. Consider walking and bicycling school access as a priority over vehicular movements when any such conflicts occur.
- CIR-2.4 Transit Access. Provide safer, more convenient access to transit service including rail, bus, and paratransit.
- CIR-2.5 Amenities. To support bicycle, pedestrian, and transit usage, provide amenities including pedestrian-scale lighting, bicycle parking, shade trees and landscaping, and bus shelters and benches.
- CIR-4.1 Land Use Supporting Reduced VMT. Support land use with increased land use densities and mixed uses, consistent with the Land Use Element, to reduce vehicle miles traveled and promote the use of walking, biking, and transit.
- CIR-4.2 Demand Management. Encourage employers to provide programs for carpooling/transit/biking/walking, transit ridership subsidies, bicycle facilities, alternative work schedules, ridesharing, telecommuting, working at home, employee education, and preferential parking for carpools/vanpools.
- CIR-4.3 New Technologies. Monitor 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.
- CIR-4.4 Electric Vehicle Charging. Support the creation of electric vehicle charging stations at multifamily residential, commercial, government, and other employment and community destinations.
- RR-6.1 Regional Standards. Coordinate planning efforts with the San Joaquin Valley Air Pollution Control District (SJVAPCD), San Joaquin Council of Governments, and the California Air Resource Board to meet local and regional air quality standards and ensure attainment of established goals.
- RR-6.2 Sensitive Receptors. Minimize the community's exposure to toxic and harmful air emissions and odors by requiring an adequate buffer or distance between residential and other sensitive receptors and industrial-type uses that typically generate air pollutants, toxic air contaminants, and/or obnoxious fumes or odors.
- RR-6.3 Construction Activities. Require new construction to minimize fugitive dust and construction vehicle emissions.
- RR-6.4 Development. Encourage the development of mixed-use residential opportunities and live-work environments within the City to lessen the impacts of traffic congestion on local air quality.

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- RR-6.5 Appliances and Equipment. Require appliances and equipment, including wood-burning devices, in development projects to meet current standards for controlling air pollution, including particulate matter and toxic air contaminants.
- RR-6.6 Combustible Materials. Cooperate with the Air District to ensure that burning of any combustible material within the City is consistent with Air District regulations to minimize particulate air pollution.
- RR-6.7 Mitigation. Require the implementation of relevant mitigation measures for all future development upon identification of potential air quality impacts.
- RR-6.8 Local Reduction Targets. The City of Lathrop establishes the following per capita GHG reduction targets, in order to meet the requirements established by the state under AB 32 and SB 32, consistent with the CARB's 2017 Scoping Plan:
- A. 3.99 MT CO₂e per capita by 2030
 - B. 2.66 MT CO₂e per capita by 2040; and
 - C. 1.33 MT CO₂e per capita by 2050.
- RR-6.9 GHG Reduction. Consider, and implement as feasible, new policies and programs that will help to provide energy efficient alternatives to fossil fuel use and reduce consumption in order to reduce greenhouse gas emissions.
- RR-6.10 Public Engagement. Promote regional air quality programs to inform the public on regional air quality concerns and encourage the engagement of all Lathrop residents in future planning decisions related to air quality.

IMPLEMENTATION ACTIONS

- LU-3.b Work with adjacent jurisdictions to facilitate increased compatibility and access across barriers to travel such as discontinuous streets, bike lanes, sidewalks, and paths.
- LU-3.c Work with developers, reclamation districts and utility providers to create or expand linear parks, trails, and publicly-accessible greenways along levees, drainage and utility rights-of-way that provide opportunities for greenway connections and passive recreational opportunities.
- LU-5b Through the development review process, analyze land use compatibility and require adequate buffers and/or architectural enhancements to protect sensitive receptors from intrusion of development activities that may cause unwanted nuisances and health risks.

LU-5c When industrial projects, including warehouse projects, fulfillment centers, and other projects that may generate high volumes of truck trips and/or air quality emissions are proposed within 1,000 feet of existing or planned residential uses or other sensitive receptors, the City shall require the preparation of a Health Risk Assessment (HRA) that meets the standards established by the Office of Environmental Health Hazard Assessment (OEHHA), and the San Joaquin Valley Air Pollution Control District (SJVAPCD). Projects shall not be approved until it can be demonstrated that the project would not result in an exceedance of the established thresholds of significance for public health risks at nearby sensitive receptors.

LU-5d When industrial projects, including warehouse projects, fulfillment centers, and other projects that may generate high volumes of truck trips and/or air quality emissions are proposed within 1,000 feet of existing or planned residential uses or other sensitive receptors, the City shall require the implementation of best management practices (BMPs) to reduce pollution exposure to sensitive receptors, particularly diesel particulate matter (DPM). The appropriate BMPs shall be established on a case-by-case basis, and should consider the following tools, methods, and approaches:

- Creating physical, structural, and/or vegetative buffers that adequately prevent or substantially reduce pollutant dispersal between warehouses and any areas where sensitive receptors are likely to be present, such as homes, schools, daycare centers, hospitals, community centers, and parks.
- Providing adequate areas for on-site parking, on-site queuing, and truck check-in that prevent trucks and other vehicles from parking or idling on public streets.
- Placing facility entry and exit points from the public street away from sensitive receptors, e.g., placing these points on the north side of the facility if sensitive receptors are adjacent to the south side of the facility. Exceptions can be made for emergency vehicle access (EVA) points.
- Locating warehouse dock doors and other onsite areas with significant truck traffic and noise away from sensitive receptors.
- Screening dock doors and onsite areas with significant truck traffic and noise with physical, structural, and/or vegetative barriers that adequately prevent or substantially reduce pollutant dispersal from the facility towards sensitive receptors.
- Posting signs clearly showing the designated entry and exit points from the public street for trucks and service vehicles.
- Posting signs indicating that all parking and maintenance of trucks must be conducted within designated on-site areas and not within the surrounding community or public streets.

LU-5e Update the Lathrop Municipal Code to include Good Neighbor Guidelines for Warehouse Distribution Facilities. The new Good Neighbor Guidelines should include:

- a. A definition of the type and size of facility that is subject to the Guidelines;
 - b. Standards to minimize exposure to diesel emissions to sensitive receptors that are situated in close proximity to the proposed facility;
 - c. Standards and practices that eliminate diesel trucks from unnecessarily traversing through residential neighborhoods;
 - d. Standards and practices that eliminate trucks from using residential areas and repairing vehicles on the streets;
 - e. Strategies to reduce and/or eliminate diesel idling within the facility's site;
- CIR-1a Review and revise roadway standards to establish complete streets standards addressing the following factors as applicable: number of travel lanes, lane width, medians, drainage control, shoulder width, parking lanes, bike lanes, fire and emergency response standards, curb and gutter design, landscaped strips, and sidewalk width.
- CIR-1b Require development projects to arrange streets in an interconnected pattern, so that pedestrians, bicyclists, and drivers are not forced onto arterial streets for inter- or intra-neighborhood travel. This approach will also increase the safety and efficiency of movement of emergency responders and reduce vehicle miles traveled within the community..
- IR-1c Apply signals, roundabouts, traffic circles and other traffic management techniques appropriately at residential and collector street intersections with collector and arterial streets in order to allow bicyclists and pedestrians to travel more conveniently and more safely from one neighborhood to another.
- CIR-1d Use traffic calming tools to assist in implementing complete street principles; possible tools include roundabouts, raised intersections, curb extensions, reduced roadway width, and high visibility crosswalks.
- CIR-2a Create an active transportation plan supporting the development of bicycle and pedestrian networks across the City and funding applications for bicycle and pedestrian improvements.
- CIR-2b Add planned bicycle and pedestrian facilities in conjunction with road rehabilitation, reconstruction, or re-striping projects whenever feasible.
- CIR-2c Enhance sidewalks to create a high-quality pedestrian environment, including wider sidewalks and improved pedestrian crossings, landscaping, buffers between sidewalks and vehicle travel lanes, enhanced pedestrian lighting, wayfinding signage, shade trees, and canopies, increased availability of benches, and other features.
- CIR-2d Improve bicycle facilities to include attractive and secure bicycle parking, bicycle lanes, bike paths, and wayfinding signage along appropriate roadways.
- CIR-2e Encourage and support the enhancement of transit stops with high quality, well-maintained shelters, and provision of wayfinding signage and transit timetables.

- CIR-2f Provide access for bicycles and pedestrians at the ends of cul-de-sacs and through walls and berms, where right-of-way is available, to provide convenient access within and between neighborhoods and to encourage walking and bicycling to neighborhood destinations.
- CIR-2g Ensure that development and infrastructure projects are designed to provide pedestrian and bicycle access and leave no gaps in the bicycle and pedestrian networks.
- CIR-2h Require new development to provide bicycle parking and shower and locker facilities at commercial, business/professional and light industrial uses in accordance with the California Green Building Standards Code. Encourage existing uses to provide such facilities.
- CIR-2i Require new multifamily developments to provide bicycle parking facilities in accordance with the California Green Building Standards Code. Encourage existing multifamily developments to provide such facilities.
- CIR-2j Create an off-street shared-use path system for use by pedestrians and bicyclists for transportation and recreation.
- CIR-2k Create bicycle and pedestrian connections to adjacent jurisdictions via shared use paths, bikeways, and sidewalks.
- CIR-2l Create bicycle and pedestrian connections to the ACE station, planned Valley Link stations, and other transit stops.
- CIR-2m Encourage transit providers to improve passenger pick-up and drop-off areas at the ACE and planned Valley Link stations to provide more convenient access.
- CIR-2n Partner with neighboring jurisdictions and regional transit providers (including San Joaquin Regional Transit District, Manteca Transit, and Tracy TRACER Bus Services) to expand transit service between Lathrop and destinations in other jurisdictions.
- CIR-2o Coordinate with transit providers and encourage them to enhance transit amenities for safe and comfortable access to transit including waiting areas, seating, landscaping, lighting, shade and rain cover, trash receptacles, and passenger loading zones.
- CIR-4a Refine and update the City of Lathrop interim VMT thresholds and screening criteria to reflect the updated VMT analysis completed for the General Plan update if such updates are deemed necessary or warranted.
- CIR-4b Evaluate the feasibility of a local or regional VMT impact fee program, bank, or exchange. Such an offset program, if determined feasible, would be administered by the City or a City-approved agency, and would offer demonstrated VMT reduction strategies through transportation demand management programs, impact fee programs, mitigation banks or exchange programs, in-lieu fee programs, or other land use project conditions that reduce VMT in a manner consistent with state guidance on VMT reduction. If, through on-site changes, a subject project cannot eliminate VMT impacts, the project could contribute on a pro-rata basis to a local or regional VMT reduction bank or exchange, as necessary, to reduce net VMT impacts.

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- CIR-4c 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-4d Require development projects that employ 100 or more full-time equivalent employees to establish transportation demand management (TDM) programs consistent with San Joaquin Valley Air Pollution Control District requirements.
- CIR-4e Partner with SJCOG on the Dibs program, which is the regional smart travel program, including rideshare, transit, walking, and biking.
- CIR-4f As new transportation technologies and mobility services, including autonomous vehicles, electric vehicles, electric bicycles and scooters, and transportation network companies (e.g., Uber and Lyft) are implemented and used by the public, review and update City policies and plans to maximize the benefit to the public of such technologies and services without adversely affecting the City's transportation network. Updates to the City's policies and plans may cover topics such as electric vehicle charging stations, curb space management, changes in parking supply requirements, policies regarding electric scooter use, etc.
- CIR-4g Encourage open data sharing. Anonymized data can improve the City's decision-making and help to develop more informed policies and plans while preserving people's privacy.
- CIR-4i As part of the development of or participation in any ridesharing program, including for shared automated vehicle fleets, ensure that the program considers the safety needs of vulnerable populations and loading needs of seniors, families with children, and individuals with mobility impairments.
- CIR-4j As need for transit grows, review and consider alternatives to conventional bus systems, such as smaller shuttle buses (micro-transit), on-demand transit services, or transportation networking company services that connect neighborhood centers to local activity centers with greater cost efficiency.
- CIR-4k Require new development to incorporate electric vehicle charging in accordance with the California Green Building Standards Code. Encourage installation of electric vehicle charging stations at existing development.
- RR-6a Review development, infrastructure, and planning projects for consistency with SJVAPCD requirements during the CEQA review process. Require project applicants to prepare air quality analyses to address SJVAPCD and General Plan requirements, which include analysis and identification of:
- A. Air pollutant emissions associated with the project during construction, project operation, and cumulative conditions.
 - B. Potential exposure of sensitive receptors to toxic air contaminants.

- C. Significant air quality impacts associated with the project for construction, project operation, and cumulative conditions.
 - D. Mitigation measures to reduce significant impacts to less than significant or the maximum extent feasible where impacts cannot be mitigated to less than significant.
- RR-6b Review all new industrial and commercial development projects for potential air quality impacts to residences and other sensitive receptors. Ensure that mitigation measures and best management practices are implemented to reduce significant emissions of criteria pollutants.
- RR-6c Work with SJCOG and the SJVAPCD to implement plans and programs aimed at improving regional air quality.
- RR-6d Continue to review development projects to ensure that all new public and private development complies with the California Code of Regulations (CCR), Title 24 standards as well as the energy efficiency standards established by the Lathrop Municipal Code.
- RR-6e Monitor GHG emissions generated by the community over time for consistency with the established GHG reduction targets, and update the City's community GHG Inventory every five years. In the event that the City determines that ongoing efforts to reduce GHG emissions are not on track to meet the City's adopted GHG reduction targets, the City shall establish and adopt new and/or revised GHG reductions measures that will effectively meet the established GHG reduction targets.
- RR-6f Continue the expansion of infrastructure to facilitate the use of City-owned low or zero emission vehicles such as electric vehicle charging facilities and conveniently located alternative fueling stations at key City facilities as operations necessitate and/or as funding becomes available.
- RR-6g Evaluate and consider multi-modal transportation benefits to all City employees, such as free or low-cost monthly transit passes. Encourage employer participation in similar programs. Encourage new transit/shuttle services and use.
- RR-6h Encourage community car-sharing and carpooling.
- RR-6i Support the establishment and expansion of a regional network of electric vehicle charging stations and encourage the expanded use of electric vehicles.
- RR-6j Establish and adopt standards and requirements for electric vehicle parking, including minimum requirements for the installation of electric vehicle charging stations in new multi-family residential and commercial, office, and light industrial development.
- RR-6k Consider instituting a Green Building Program to reflect best practices, such as encouraging the use of cement substitutes and recycled building materials for new construction.

RR-6I Continue cooperating with the SJVAPCD by requiring a dust management plan to prevent fugitive dust from leaving the property boundaries and causing a public nuisance or a violation of an ambient air standard prior to construction and grading.

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 Lathrop 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). As previously discussed, the buildout growth projections are not a prediction for growth as the actual amount of development that will occur through the planning horizon of the General Plan is based on many factors outside of the City’s control, including future real estate and labor market conditions, property owner preferences and decisions, and site-specific constraints. 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 electricity and natural gas consumption would be used primarily to power buildings (all types of buildings, including residential, commercial, office, industrial, public, etc.). Electricity would primarily come from the electricity utility provider (PG&E), 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. As shown in Table 3.7-1, the proposed Project would generate approximately 7,503,700 daily VMT in the Planning Area. 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. For example, developers would be required to comply with the latest version of the 2019 Building Energy Efficiency Standards (CalGreen), which became effective on January 1, 2020. CalGreen requires developers to implement stringent requirements for home insulation, energy efficiency of appliances, renewable energy, electric vehicle charging, water efficiency and conservation, construction waste reduction, indoor and outdoor air quality, material conservation and resource efficiency, and efficiency of building maintenance and operation.

Additionally, developers would have to comply with proposed General Plan goals, policies and implementing actions that reduce energy usage, promote renewable and/or alternative energy sources, and encourage pedestrian/bicycle modes of transportation, as identified under Impact 3.7-1. For example, Policy LU-4.2 emphasizes efforts to reduce regional vehicle miles traveled (VMT) by supporting land use patterns and site designs that promote active modes of transportation, and public transit. Policy CIR-2.1 requires consideration of all modes of travel in design (i.e. complete streets). Furthermore, Policy RR-6.9 requires consideration and adoption of new policies and programs that will help to provide energy efficient alternatives to fossil fuel use

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and reduce consumption in order to reduce greenhouse gas emissions. Other General Plan policies and implementation actions would further reduce energy consumption.

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. 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 city, maintains sufficient capacity to serve the Planning Area. The City of Lathrop would comply with all existing energy standards in implementing the General Plan project, and would not result in significant adverse impacts on energy resources. Furthermore, General Plan policies would ensure enhanced access to transit, as described by Policy CIR-2.4, which ensures the City would provide safe, convenient access to transit service including rail, bus, and paratransit. Moreover, Policy CIR-4.4 supports the creation of electric vehicle charging stations at multifamily residential, commercial, government, and other employment and community destinations. Additionally, implementing action CIR-1c requires the City to apply signals, roundabouts, traffic circles and other traffic management techniques appropriately at residential and collector street intersections with collector and arterial streets in order to allow bicyclists and pedestrians to travel conveniently and safely from one neighborhood to another. Numerous other policies and implementing actions would further reduce community energy usage, via improvements to land use, reductions in fossil fuel usage, energy efficiency, infrastructure development, more efficient use of available resources, and encouragement of green building practices.

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 GOALS, POLICIES, AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS**GOALS**

- LU-1 Accommodate a mix of land uses that meet the needs of residents, businesses, and visitors with places to live, work, shop, be entertained and culturally engaged.
- LU-2 Promote objectives and development in special planning areas consistent with adopted specific plans, overlay districts, Master Plans and density bonus provisions.
- LU-3 Participate in coordinated local and regional land use planning activities.
- LU-4 Coordinate and integrate land use planning and transportation objectives.
- LU-5 Ensure that new development is compatible with existing development.
- CIR-1 Develop and maintain a roadway system that accommodates all users.
- CIR-2 Create a system of pedestrian, bicycle, and transit facilities that enables non-automotive accessibility and increases the health and livability of the community.
- CIR-4 Plan for the future of transportation to ensure accessibility for all, reduce the environmental impacts of Transportation, and improve the quality of life.
- RR-6 Provide the community with optimal air quality.

POLICIES

- LU-1.1 Support a full spectrum of conveniently located residential, commercial, industrial, public, and quasi-public uses that support business development, regional transportation objectives and the livability of residential neighborhoods.
- LU-1.3 Maintain a supply of developable lands sufficient to meet desired levels of housing, jobs, economic, educational, and recreational needs of the city over the planning horizon.
- LU-1.4 Continue to support the development of a variety of housing types and densities that meet the needs of individuals and families, and offers residents of all income levels, age groups and special needs sufficient housing opportunities and choices. (Additional policies specifically related to Housing are included in the General Plan's Housing Element)
- LU-1.8 Recognize that the General Plan and Land Use Map may be amended in accordance with State law in order to ensure that there is an adequate supply of commercial, industrial, public facility, parks, residential, and other desired land uses to serve the City's needs.
- LU-3.1 Support regional efforts that promote higher densities and intensities near major transit and travel facilities, and reduce regional vehicle miles traveled by supporting active modes of transportation including walking, biking, and public transit.
- LU-3.2 Utilize planning tools and objectives that promote transit-oriented and mixed-use development objectives near future ACE and Valley Link Transit Facilities. Land use plans for these areas should complement transit facilities to accommodate transit oriented development (TOD) developments and/or park-and-ride facilities near ACE stations and future Valley Link station.

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- LU-3.3 Integrate climate change and adaptation planning principles into future updates of the Zoning Code, and other related long-range utilities and facilities planning documents. (See the Safety Element for additional policies related to climate change and resiliency planning).
- LU-3.4 Promote logical City boundaries and work with surrounding jurisdictions to encourage complementary uses. Specifically, work with the City of Manteca and San Joaquin County to ensure development of complementary and compatible uses adjacent to Lathrop.
- LU-4.2 Emphasize efforts to reduce regional vehicle miles traveled (VMT) by supporting land use patterns and site designs that promote active modes of transportation, and public transit.
- LU-4.3 Encourage the development of new industrial and business park which facilitate efficient circulation patterns that reduce truck traffic near residential uses.
- LU-5.1 Require new development to be compatible and complementary to existing development. Where appropriate and feasible, promote connections between neighborhoods and services and facilities.
- LU-5.4 In industrial areas located within 1,000 feet of existing and planned sensitive receptors, promote industrial uses that are environmentally sustainable with limited potential to create nuisances such as noise and odors.
- LU-5.5 Ensure that industrial development projects, including warehouse, distribution, logistics, and fulfillment projects, mitigate adverse impacts (including health risks and nuisances) to nearby residential land uses and other existing and planned sensitive receptors.
- IR-1.2 Complete Streets. Consider all modes of travel in planning, design, and construction of all transportation projects to create safer, more livable, and more inviting environments for pedestrians, bicyclists, motorists and public transit users of all ages and capabilities.
- CIR-2.1 Bicycle and Pedestrian Networks. Establish a network of identified bicycle and pedestrian routes connecting residential areas with schools, recreation, shopping, and employment areas within the City.
- CIR-2.3 Safe Routes to School. Consider walking and bicycling school access as a priority over vehicular movements when any such conflicts occur.
- CIR-2.4 Transit Access. Provide safer, more convenient access to transit service including rail, bus, and paratransit.
- CIR-2.5 Amenities. To support bicycle, pedestrian, and transit usage, provide amenities including pedestrian-scale lighting, bicycle parking, shade trees and landscaping, and bus shelters and benches.
- CIR-4.1 Land Use Supporting Reduced VMT. Support land use with increased land use densities and mixed uses, consistent with the Land Use Element, to reduce vehicle miles traveled and promote the use of walking, biking, and transit.

- CIR-4.2 Demand Management. Encourage employers to provide programs for carpooling/transit/biking/walking, transit ridership subsidies, bicycle facilities, alternative work schedules, ridesharing, telecommuting, working at home, employee education, and preferential parking for carpools/vanpools.
- CIR-4.3 New Technologies. Monitor 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.
- CIR-4.4 Electric Vehicle Charging. Support the creation of electric vehicle charging stations at multifamily residential, commercial, government, and other employment and community destinations.
- RR-6.1 Regional Standards. Coordinate planning efforts with the San Joaquin Valley Air Pollution Control District (SJVAPCD), San Joaquin Council of Governments, and the California Air Resource Board to meet local and regional air quality standards and ensure attainment of established goals.
- R-6.2 Sensitive Receptors. Minimize the community's exposure to toxic and harmful air emissions and odors by requiring an adequate buffer or distance between residential and other sensitive receptors and industrial-type uses that typically generate air pollutants, toxic air contaminants, and/or obnoxious fumes or odors.
- RR-6.3 Construction Activities. Require new construction to minimize fugitive dust and construction vehicle emissions.
- RR-6.4 Development. Encourage the development of mixed-use residential opportunities and live-work environments within the City to lessen the impacts of traffic congestion on local air quality.
- RR-6.5 Appliances and Equipment. Require appliances and equipment, including wood-burning devices, in development projects to meet current standards for controlling air pollution, including particulate matter and toxic air contaminants.
- RR-6.6 Combustible Materials. Cooperate with the Air District to ensure that burning of any combustible material within the City is consistent with Air District regulations to minimize particulate air pollution.
- RR-6.7 Mitigation. Require the implementation of relevant mitigation measures for all future development upon identification of potential air quality impacts.
- RR-6.8 Local Reduction Targets. The City of Lathrop establishes the following per capita GHG reduction targets, in order to meet the requirements established by the state under AB 32 and SB 32, consistent with the CARB's 2017 Scoping Plan:
- A. MT CO₂e per capita by 2030
 - B. 2.66 MT CO₂e per capita by 2040; and

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C. 1.33 MT CO₂e per capita by 2050.

RR-6.9 GHG Reduction. Consider, and implement as feasible, new policies and programs that will help to provide energy efficient alternatives to fossil fuel use and reduce consumption in order to reduce greenhouse gas emissions.

RR-6.10 Public Engagement. Promote regional air quality programs to inform the public on regional air quality concerns and encourage the engagement of all Lathrop residents in future planning decisions related to air quality.

IMPLEMENTATION ACTIONS

LU-3.b Work with adjacent jurisdictions to facilitate increased compatibility and access across barriers to travel such as discontinuous streets, bike lanes, sidewalks, and paths.

LU-3.c Work with developers, reclamation districts and utility providers to create or expand linear parks, trails, and publicly-accessible greenways along levees, drainage and utility rights-of-way that provide opportunities for greenway connections and passive recreational opportunities.

U-5b Through the development review process, analyze land use compatibility and require adequate buffers and/or architectural enhancements to protect sensitive receptors from intrusion of development activities that may cause unwanted nuisances and health risks.

LU-5c When industrial projects, including warehouse projects, fulfillment centers, and other projects that may generate high volumes of truck trips and/or air quality emissions are proposed within 1,000 feet of existing or planned residential uses or other sensitive receptors, the City shall require the preparation of a Health Risk Assessment (HRA) that meets the standards established by the Office of Environmental Health Hazard Assessment (OEHHA), and the San Joaquin Valley Air Pollution Control District (SJVAPCD). Projects shall not be approved until it can be demonstrated that the project would not result in an exceedance of the established thresholds of significance for public health risks at nearby sensitive receptors.

LU-5d When industrial projects, including warehouse projects, fulfillment centers, and other projects that may generate high volumes of truck trips and/or air quality emissions are proposed within 1,000 feet of existing or planned residential uses or other sensitive receptors, the City shall require the implementation of best management practices (BMPs) to reduce pollution exposure to sensitive receptors, particularly diesel particulate matter (DPM). The appropriate BMPs shall be established on a case-by-case basis, and should consider the following tools, methods, and approaches:

- Creating physical, structural, and/or vegetative buffers that adequately prevent or substantially reduce pollutant dispersal between warehouses and any areas where sensitive receptors are likely to be present, such as homes, schools, daycare centers, hospitals, community centers, and parks.
- Providing adequate areas for on-site parking, on-site queuing, and truck check-in that prevent trucks and other vehicles from parking or idling on public streets.

- Placing facility entry and exit points from the public street away from sensitive receptors, e.g., placing these points on the north side of the facility if sensitive receptors are adjacent to the south side of the facility. Exceptions can be made for emergency vehicle access (EVA) points.
- Locating warehouse dock doors and other onsite areas with significant truck traffic and noise away from sensitive receptors.
- Screening dock doors and onsite areas with significant truck traffic and noise with physical, structural, and/or vegetative barriers that adequately prevent or substantially reduce pollutant dispersal from the facility towards sensitive receptors.
- Posting signs clearly showing the designated entry and exit points from the public street for trucks and service vehicles.
- Posting signs indicating that all parking and maintenance of trucks must be conducted within designated on-site areas and not within the surrounding community or public streets.

LU-5e Update the Lathrop Municipal Code to include Good Neighbor Guidelines for Warehouse Distribution Facilities. The new Good Neighbor Guidelines should include:

- a. A definition of the type and size of facility that is subject to the Guidelines;
- b. Standards to minimize exposure to diesel emissions to sensitive receptors that are situated in close proximity to the proposed facility;
- c. Standards and practices that eliminate diesel trucks from unnecessarily traversing through residential neighborhoods;
- d. Standards and practices that eliminate trucks from using residential areas and repairing vehicles on the streets;
- e. Strategies to reduce and/or eliminate diesel idling within the facility's site;

IR-1a Review and revise roadway standards to establish complete streets standards addressing the following factors as applicable: number of travel lanes, lane width, medians, drainage control, shoulder width, parking lanes, bike lanes, fire and emergency response standards, curb and gutter design, landscaped strips, and sidewalk width.

IR-1b Require development projects to arrange streets in an interconnected pattern, so that pedestrians, bicyclists, and drivers are not forced onto arterial streets for inter- or intra-neighborhood travel. This approach will also increase the safety and efficiency of movement of emergency responders and reduce vehicle miles traveled within the community..

IR-1c Apply signals, roundabouts, traffic circles and other traffic management techniques appropriately at residential and collector street intersections with collector and arterial streets in order to allow bicyclists and pedestrians to travel more conveniently and more safely from one neighborhood to another.

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- CIR-1d Use traffic calming tools to assist in implementing complete street principles; possible tools include roundabouts, raised intersections, curb extensions, reduced roadway width, and high visibility crosswalks.
- CIR-2a Create an active transportation plan supporting the development of bicycle and pedestrian networks across the City and funding applications for bicycle and pedestrian improvements.
- CIR-2b Add planned bicycle and pedestrian facilities in conjunction with road rehabilitation, reconstruction, or re-striping projects whenever feasible.
- CIR-2c Enhance sidewalks to create a high-quality pedestrian environment, including wider sidewalks and improved pedestrian crossings, landscaping, buffers between sidewalks and vehicle travel lanes, enhanced pedestrian lighting, wayfinding signage, shade trees, and canopies, increased availability of benches, and other features.
- CIR-2d Improve bicycle facilities to include attractive and secure bicycle parking, bicycle lanes, bike paths, and wayfinding signage along appropriate roadways.
- CIR-2e Encourage and support the enhancement of transit stops with high quality, well-maintained shelters, and provision of wayfinding signage and transit timetables.
- CIR-2f Provide access for bicycles and pedestrians at the ends of cul-de-sacs and through walls and berms, where right-of-way is available, to provide convenient access within and between neighborhoods and to encourage walking and bicycling to neighborhood destinations.
- CIR-2g Ensure that development and infrastructure projects are designed to provide pedestrian and bicycle access and leave no gaps in the bicycle and pedestrian networks.
- CIR-2h Require new development to provide bicycle parking and shower and locker facilities at commercial, business/professional and light industrial uses in accordance with the California Green Building Standards Code. Encourage existing uses to provide such facilities.
- CIR-2i Require new multifamily developments to provide bicycle parking facilities in accordance with the California Green Building Standards Code. Encourage existing multifamily developments to provide such facilities.
- CIR-2j Create an off-street shared-use path system for use by pedestrians and bicyclists for transportation and recreation.
- CIR-2k Create bicycle and pedestrian connections to adjacent jurisdictions via shared use paths, bikeways, and sidewalks.
- CIR-2l Create bicycle and pedestrian connections to the ACE station, planned Valley Link stations, and other transit stops.
- CIR-2m Encourage transit providers to improve passenger pick-up and drop-off areas at the ACE and planned Valley Link stations to provide more convenient access.

- CIR-2n Partner with neighboring jurisdictions and regional transit providers (including San Joaquin Regional Transit District, Manteca Transit, and Tracy TRACER Bus Services) to expand transit service between Lathrop and destinations in other jurisdictions.
- CIR-2o Coordinate with transit providers and encourage them to enhance transit amenities for safe and comfortable access to transit including waiting areas, seating, landscaping, lighting, shade and rain cover, trash receptacles, and passenger loading zones.
- CIR-4a Refine and update the City of Lathrop interim VMT thresholds and screening criteria to reflect the updated VMT analysis completed for the General Plan update if such updates are deemed necessary or warranted.
- CIR-4b Evaluate the feasibility of a local or regional VMT impact fee program, bank, or exchange. Such an offset program, if determined feasible, would be administered by the City or a City-approved agency, and would offer demonstrated VMT reduction strategies through transportation demand management programs, impact fee programs, mitigation banks or exchange programs, in-lieu fee programs, or other land use project conditions that reduce VMT in a manner consistent with state guidance on VMT reduction. If, through on-site changes, a subject project cannot eliminate VMT impacts, the project could contribute on a pro-rata basis to a local or regional VMT reduction bank or exchange, as necessary, to reduce net VMT impacts.
- CIR-4c 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-4d Require development projects that employ 100 or more full-time equivalent employees to establish transportation demand management (TDM) programs consistent with San Joaquin Valley Air Pollution Control District requirements.
- CIR-4e Partner with SJCOG on the Dibs program, which is the regional smart travel program, including rideshare, transit, walking, and biking.
- CIR-4f As new transportation technologies and mobility services, including autonomous vehicles, electric vehicles, electric bicycles and scooters, and transportation network companies (e.g., Uber and Lyft) are implemented and used by the public, review and update City policies and plans to maximize the benefit to the public of such technologies and services without adversely affecting the City's transportation network. Updates to the City's policies and plans may cover topics such as electric vehicle charging stations, curb space management, changes in parking supply requirements, policies regarding electric scooter use, etc.
- CIR-4g Encourage open data sharing. Anonymized data can improve the City's decision-making and help to develop more informed policies and plans while preserving people's privacy.

3.7 GREENHOUSE GASES, CLIMATE CHANGE, AND ENERGY

- CIR-4i As part of the development of or participation in any ridesharing program, including for shared automated vehicle fleets, ensure that the program considers the safety needs of vulnerable populations and loading needs of seniors, families with children, and individuals with mobility impairments.
- CIR-4j As need for transit grows, review and consider alternatives to conventional bus systems, such as smaller shuttle buses (micro-transit), on-demand transit services, or transportation networking company services that connect neighborhood centers to local activity centers with greater cost efficiency.
- CIR-4k Require new development to incorporate electric vehicle charging in accordance with the California Green Building Standards Code. Encourage installation of electric vehicle charging stations at existing development.
- RR-6a Review development, infrastructure, and planning projects for consistency with SJVAPCD requirements during the CEQA review process. Require project applicants to prepare air quality analyses to address SJVAPCD and General Plan requirements, which include analysis and identification of:
- A. Air pollutant emissions associated with the project during construction, project operation, and cumulative conditions.
 - B. Potential exposure of sensitive receptors to toxic air contaminants.
 - C. Significant air quality impacts associated with the project for construction, project operation, and cumulative conditions.
 - D. Mitigation measures to reduce significant impacts to less than significant or the maximum extent feasible where impacts cannot be mitigated to less than significant.
- RR-6b Review all new industrial and commercial development projects for potential air quality impacts to residences and other sensitive receptors. Ensure that mitigation measures and best management practices are implemented to reduce significant emissions of criteria pollutants.
- RR-6c Work with SJCOG and the SJVAPCD to implement plans and programs aimed at improving regional air quality.
- RR-6d Continue to review development projects to ensure that all new public and private development complies with the California Code of Regulations (CCR), Title 24 standards as well as the energy efficiency standards established by the Lathrop Municipal Code.
- RR-6e Monitor GHG emissions generated by the community over time for consistency with the established GHG reduction targets, and update the City's community GHG Inventory every five years. In the event that the City determines that ongoing efforts to reduce GHG emissions are not on track to meet the City's adopted GHG reduction targets, the City shall establish and adopt new and/or revised GHG reductions measures that will effectively meet the established GHG reduction targets.

- RR-6f Continue the expansion of infrastructure to facilitate the use of City-owned low or zero emission vehicles such as electric vehicle charging facilities and conveniently located alternative fueling stations at key City facilities as operations necessitate and/or as funding becomes available.
- RR-6g Evaluate and consider multi-modal transportation benefits to all City employees, such as free or low-cost monthly transit passes. Encourage employer participation in similar programs. Encourage new transit/shuttle services and use.
- RR-6h Encourage community car-sharing and carpooling.
- RR-6i Support the establishment and expansion of a regional network of electric vehicle charging stations and encourage the expanded use of electric vehicles.
- RR-6j Establish and adopt standards and requirements for electric vehicle parking, including minimum requirements for the installation of electric vehicle charging stations in new multi-family residential and commercial, office, and light industrial development.
- RR-6k Consider instituting a Green Building Program to reflect best practices, such as encouraging the use of cement substitutes and recycled building materials for new construction.
- RR-6l Continue cooperating with the SJVAPCD by requiring a dust management plan to prevent fugitive dust from leaving the property boundaries and causing a public nuisance or a violation of an ambient air standard prior to construction and grading.

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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 Lathrop, 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.

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

Information related to toxic air pollutants including air quality hazards can be found in Chapter 3.3 (Air Quality).

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 18 locations with a Lathrop address that are listed in the Envirostor database. Seven sites are listed as school investigation sites with no action required, three sites are listed as certified (two State Response and one corrective action), two sites are listed as active (one is listed as a corrective action and one is listed as a Federal Superfund), two sites are referred to the RWQCB (one evaluation and one State Response), one site is referred to the Site Mitigation and Brownfields Reuse Program (SMBRP) (corrective action), and one site is listed as a military evaluation with no further action. Table 3.8-1 lists the Envirostor sites within Lathrop. Following the table is a background discussion of these sites.

TABLE 3.8-1: LATHROP SITE CLEANUP AND HAZARDOUS FACILITIES LIST (ENVIROSTOR)

NAME	STATUS DATE	LOCATION
<i>ACTIVE – FEDERAL SUPERFUND</i>		
Sharpe Army Depot	5/1/1986	61 mi. East of San Francisco
<i>ACTIVE – CORRECTIVE ACTION</i>		
J R Simplot Co.	6/14/2011	16777 Howland Ave.
<i>NO FURTHER ACTION – MILITARY INVESTIGATION</i>		
Lathrop Quinones Armed Forces Reserve Center	12/19/2001	400 E. Roth Rd.
<i>NO FURTHER ACTION – SCHOOL INVESTIGATION</i>		
East Union HS District Farm Project	12/10/2010	2901 E. Louise Ave.
Joe Widmer Elementary School	6/23/2000	Stonebridge Lane/I-5
Lathrop High School	1/30/2006	526 and 600 W. Dos Reis Rd. & 15225 Manthey Rd.

<i>NAME</i>	<i>STATUS DATE</i>	<i>LOCATION</i>
Louise Avenue Community School	10/19/2001	245 Louise Ave.
Mossdale School Site	7/3/2003	500 W. Louise Ave./17599 S. Manthey Rd.
Proposed River Islands MS/ES	1/22/2007	San Joaquin Rd. and north of Stewart Rd.
Terry School	6/10/2003	401/801 W. Louise Ave.
<i>CERTIFIED – CORRECTIVE ACTION</i>		
Defense Dist Depot/San Joaquin/Sharpe	2/25//2009	Roth Rd. Buildings S-4
<i>CERTIFIED – STATE RESPONSE</i>		
J. R. Simplot, Lathrop – Soil Removal	6/1/1983	16777 Howland Ave.
Lague Sales	3/1/1990	2112 E. Louise Ave.
<i>UNDERGOING CLOSURE – NON-OPERATING</i>		
Defense Dist Depot/San Joaquin/Sharpe	N/A	Roth Rd. Buildings S-4
J R Simplot Co.	N/A	16777 Howland Ave.
<i>REFER – OTHER AGENCY</i>		
Occidental Chemical Corp	6/19/2013	16777 Howland Rd.
Oxychem-Lathrop	1/1/1984	2715 E. Louise Ave.
Libbey-Owens-Ford Glass Co.	11/15/1982	500 E. Louise Ave.

SOURCE: CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL, ENVIROSTOR DATABASE, 2020.

ACTIVE SITES

There are two active sites with a Lathrop address that are listed in the Envirostor database: The J R Simplot Co Corrective Action site, and the Sharpe Army Depot Federal Superfund site.

The J R Simplot Co. Corrective Action site has an active cleanup status as of June 14, 2011. This approximately one-acre site is located at 16777 Howland Avenue. The site has been used for many years for formulating and storing agricultural fertilizers. Previous operations also included pesticide formulation in the Ag Chem area near the west side of the site. The soil at this site may be contaminated with 1,2-Dribomo-3-Chloropropane (DBCP).

In 1981, the California Department of Health Services (DHS, the predecessor agency to the DTSC) issued OxyChem the Interim Status Document (ISD) to regulate the storage of hazardous wastes at the plant. OxyChem continued operation of the plant through 1982, including storage of wastewater in aboveground storage tank (AST) 128 and storage of stormwater in AST 127. In 1982, OxyChem initiated a groundwater remediation program that continues to this date. Groundwater containing DBCP and ethylene dibromide (EDB) is extracted from shallow wells, treated, and re-injected into deeper wells under the direction of the California RWQCB. This groundwater remediation program is not a part of the Ag Chem Area closure plan. In 1983, Simplot purchased the Lathrop Plant from OxyChem and requested that the DHS rescind the ISD because wastewater storage would be limited to less than 90 days in duration. The ISD was rescinded by DHS in 1983. AST 127 and AST 128 continued to be used for short-term storage of wastewater. In 1988, after pesticide formulation ceased, Simplot discontinued wastewater storage and cleaned AST 127, AST 128, and associated piping. Stormwater was stored in AST 127 from 1988 until 1991, when it was converted for use in storing fertilizer. AST 128 remained in place and unused since 1988.

In 1993, the DTSC issued Simplot a Report of Violation (ROV) indicating that the former hazardous waste storage tanks had not been closed in accordance with current requirements. Simplot responded to the ROV by transmitting documentation concerning the 1988 tank/piping cleanout to the DTSC. Subsequently, Simplot and DTSC entered into a Consent Agreement to complete closure of the Ag Chem Area. In 1995, and on behalf of Simplot, Geomatrix prepared the closure plan, which was approved by the DTSC in 1996.

The DTSC met with facility representatives and the Human and Ecological Risk Division (HERD) to discuss the future work. Based on this meeting, J R Simplot submitted a Closure/Risk Assessment which has been reviewed by DTSC. A letter will be mailed to the facility with comments regarding the Health Risk Assessment (HRA) portion. Occidental Chemical Corp. has signed a Voluntary Cleanup Agreement (VRA) with DTSC to provide for the completion of a Removal Action Workplan to remove contaminants from the site area.

The Sharpe Army Depot Federal Superfund site has an active cleanup status as of May 1, 1986. This site is discussed in further detail below.

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 is one site within Lathrop that is listed on the Cortese List. This site, the Sharpe Army Depot (site 39970002), was previously known as Sharpe Army Depot and was operated by the U.S. Army. Defense Distribution Depot San Joaquin California (DDJC)-Sharpe was established in 1941 and consists of 727 acres. As of July 1990, the Defense Logistics Agency (DLA) took over operation of Sharpe and is now known as the DDJC-Sharpe. The repair and reconditioning of heavy equipment and aircraft was conducted onsite until 1976. Storage, handling, preservation, and shipment of general supplies and equipment is the remaining base mission.

The Sharpe facility is divided into three general contamination areas: North Balloon, South Balloon, and Central areas. Groundwater treatment removal actions were initiated in the North and South Balloon areas in November 1990, and April 1987, respectively. The Sharpe facility was listed on the federal National Priorities List in July 1987. On July 19, 1989, the U.S. Army, U.S.EPA, the RWQCB, and DTSC entered into a Federal Facility Agreement (FFA) for Sharpe.

Past disposal sites include burial areas, burn pits, fire training areas, and leaking underground storage tanks. Soil and groundwater contamination by volatile organic compounds (VOCs), primarily trichloroethylene (TCE) and perchloroethylene (PCE), has been found at the site. Presently, two offsite TCE plumes can be found west of the Central Area as well as in the North Balloon. Elevated arsenic concentrations have also been detected in the soils and groundwater at Sharpe. Lead and chromium contamination have also been found in the soil.

The long-term remedy for contaminated soil included excavation and disposal of metals-contaminated soils, soil vapor extraction for VOC-contaminated soils and backfill of excavated areas with clean soil. EPA later updated the remedy to add land use controls and monitoring. The Army also completed a removal action for pesticides in soil and soil vapor extraction treated contaminated soil in phases between 1998 and 2001.

The long-term remedy for contaminated groundwater included air stripping, a gas-phase carbon adsorber for treatment of off gas and disposition of treated groundwater. Extraction and treatment of groundwater to remove VOCs began in early 1987. A second interim groundwater treatment system started operating in the North Balloon area in late 1990.

EPA has conducted several five-year reviews of the site's remedy. These reviews ensure that the remedies put in place protect public health and the environment, and function as intended by site decision documents.

The Army continues ongoing operation of the groundwater and soil vapor treatment systems. The Army submits routine sampling reports, including an annual report summarizing the cleanup progress. The Army completed the 4th Five-Year Review Report (Report) in August 2020. EPA's evaluation of the Army's Report concluded that response actions at the site are in accordance with the remedy selected by EPA and that the remedy continues to be protective of human health and the environment in the short term. Continued protectiveness of the remedy requires additional monitoring wells to establish the boundaries of some of the groundwater plumes, optimization of the groundwater extraction remedies by installing new extraction wells, and additional evaluation of extent of lead and hexavalent chromium at some of the soil sites. The Army will also evaluate if soil gas action levels should be revised to ensure protection of future indoor occupants to vapor intrusion.

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 (LUST)

There are 14 locations with a Lathrop address that are listed in the GeoTracker database for Leaking Underground Storage Tanks (LUST). All of the locations have undergone LUST cleanup and the State has closed the case. Table 3.8-2 lists the location of open and closed cases for LUSTs in Lathrop.

TABLE 3.8-2: LATHROP LUST CLEANUP SITES

NAME	ACTIVITY	LOCATION
<i>CLOSED CASES (CLEANUP COMPLETED)</i>		
ARCO #6080 Case #1	Completed - Case Closed	85 Louise Ave. E.
ARCO #6080 Case #2	Completed - Case Closed	85 Louise Ave. E.
Central Valley Construction	Completed - Case Closed	146 Klo Rd.
Circle-K #1205	Completed - Case Closed	16470 Cambridge Rd.
City of Lathrop	Completed - Case Closed	15688 Harlan Rd.
DiSalvo Trucking	Completed - Case Closed	1444 Lathrop Rd.
Fuller Mobile Home Park	Completed - Case Closed	365 Louise Ave. E.
Joe's Texaco	Completed - Case Closed	15600 Harlan Rd. S.
Langston's Market ARCO	Completed - Case Closed	15615 7 th St. S
Libbey Owens Ford Company	Completed - Case Closed	500 Louise Ave. E.
MBP Mossdale	Completed - Case Closed	444 Mossdale St.
Phillips 66	Completed - Case Closed	16500 Harlan Rd. S.
Quaresma Property	Completed - Case Closed	91 Thomsen Rd. E.
Segura & Sons Transportation	Completed - Case Closed	12796 Harlan Rd. S.

SOURCE: CALIFORNIA WATER RESOURCES CONTROL BOARD GEOTRACKER DATABASE, 2017.

PERMITTED UNDERGROUND STORAGE TANK (UST)

There are 12 locations with a Lathrop address that have 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 in Lathrop.

TABLE 3.8-3: LATHROP PERMITTED UST SITES

NAME	LOCATION
A & W Farms	12965 Manthey Rd. S.
ARCO 06080	85 Louise Ave. E.
Brown Sand Inc.	800 Mossdale Ave. W.
Colonial Energy CE 40135 (DBA Power Mart)	192 Lathrop Rd.
Fast Lane Central Valley	116 Roth Rd.
Joes Travel Plaza	15600 Harlan Rd. S.
Lathrop Gas & Food Inc.	140 Lathrop Rd. E.
Lathrop Shell	16500 Harlan Rd. S.
Mossdale Chevron	444 Mossdale Ave. W.
Pilot Travel Center Lathrop – 1017	345 Roth Rd.
Super Store Industries – Grocery Division	16888 McKinley Ave.
Two Guys Food & Fuel	147 Lathrop Rd. E.

SOURCE: CALIFORNIA WATER RESOURCES CONTROL BOARD GEOTRACKER DATABASE, 2017.

WATER BOARD PROGRAM CLEANUP SITES

There are 12 locations with a Lathrop address that are listed in the GeoTracker database for Water Board Cleanup Sites. Five of the locations have undergone cleanup and the State has closed the case. There are seven locations in Lathrop with an open case. Table 3.8-4 lists the location of open and closed cases for Water Board Program Cleanup Sites in Lathrop.

TABLE 3.8-4: LATHROP WATER BOARD CLEANUP SITES

<i>NAME</i>	<i>LOCATION</i>
<i>OPEN - REMEDIATION</i>	
Former Pilkington North America	500 Louise Ave. E.
Former Pilkington North America	500 Louise Ave. E.
Occidental Chemical Agricultural Products Company	16777 Howland Rd.
<i>OPEN - SITE ASSESSMENT</i>	
J. R. Simplot Company	16777 Howland Rd.
<i>OPEN - VERIFICATION MONITORING</i>	
J. R. Simplot Company	16777 Howland Rd.
<i>OPEN - INACTIVE CASE</i>	
Channel Construction Along Shulte Road	Shulte Rd.
<i>OPEN - ACTIVE CASE</i>	
San Joaquin Cogen LLC	17200 Murphy Pkwy.
<i>CLOSED CASES (CLEANUP COMPLETED)</i>	
California Natural Products	1250 Lathrop Rd. E.
D'Arcy Parkway Road Extension	400-500 D'Arcy Pkwy.
Hayre's Egg Producers	12565 S. Manthey Rd.
Lague Sales Salvage Yard	2112 Louise Ave. E.
PG&E Lathrop Gas Dehydrator	Undine Rd.

SOURCE: CALIFORNIA WATER RESOURCES CONTROL BOARD GEOTRACKER DATABASE, 2017.

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 data identifies active, planned and closed sites. The City has two solid waste facilities listed in the database, both of which are closed. The site details are listed in Table 3.8-5 below.

TABLE 3.8-5: CIWMB FACILITIES/SITES

<i>NUMBER</i>	<i>NAME</i>	<i>ACTIVITY</i>	<i>REGULATORY</i>	<i>STATUS</i>
39-AA-0012	Windeler Ranch Glass Disposal Site	Solid Waste Disposal Site	Permitted	Closed
39-CR-0022	Pilkington North America, Inc.	Solid Waste Disposal Site	Unpermitted	Closed

SOURCE: CALIFORNIA DEPARTMENT OF RESOURCES RECYCLING AND RECOVERY, 2017.

The Windeler Ranch Glass Disposal Site is located at 640 Mossdale Road. The facility is owned by Raab, G. and is inspected four times each year. The most recent inspection of this facility (as of December 2017) by the Local Enforcement Agency (San Joaquin County Environmental Health Department) shows no violations or areas of concern.

The Pilkington North America, Inc. Site is located at 500 E Louise Avenue. The facility was formerly owned by Libbey-Owens Ford (currently owned by ASP/RWM Properties), and is inspected four times each year. The most recent inspections of this facility (as of December 2017) by the Local Enforcement Agency (San Joaquin County Environmental Health Department) shows no violations or areas of concern.

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 percent 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, 2011).

The remaining 23 percent 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, 2011).

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 are no private or public airport facilities in the Planning Area.

Stockton Metropolitan Airport: The Stockton Metropolitan Airport is located approximately 3.0 miles north of the Lathrop City Limits. This airport is a County-owned facility that occupies approximately 1,609 acres at an elevation of 23 feet above mean sea level (MSL). The acreage within the airport influence area is 56,184 acres.

The Stockton Metropolitan Airport is designated as a Non-hub Commercial Service Airport within the Federal Aviation Administration's (FAA) National Plan of Integrated Airport Systems (NPIAS). The airport is served by Allegiant Air, which provides service to Phoenix/Mesa, Arizona and Las Vegas, Nevada. In addition to commercial service, Stockton Metropolitan Airport offers a wide range of fixed base operators (FBOs) providing fuel, aircraft maintenance, aircraft hangar and tie-down rental, aircraft rental, flight training, aircraft management services, and pilot lounges for corporate and general aviation pilots. The airport also houses FBOs that support air cargo operations.

Stockton Metropolitan Airport is served by a parallel runway system in a northwest-southeast orientation. Runway 11L-29R is 10,650 feet long and 150 feet wide and is constructed of asphalt. Runway 11R-29L is 4,448 feet long and 75 feet wide and also constructed of asphalt. Runway 11L-29R is accommodated by several instrument approach procedures aiding pilots in navigation to the runway. Runway 29R contains a medium intensity approach lighting system with runway alignment lights (MALSR) to provide runway alignment guidance for pilots in reduced visibility conditions. Runway 11L-29R is served by a four-light Precision Approach Path Indicator (PAPI- 4) at both ends and contains high intensity runway lighting (HIRL) to indicate the location of the runway edge. Runway 11R-29L does not contain approach or runway edge lighting.

The northernmost portion of the Planning Area is located within the airport influence area for the Stockton Metropolitan Airport identified in the ALUCP. Land within the airport influence area is designated for industrial and commercial uses by the City's General Plan. Other existing uses within the airport influence area include residential uses.

The lands within the City Limits that are located in the airport influence area for the Stockton Metropolitan Airport are not within the Airport's noise exposure contours. Additionally, the lands within the City that are located in the airport influence area are not within the Airport's Safety Zones.

Major Regional Airport Facilities

San Francisco International Airport (SFO): SFO is the largest airport in the region, and a hub for United Airlines. It provides a wide range of domestic airline service and all of the region's long-haul international flights. San Francisco serves 68% of regional Bay Area air passengers and 43% of regional air cargo shipments.

Metropolitan Oakland International Airport (OAK): Oakland Airport has traditionally been the hub for low-cost carriers and a major air cargo center due to operations by FedEx and UPS. Oakland serves 17% of Bay Area regional air passengers and 52% of air cargo.

Norman Y. Mineta San Jose International Airport (SJC): Traffic at San Jose Airport has been affected by the recent realignment of airline services in the Bay Area. The airport does not currently offer any long-haul international flights, and air cargo facilities are limited due to space constraints. San Jose serves 15% of the Bay Area regional air passengers and 6% of air cargo.

Sacramento International Airport (SMF): The Sacramento Airport served nearly 9 million passengers in 2012 with 150 daily departures to 36 destinations. Southwest provides the majority of flights. Many Sacramento area air passengers use Oakland and San Francisco for their air service needs. Conversely, some Bay Area passengers choose Sacramento Airport.

National Transportation Safety Board Aviation Accident Database

The National Transportation Safety Board Aviation Accident Database does not identify any aircraft accidents with Lathrop identified as the nearest location between January of 1983 to 2017. (National Transportation Safety Board, 2017).

FIRE HAZARDS

Fuel Rank

Fuel rank is a ranking system developed by the California Department of Forestry and Fire Protection (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 percent, 11-25 percent, 26-40 percent, 41-55 percent, 56-75 percent, and over 75 percent. 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 is a reflection of the distance from the ground to the lowest leafy vegetation for tree and plant species. The crown index is a reflection of 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 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.

The City of Lathrop contains areas with "moderate" and "non-wildland fuel" ranks. CalFire data for the areas immediately surrounding the Planning Area also include "moderate" and "non-wildland fuel" ranks. Some areas in Stockton, approximately 10 miles or further north of the Planning Area, are designated as "moderate" fuel ranks.

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.

LOCAL RESPONSIBILITY AREAS

The majority of the Planning Area is located within a Local Responsibility Area (LRA). The Lathrop Planning Area is covered by two independent Fire Protection Districts: the Lathrop-Manteca Fire Protection District (LMFD) and French Camp-McKinley Fire District (French Camp). The LMFD provides fire protection services for all lands within the City of Lathrop being primarily lands south of Roth Road in addition to providing service to some 84.7 square miles of rural area around Manteca in the southern San Joaquin County area. The French Camp provides fire protection for the rural area primarily south of Stockton and north of Roth Road both east and west of Interstate 5. French Camp service boundaries include some 16 square miles, including a small portion of Stockton. Approximately 805 acres of the French Camp Fire District is in the Lathrop Area of Interest and about 149 acres is in the Sphere of Influence.

The City of Lathrop is not categorized as a "Very High" FHSZ by CalFire. No cities or communities within San Joaquin County are categorized as a "Very High" FHSZ by CalFire.

STATE RESPONSIBILITY AREAS

There are no State Responsibility Areas (SRAs) within the vicinity of the Planning Area.

FEDERAL RESPONSIBILITY AREAS

There is one Federal Responsibility Area (FRA) within the Planning Area. The Defense Depot San Joaquin Sharpe site and the Sharpe AAF Airport are located within a FRA. The Depot and Airport

are located in northern Lathrop, west of Interstate 5, north of W. Lathrop Road, and south of Roth Road.

Fire Threat

The fuel rank data are used by CalFire to delineate fire threat based on a system of ordinal ranking. Thus, the Fire Threat model creates discrete regions, which reflect fire probability and predicted fire behavior. The four classes of fire threat range 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 Planning Area within Lathrop is considered to have low fire hazard severity as the surrounding land uses are either urban or irrigated agricultural land.

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 Lathrop is located within EPA Region 9, which includes Arizona, California, Hawaii, Nevada, the Pacific Islands, and 148 Tribes.

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 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.

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 San Joaquin 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. San Joaquin County implements the CUPA that has enforcement authority over the City of Lathrop.

San Joaquin Valley Air Pollution Control District

San Joaquin Valley Air Pollution Control District (SJVAPCD) has jurisdiction over the City of Lathrop 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.

San Joaquin County

Hazardous waste programs are managed and implemented locally through the County of San Joaquin 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.

San Joaquin 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 Lathrop and San Joaquin 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 Lathrop and San Joaquin County Public Works Solid Waste Division collaborate on a variety of hazardous waste collection opportunities 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.

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. The haulers and users of hazardous materials are listed with the Lathrop-Manteca Fire District and are regulated and monitored by San Joaquin County. In addition, 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 General Plan policies and actions listed below, as well as adherence to Federal and State regulations, would ensure that potential impacts associated with the routine use, transport, storage, or disposal or accidental release of hazardous materials would be **less than significant**.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

PUBLIC SAFETY ELEMENT POLICIES

- PS-4.1 Location. Maintain an awareness of where hazardous materials are being stored and/or produced in the City and throughout the region.
- PS-4.2 Reduction. Encourage producers and users of hazardous materials to reduce the amount of hazardous materials produced and used.
- PS-4.3 Storage. Require the storage of hazardous materials in safe manner.
- PS-4.4 Regulations. Ensure that the LMFD continues to enforce the Uniform Fire Code relating to the use of hazardous material and require the appropriate regulations to be followed and precautions taken for the type and amount of hazard being created, used, stored, and/or disposed.
- PS-4.5 Hazardous Materials Business Plan. Coordinate with the LMFD to ensure that businesses in the city which 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.
- PS-4.6 Cleanup Sites. Require that the hazardous material transporter and/or the party responsible for the release, coordinates with the San Joaquin County Environmental Health Department, LMFD, and other agencies as needed, to confirm that hazardous waste cleanup sites located within the city are remediated with the property owner in a manner that keeps the public safe.
- PS-4.7 Emergency Response. Work with the LMFD and other responding agencies to ensure that emergency personnel respond safely and effectively to a hazardous materials incident in the city.
- PS-4.8 Public Education. Coordinate with the City's waste service provider(s) and San Joaquin County to increase public awareness about proper disposal related to household hazardous waste and inform the Lathrop community regarding relevant services and programs to address issues related to hazardous waste and materials.

PUBLIC SAFETY ELEMENT ACTIONS

- PS-4a As part of the development review process, require projects that result in significant risks associated with hazardous materials to include measures to address the risks and reduce the risks to an acceptable level.
- PS-4b Review development proposals to address proximity of users and transporters of significant amounts of hazardous materials relative to sensitive uses, such as schools and residential neighborhoods.
- PS-4c Continue to maintain and update emergency service plans, including plans for the handling of hazardous materials and rapid cleanup of hazardous materials spills.

- PS-4d Continue to require the submittal of information regarding hazardous materials manufacturing, storage, use, transport, and/or disposal by existing and proposed businesses and developments to the LMFD.
- PS-4e Coordinate with the LMFD and 911 dispatch center to ensure that the City maintains a current database of hazardous materials.
- PS-4f Educate current and future property owners about contamination from previous uses. The City shall coordinate with property owners in the cleanup of these sites, particularly in areas with redevelopment potential.
- PS-4g Coordinate with the LMFD, other local agencies, Union Pacific Railroad, and other transporters to strictly regulate and enforce the use, storage, transport, and/or disposal of hazardous materials under California Administrative Code Title 19 requirements.
- PS-4h Provide educational opportunities for generators of small quantity, household, and agricultural waste products regarding their responsibilities for source reduction and proper and safe hazardous waste management and disposal.
- PS-4i Coordinate with San Joaquin County and other public agencies to inform consumers about household use and disposal of hazardous materials.
- PS-4j Cooperate fully with Union Pacific Railroad, LMFD, and other agencies, such as the California Highway Patrol, in the event of a hazardous material emergency.
- PS-4k Continue to promote hazardous materials and/or electronic waste drop-off events and opportunities for the public.

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)

Schools within the City of Lathrop are part of the Manteca Unified School District (MUSD) and BANTA Unified School District. The MUSD provides school services for grades K through 12 within the communities of Manteca, Lathrop, Stockton, and French Camp. The District is approximately 113 square miles and serves more than 23,000 students. Within the City of Lathrop, there are three elementary schools (Lathrop Elementary School, Joseph Widmer School, and Mossdale Elementary School) and one high school (Lathrop High School). Schools within the City of Lathrop west of the San Joaquin River, are within the Banta Unified School District (BUSD). The BUSD provides school services for grades K through 12 within the communities of Banta, Tracy, and Lathrop; more specifically River Islands of Lathrop. River Islands currently has two charter elementary schools, the River Islands Technology Academy and the S.T.E.A.M. Academy). Table 3.8-6 shows the public schools serving Lathrop.

TABLE 3.8-6: PUBLIC SCHOOLS SERVING LATHROP

<i>SCHOOL</i>	<i>GRADES SERVED</i>	<i>ADDRESS</i>
<i>ELEMENTARY AND MIDDLE SCHOOLS</i>		
Lathrop Elementary School	K-8	15851 5 th Street
Joseph Widmer Elementary School	K-8	751 Stonebridge Lane
Mossdale Elementary School	K-8	455 Brookhurst Boulevard
River Islands Technology Academy	K-8	1175 Marina Drive
Next Generation S.T.E.A.M. Academy	K-8	18001 Commercial Street
Total		
<i>HIGH SCHOOLS</i>		
Lathrop High School	9-12	647 Spartan Way
Total		

SOURCES: CALIFORNIA DEPARTMENT OF EDUCATION EDUCATIONAL DEMOGRAPHICS UNIT ENROLLMENT FOR 2017-18

The General Plan's Land Use Element, and Land Use Map 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: Limited Industrial, General Industrial, and Commercial uses. In addition to designated land uses identified by Lathrop's Land Use Map, existing site uses such as existing agricultural lands and operations also have the potential to use and store hazardous materials. 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 urban areas including: paints, cleaners, and cleaning solvents. If handled appropriately, these materials do not pose a significant risk. The General Industrial (GI) land use generally provides opportunities for large-scale industries requiring

substantial acreage. The term general implies industrial operations which are relatively high in intensity of operation and which may require special conditions such as noise attenuation equipment or emission controls to mitigate potential adverse impacts. The Limited Industrial (LI) land use designation accommodates a wide range of uses including business parks, clean light industrial, research and development facilities, tech and biotech manufacturing facilities, high tech services providing assembly, warehousing, and sales of equipment, and warehouse and distribution centers. The Service Commercial land use designation provide for the location of uses such as auto sales and repairs, building materials supply, equipment services. This land use designation is for businesses engaged in servicing equipment, materials, and products as opposed to manufacturing, assembling, and packaging products. The Freeway Commercial designation caters primarily to services associated with highway travel such as hotels, restaurants, automotive services and sales, and fuel stations.

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 projects. However, given the unknown nature of future business establishments within the commercial and industrial use categories, the potential for hazardous materials is present. Potential impacts related to the handling or transport of hazardous materials in proximity to schools would be minimized through the implementation of the policies and actions listed below, as well as adherence to local, State, and Federal regulations.

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 the SJVAPCD, RWQCB, DTSC and the local CUPA (San Joaquin County). 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 includes policies and requirements, listed below, that require 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. Additionally, these policies and actions also require the submittal of information regarding hazardous materials manufacturing, storage, use, transport, and/or disposal by existing and proposed businesses and developments to the Lathrop-Manteca Fire District. Compliance with all existing regulations as well as General Plan policies and actions related to land use compatibility and hazardous materials handling and reporting requirements would ensure that this impact is **less than significant**.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

PUBLIC SAFETY ELEMENT POLICIES

PS-4.1 Location. Maintain an awareness of where hazardous materials are being stored and/or produced in the City and throughout the region.

- PS-4.2 Reduction. Encourage producers and users of hazardous materials to reduce the amount of hazardous materials produced and used.
- PS-4.3 Storage. Require the storage of hazardous materials in safe manner.
- PS-4.4 Regulations. Ensure that the LMFD continues to enforce the Uniform Fire Code relating to the use of hazardous material and require the appropriate regulations to be followed and precautions taken for the type and amount of hazard being created, used, stored, and/or disposed.
- PS-4.5 Hazardous Materials Business Plan. Coordinate with the LMFD to ensure that businesses in the city which 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.

PUBLIC SAFETY ELEMENT ACTIONS

- PS-4a As part of the development review process, require projects that result in significant risks associated with hazardous materials to include measures to address the risks and reduce the risks to an acceptable level.
- PS-4b Review development proposals to address proximity of users and transporters of significant amounts of hazardous materials relative to sensitive uses, such as schools and residential neighborhoods.
- PS-4c Continue to maintain and update emergency service plans, including plans for the handling of hazardous materials and rapid cleanup of hazardous materials spills.
- PS-4d Continue to require the submittal of information regarding hazardous materials manufacturing, storage, use, transport, and/or disposal by existing and proposed businesses and developments to the LMFD.
- PS-4e Coordinate with the LMFD and 911 dispatch center to ensure that the City maintains a current database of hazardous materials.

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)

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

There is one site within Lathrop that is listed on the Cortese List. This site, the Sharpe Army Depot (site 39970002), was previously known as Sharpe Army Depot and was operated by the U.S. Army. Defense Distribution Depot San Joaquin California (DDJC)-Sharpe was established in 1941 and

consists of 727 acres. As of July 1990, the Defense Logistics Agency (DLA) took over operation of Sharpe and is now known as the DDJC-Sharpe. The repair and reconditioning of heavy equipment and aircraft was conducted onsite until 1976. Storage, handling, preservation, and shipment of general supplies and equipment is the remaining base mission.

The Sharpe facility is divided into three general contamination areas: North Balloon, South Balloon, and Central areas. Groundwater treatment removal actions were initiated in the North and South Balloon areas in November 1990, and April 1987, respectively. The Sharpe facility was listed on the federal National Priorities List in July 1987. On July 19, 1989, the U.S. Army, U.S.EPA, the RWQCB, and DTSC entered into a Federal Facility Agreement (FFA) for Sharpe.

Past disposal sites include burial areas, burn pits, fire training areas, and leaking underground storage tanks. Soil and groundwater contamination by volatile organic compounds (VOCs), primarily trichloroethylene (TCE) and perchloroethylene (PCE), has been found at sites. Presently, two offsite TCE plumes can be found west of the Central Area as well as in the North Balloon. Elevated arsenic concentrations have also been detected in the soils and groundwater at the Sharpe site. Lead and chromium contamination have also been found in the soil.

The above-mentioned sites are subject to various Federal and State laws and regulatory agencies, including the CERCLA, EPA, DTSC, and RWQCB. At this site, activity and use limitations that EPA calls institutional controls are in place. Institutional controls play an important role in site remedies because they reduce exposure to contamination by limiting land or resource use. They also guide human behavior. For instance, zoning restrictions prevent land uses – such as residential uses – that are not consistent with the level of cleanup. The Sharpe facility site has historically been designated Limited Industrial on the Lathrop General Plan Land Use Map, and no changes to this LI designation are proposed as part of the General Plan update. As such, the proposed Project would not introduce sensitive receptors, including residential uses, to this area.

The General Plan does not propose or approve any specific development project, however 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. 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 are no airport facilities located within the Planning Area. The nearest airport facilities within the vicinity of the Planning Area are the Stockton Metropolitan Airport, located approximately 3 miles north of the Lathrop City Limits, and the New Jerusalem Airport, located approximately 5.5 miles southwest of the Lathrop City Limits.

The New Jerusalem Airport is owned and operated by the City of Tracy. New Jerusalem Airport is served by one runway, Runway 12-30, which is 3,530 feet long and 60 feet wide, constructed of asphalt. The airport is unattended and serves as a staging area for aerial chemical application, pilot training activities, as well as powered parachute and ultralight activities. The Planning Area is located outside of the airport influence areas for the New Jerusalem Airport; therefore, it is not anticipated that this airport would pose a hazard to people residing or working in the Planning Area.

As previously mentioned, the Stockton Metropolitan Airport is located in unincorporated San Joaquin County adjacent to the City of Stockton City Limits southern boundary. This airport is a County-owned facility that occupies approximately 1,609 acres at an elevation of 23 feet above Mean Sea Level (MSL). The Stockton Metropolitan Airport is designated as a Non-hub Commercial Service Airport within the Federal Aviation Administration's (FAA) National Plan of Integrated Airport Systems (NPIAS). The airport is served by Allegiant Air, which provides service to Phoenix/Mesa, Arizona and Las Vegas, Nevada. In addition to commercial service, Stockton Metropolitan Airport offers a wide range of fixed base operators (FBOs) providing fuel, aircraft maintenance, aircraft hangar and tie-down rental, aircraft rental, flight training, aircraft management services, and pilot lounges for corporate and general aviation pilots. The airport also houses FBOs that support air cargo operations.

The NTSB Aviation Accident (NTSBAA) Database identifies one aircraft accident (nonfatal) on October 16, 1969 at the Stockton Metropolitan Airport; however, the accident did not occur within the City of Lathrop. Additionally, the NTSBAA Database does not identify any aircraft accidents with Lathrop identified as the nearest location between January of 1983 to 2020. (National Transportation Safety Board, 2017).

The northernmost portion of the Planning Area is located within the airport influence area for the Stockton Metropolitan Airport identified in the ALUCP. The land within the airport influence area is designated for industrial and commercial uses by the City's General Plan. Other uses within the airport influence area include existing residential uses.

The lands within the Planning Area that are located in the airport influence area (AIA) for the Stockton Metropolitan Airport are not within the Airport's noise exposure contours. Additionally, the lands within the Planning Area that are located in the airport influence area are not within the Airport's Safety Zones. However, airspace review is required for development greater than 100 feet tall on lands within the AIA.

The City of Lathrop has prepared the General Plan to include policies and actions intended to ensure future developments are consistent with the Stockton Metropolitan ALUCP. General Plan Policy LU-3.5 requires development within the Stockton Metropolitan Airport Influence Area to be consistent with the compatible uses identified in the Project Review Guidelines for the Airport Land Use Commission. As described above, lands within the Planning Area include lands within Zone 8 (airport influence area). Additionally, General Plan Action LU-3f requires all applications for development within the Stockton Metro Airport Area of Influence to be referred to the ALUC and the Stockton Metro Airport for comment to ensure that all future plans have limited impacts to the community of Lathrop. 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 relative to this topic would be **less than significant**.

GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

LAND USE ELEMENT POLICIES

LU-3.5 Ensure that development within the Stockton Metropolitan Airport Influence Area (Figure 4.2-1 of the General Plan Existing Conditions Report) is consistent with the compatible uses identified in the Project Review Guidelines for the Airport Land Use Commission.

LAND USE ELEMENT ACTIONS

LU-3f Refer all applications for development within the Stockton Metro Airport Area of Influence to the Airport Land Use Commission and the Stockton Metro Airport for comment.

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 Lathrop. 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 result in a **less than significant** impact related to its environmental topic.

GENERAL PLAN POLICIES AND ACTION THAT MITIGATE POTENTIAL IMPACTS

PUBLIC SAFETY ELEMENT POLICIES

PS-5.1 Emergency Operations Plan. Continue to maintain and update the Emergency Operations Plan.

PS-5.2 Critical Facilities. Coordinate with service providers to ensure the resilience of critical facilities, lifeline services, and infrastructure, and plan for the use of critical facilities during post-disaster response and recovery.

PS-5.3 Agency Coordination. Coordinate with San Joaquin County and the California Standardized Emergency Management System (SEMS) to ensure coordinated local and State-level responses in the event of an emergency and implementation of the Countywide Emergency Preparedness Plan and Local Hazard Mitigation Plan.

PS-5.4 Location Coordination. Coordinate with local key stakeholders (officials, schools, businesses, and organizations) within the community to make them aware of their role in the emergency plan and the necessary requirements in case of emergency.

PS-5.6: Automatic and Mutual Aid. Continue to participate in automatic and mutual aid agreements with adjacent service providers to ensure efficient and adequate resources, facilities, and support services during and after emergencies.

PS-5.7 Communication. Provide a comprehensive emergency communication system to properly respond to emergencies. Clearly communicate to the public the City's plans, procedures, and responsibilities in the event of a disaster or emergency.

PS-5.9 Public Awareness. Prepare residents for emergency situations by making emergency strategies, including evacuation routes, publicly-known and easily accessible.

PS-5.10 School Safety. Coordinate with local schools related to their programs and practices regarding emergency preparedness.

PS-5.11 Emergency Shelters. Periodically coordinate with emergency shelter providers to ensure that necessary equipment supplies are available in the case of emergency.

PUBLIC SAFETY ELEMENT ACTIONS

PS-5a Regularly practice implementation of the City's Emergency Regularly review County and State emergency response procedures that must be coordinated with City procedures.

PS-5b Cooperate with San Joaquin County OES, LMFD, Lathrop Police Services, San Joaquin County Sheriff, the reclamation districts, and other agencies with responsibility for emergency management in emergency response planning, training and provision of logistical support.

- PS-5e Periodically review, maintain, and repair City roadways and emergency access routes, and provide signage, where necessary, to clearly identify emergency access routes.
- PS-5h 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.

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 foothill and forested areas. The severity of wildfire problems depends on a combination of vegetation, climate, slope, and people. 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 Lathrop is not categorized as a "Very High" FHSZ and no cities or communities within San Joaquin County are categorized as a "Very High" FHSZ by CalFire. The majority of the Planning Area is located within a Local Responsibility Area (LRA). The portions of the Planning Area located in an LRA include: a developed area adjacent south of the Defense Depot San Joaquin Sharpe site and the Sharpe AAF Airport, a developed area near D'Arcy Parkway, an area along the San Joaquin River, just west of Interstate 5, and an undeveloped area along the San Joaquin River in the westernmost Planning Area. The Lathrop Planning Area is covered by two independent Fire Protection Districts: the Lathrop-Manteca Fire Protection District (LMFD) and French Camp-McKinley Fire District (French Camp). The LMFD provides fire protection services for all lands within the City of Lathrop being primarily lands south of Roth Road. The French Camp provides fire protection for the rural area primarily south of Stockton and north of Roth Road both east and west of Interstate 5. French Camp service boundaries include some 16 square miles, including a small portion of Stockton. Approximately 805 acres of the French Camp Fire District is in the Lathrop Area of Interest and about 149 acres is in the Sphere of Influence.

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 Planning Area is considered to have negligible wildfire fire threat as much of the land use is urban or irrigated agricultural land.

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 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 fire hazards as required under CEQA. As described previously, no lands within the city are characterized as having a high fire hazard risk potential, or located adjacent to lands that have a high risk for wildfire. Development under the General Plan would allow development to place people and/or structures in undeveloped areas that are identified as having a low to moderate risk of wildland fires; therefore, this is considered a **less than significant** impact.

GENERAL PLAN POLICIES AND ACTION THAT MITIGATE POTENTIAL IMPACTS

PUBLIC SAFETY ELEMENT POLICIES

- PS-2.1 Building Fire Codes. Require that all buildings and facilities within the city comply with local, state, and federal regulatory standards such as the California Building and Fire Codes, as well as other applicable fire safety standards, to minimize the risk of fire in the city.
- PS-2.4 Fire Emergency Response Time. Encourage and work cooperatively with the LMFD District to achieve adequate response times to ensure public safety for all emergency response calls within the city.
- PS-2.5 Roadway Design and Maintenance. Design and maintain roadways to maintain acceptable emergency vehicle response times.
- PS-2.6 Water Supply. Ensure that new development is served with adequate water volumes and water pressure to support fire protection, including minimum required fire flow standards for commercial, industrial and residential areas.
- PS-2.7 Fire Hazard Identification. Regularly monitor CAL FIRE's fire hazard overlay map for changes in fire hazard severity districts in Lathrop.
- PS-2.9 Grant Funding. Seek grant funding, on our own and in collaboration with regional partners, to mitigate potential wildfire threats and natural disaster threats to the community and to implement special training workshops and projects related to defensible space, fuel reduction practices, and other hazard mitigation practices.
- PS-2.10 Interagency Support. Participate in the mutual aid system and automatic aid agreements to back up and supplement capabilities to respond to emergencies, including plans for emergency backup power sources for critical facilities due to electricity outages.

PUBLIC FACILITIES AND SERVICES ELEMENT POLICIES

- PFS-7.3 Enhanced Service. Periodically review, and if necessary, amend, the criteria for determining the circumstances under which fire service will be enhanced.
- PFS-7.4: Roadway Design and Maintenance. Design and maintain roadways in such a way to maintain acceptable emergency vehicle response times.

PUBLIC SAFETY ELEMENT ACTIONS

PS-2a Continue to enforce the California Building Code and the California Fire Code to ensure that all construction implements fire-safe techniques, including fire resistant materials, where required.

PS-2c Continuously monitor response times and provide the City Council with an annual report on the results. *Monitor response times and provide the City Council with a periodic report on the results.*

PS-2d: As part of the City's development review process for new projects:

- A. The City will continue to refer applications to the LMFD for determination of the projects' potential impacts on fire protection services. Requirements will be added as conditions of project approval, if appropriate.
- B. The Planning Commission, the LMFD, and the City Engineer will review proposed street patterns to evaluate the accessibility for fire and emergency response.

PUBLIC FACILITIES AND SERVICES ELEMENT ACTIONS

PFS-7a_Continuously monitor response times and provide the City Council with a periodic report on the results of the monitoring.

PFS-7b_The LMFD and the Public Works Department will review proposed development projects and street networks to evaluate the accessibility for fire engines and other emergency response functions.

This section provides a background discussion of the regional hydrology, flooding, water quality, water purveyors, and water sources in Lathrop. This section is organized with an existing setting, regulatory setting, and impact analysis.

Comments were received during the Notice of Preparation comment period regarding this environmental topic from the Central Valley Regional Water Quality Control Board (CVRWQCB) (November 8, 2021). The CVRWQCB highlighted that any future development under the General Plan must adhere to the Basin Plan, which identifies water quality objectives, and Antidegradation regulations, which requires any discharged water to apply the best practicable treatment to prevent pollution or a nuisance from occurring. The CVRWQCB went on to emphasize the potential permitting requirements related to water quality which are as follows:

- Construction Storm Water General Permit
- Phase I and II Municipal Separate Storm Sewer System (MS4) Permits
- Industrial Storm Water General Permit
- Clean Water Act Section 404 Permit
- Clean Water Act Section 401 Permit
- Waste Discharge Requirements
- Dewatering Permit
- Limited Threat General NPDES Permit
- NPDES Permit

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

Lathrop is located in the San Joaquin River watershed. The San Joaquin River is about 300 miles long. It begins in the Sierra Nevada mountain range on California's eastern border. The river runs down the western slope of the Sierra and flows roughly northwest through the Central Valley, to where it meets the Sacramento River at the Sacramento-San Joaquin Delta, a 1,000-square-mile maze of channels and islands that drains more than 40 percent of the state's lands (SJRG 2013).

Because the Central Valley receives relatively little rainfall (12 to 17 inches a year, falling mostly October through March), snowmelt runoff from the mountains is the main source of fresh water in the San Joaquin River. Over its 300-mile length, the San Joaquin River is fed by many other streams and rivers, most notably the Stanislaus, Tuolumne, and Merced Rivers.

Most of the surface water in the upper San Joaquin River is stored and diverted at Millerton Lakes' Friant Dam, near Fresno. From Friant Dam, water is pumped north through the Madera Canal and south through the Friant-Kern canal to irrigation districts and other water retailers, which then deliver the water directly to the end users in the southern portion of the watershed.

In the central and northern portions of the watershed, many agricultural and municipal users receive water from irrigation districts, such as the Modesto, Merced, Oakdale, South San Joaquin and Turlock Irrigation Districts. That water is provided through diversions from rivers that are tributary to the San Joaquin, such as the Mokelumne, Stanislaus, Tuolumne and Merced Rivers.

In an average year, about 1.5 million acre-feet of water is diverted from the San Joaquin River at Friant Dam, leaving little flow in the river until the Merced River joins the San Joaquin northwest of the City of Merced. Additional water also reaches the river via flows returning to the river from municipal wastewater treatment plants, as well as urban and agricultural runoff. The rest of the area's water supply needs are met by importing water from northern California (via the Central Valley Project) and by pumping water from the groundwater basin (SJRG 2013).

CLIMATE

Lathrop has an inland Mediterranean climate with warm, dry summers and cooler winters. The average daily maximum temperature in the Basin is 65 degrees Fahrenheit (°F), with average temperature highs of 95 °F in July. Average daily minimum temperature is 48 °F, with average temperature lows of 45 °F in January. Normal rainfall level is approximately 9 inches per year, and occurs mainly in the winter months from November to April. Thunderstorms occur on approximately three to four days in the spring, on average.

Lathrop has warm, dry days and relatively cool nights, with clear skies and limited rainfall. Winters are mild with light rains and frequent heavy fog from December to January. In summer, high temperatures often exceed 100 degrees, with averages in the low 90's in the northern valley and the high 90's in the southern valley. Summer low temperatures average in the high 50's in the northern valley and the upper 60's in the southern valley. Lathrop receives approximately 20 inches of rain per year.

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

San Joaquin County is located in the San Joaquin River Hydrological Region. 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 King's 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 (DWR 2013, pg. SJR-5).

Local Watersheds (Hydrologic Sub-Areas)

Within the San Joaquin River Hydrological Region, the Planning Area is located in the Upper Old River, Oakwood Lake-San Joaquin River, and Town of French Camp-San Joaquin River watersheds as shown on Figure 3.9-1.

LOCAL DRAINAGE

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. Additionally, the City enforces storm drain regulations established by the US EPA and the State of California.

The City of Lathrop's storm drainage collection system uses pipelines, surface channels and, in some locations, detention basins that store peak flows to direct drainage to the San Joaquin River. The City's documented existing storm drain infrastructure includes approximately 916 inlets, 691 manholes, 21 pump stations, 4 outfalls to the San Joaquin River, 13 detention basins, and 36 miles of storm drain (J.B. Anderson, 2016).

STORMWATER QUALITY

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 National Pollution Discharge Elimination System (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.

303(d) Impaired Water Bodies

Water quality in Lathrop is governed by the 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 the San Joaquin County which are considered Section 303(d) impaired waterbodies. Those areas in the city and in the regional vicinity of the Planning Area that are impaired are referred as Delta Waterways (Southern Portion) by the Water Quality Control Monitoring Council. This includes 3,125 acres listed as early as 1996 for Chlorpyrifos (Agriculture, Urban Runoff/Storm Sewers), DDT (Agriculture), Diazinon (Agriculture, Urban Runoff/Storm Sewers), Electrical Conductivity (Agriculture), Group A Pesticides (Agriculture), Invasive Species (Source Unknown), Mercury (Resource Extraction), and Unknown Toxicity (Source Unknown).

The City of Lathrop, in collaboration with San Joaquin County, Tracy, Lodi, Manteca, and Patterson prepared a Multi-Agency Post-Construction Stormwater Standards Manual to provide consistent guidance for municipal workers, developers and builders in implementing the requirements under the Statewide Small MS4 NPDES permit (2013-0001-DWQ).

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.

Table 3.9-2 below summarizes 303(d) impaired water bodies in the vicinity of the Planning Area.

TABLE 3.9-2: PLANNING AREA VICINITY IMPAIRED WATER BODIES

<i>POLLUTANT</i>	<i>FINAL LISTING DECISION</i>	<i>TMDL STATUS¹</i>	<i>EXPECTED TMDL COMPLETION²</i>	<i>USEPA TMDL APPROVAL DATE³</i>	<i>POTENTIAL SOURCES</i>
<i>DELTA WATERWAYS, SOUTHERN PORTION (3,125 ACRES)</i>					
<i>METALS/METALLOIDS</i>					
Mercury	Do Not Delist from 303(d) list (USEPA approved TMDL)	5B		10/20/2011	Agricultural Return Flows, Atmospheric Deposition, Highway/Road/Bridge Runoff, Industrial Point Sources, Municipal Point Sources, Natural Sources, Resource Extraction, Urban Runoff/Storm Sewers
<i>MISCELLANEOUS</i>					
Invasive Species	List on 303(d) list (TMDL required list)	5A	2019		Unknown
<i>PESTICIDES</i>					
DDT (Dichlorodiphenyl trichloroethane)	Do Not Delist from 303(d) list (TMDL required list)	5A	2027		Unknown
Group A Pesticides	List on 303(d) list (TMDL required list)	5A	2027		Unknown
Chlorpyrifos	List on 303(d) list (being addressed by USEPA approved TMDL)	5B		10/10/2007	Unknown
Diazinon	List on 303(d) list (being addressed by USEPA approved TMDL)	5B		10/10/2007	Unknown

3.9 HYDROLOGY AND WATER QUALITY

POLLUTANT	FINAL LISTING DECISION	TMDL STATUS ¹	EXPECTED TMDL COMPLETION ²	USEPA TMDL APPROVAL DATE ³	POTENTIAL SOURCES
<i>SALINITY</i>					
Electrical Conductivity	Do Not Delist from 303(d) list (TMDL required list)	5A	2027		Unknown
<i>TOXICITY</i>					
Toxicity	List on 303(d) list (TMDL required list)	5A	2019		Unknown
<i>FRENCH CAMP SLOUGH (PORTION) (6.3 MILES)</i>					
<i>FECAL INDICATOR BACTERIA</i>					
Indicator Bacteria	Do Not Delist from 303(d) list (TMDL required list)	5A	2027		Unknown
<i>NUTRIENTS</i>					
Oxygen, Dissolved	Do Not Delist from 303(d) list (TMDL required list)	5A	2027		Unknown
Diazinon	Do Not Delist from 303(d) list (being addressed with action other than TMDL)	5C			Agriculture
Chlorpyrifos	List on 303(d) list (USEPA approved TMDL)	5B		10/8/2007	Agriculture
<i>TOXICITY</i>					
Toxicity	Do Not Delist from 303(d) list (TMDL required list)	5A	2027		Unknown
<i>TOM PAINE SLOUGH, IN DELTA WATERWAYS SOUTHERN PORTION (14 MILES)</i>					
<i>NUTRIENTS</i>					
Oxygen, Dissolved	List on 303(d) list (TMDL required list)	5A	2027		Unknown
<i>SALINITY</i>					
Chloride	List on 303(d) list (TMDL required list)	5A	2027		Unknown
Salinity	List on 303(d) list (TMDL required list)	5A	2027		Unknown

1: TOTAL MAXIMUM DAILY LOAD (TDML)

2: DETERMINATION THE LOADING CAPACITY OF THE WATERBODY AND ALLOCATION OF LOAD AMONG DIFFERENT POLLUTANT SOURCES.

3: APPROVED TMDL WASTELOAD ALLOCATIONS GENERALLY BECOME IMPLEMENTED THROUGH EPA'S NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMITS UNDER CWA SECTION 402.

SOURCE: STATE WATER RESOURCES CONTROL BOARD, FINAL 2014/2016 CALIFORNIA INTEGRATED REPORT (CLEAN WATER ACT SECTION 303(D) LIST / 305(B) REPORT)

GROUNDWATER

In February, 2019 DWR approved a Basin Boundary Modification Request that incorporates all of the City of Lathrop in the Tracy Sub-basin and removes the City from the Eastern San Joaquin Sub-basin. The City has coordinated with the Tracy Sub-basin Groundwater Sustainability Agencies (GSA) to develop a Groundwater Sustainability Plan (GSP) that needs to be adopted and submitted to DWR by

January 31, 2022. The GSP was adopted by the City of Lathrop GSA on December 13, 2021. The Tracy Subbasin is not adjudicated, nor are any of the neighboring subbasins.

The Tracy Subbasin encompasses an area of about 238,429 acres (370 square miles) in San Joaquin and Alameda counties, primarily between the eastern extent of the Coast Ranges on the south and the San Joaquin River on the east. The Subbasin is bounded on the north and east by the San Joaquin River, on the south by the San Joaquin-Stanislaus counties border, and on the west by the aerial extent of sedimentary deposits bounded by the Coastal Ranges. The San Joaquin, Old, and Middle rivers are the principal rivers within or bordering the subbasin.

Most of the groundwater pumping occurs in the area south of Old River and east of the San Joaquin River within Lathrop. North of the Old River, surface water from the Sacramento-San Joaquin Delta, is used to meet most of the water demand. The bottom of the Subbasin is the base of fresh water which is positioned at the top of the marine sediments that contain saline water. In the Tracy Subbasin, the base of the freshwater ranges from about 400 feet to 2,000 feet beneath the Subbasin. Two principal aquifers are located with the Subbasin, an Upper confined to semi-confined aquifer and a Lower confined aquifer that are separated by a layer of clay. The Upper and Lower aquifers merge where there is an absence of the clay layer, near the southwestern portion of the Subbasin. These layers also merge north of the Old River in the northern portion of the Subbasin.

The City of Lathrop encompasses approximately 14,400 (22 square miles) of the Tracy Subbasin. Municipal water sources include groundwater pumped by five wells and treated surface water purchased from the Southern San Joaquin Irrigation District (SSJID). The surface water supplies from SSJID helps the City reduce its use of groundwater. The average water demand of the City is about 9,000 acre-feet per year (AFY) and the future buildout demand for the City is estimated at 20,000 AFY. The City's total projected groundwater supply was approximately 44 percent or 6,253 AFY in 2020. This projection is expected to increase to 7,060 AFY (47 percent) in 2028 in which the supply stays constant as the City anticipates to increase its surface water supply through buildout.

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.

Areas that are subject to flooding are indicated by a series of alphabetical symbols, indicating anticipated exposure to flood events:

- **Zone A:** Subject to 100-year flooding with no base flood elevation determined. Identified as an area that has a one percent chance of being flooded in any given year.
- **Zone AE:** Subject to 100-year flooding with base flood elevations determined.

- **Zone AH:** Subject to 100-year flooding with flood depths between one- and three-feet being areas of ponding with base flood elevations determined.
- **500-year Flood Zone:** Subject to 500-year flooding. Identified as an area that has a 0.2 percent chance of being flooded in a given year.
- **Zone X, Area with Reduced Risk Due to Levee:** This zone includes areas that would be flooded if a 500-year flood occurred but has a reduced risk of flooding due to levee protection

The Planning Area is subject to flooding problems along the natural creeks and drainages that traverse the area. The primary flood hazard is the San Joaquin River and its tributaries, notably Paradise Cut (along the southwestern SOI boundary). A levee running from Airport Way in Manteca west and northwest along the San Joaquin River provides flood protection for the land north and east of the River. This levee is under the jurisdiction of Reclamation District No. 17 (RD 17).

The 100-year flood plain is largely confined to the southern and western portions of the City limits and SOI. Additionally, the 500-year flood plain is located in the eastern and northern portions of the City limits and SOI. Zone X, Area with Reduced Risk Due to Levee includes the majority of the Planning Area.

SB 5 Flood Zones

Both State policy and recently enacted State legislation (Senate Bill 5) call for 200-year (0.5% annual chance) flood protection to be the minimum level of protection for urban and urbanizing areas in the Central Valley. Senate Bill 5 (SB5) requires that the 200-year protection be consistent with criteria used or developed by the Department of Water Resources. SB 5 requires all urban and urbanizing areas in the Sacramento and San Joaquin Valleys to achieve 200-year Urban Level of flood protection (or a finding of adequate progress toward 200-year flood protection) in order to approve development. The 200-year floodplain for the Planning Area, as mapped for the City of Lathrop and San Joaquin County, is shown on Figure 3.9-3. As shown in the figure, nearly the entire City and SOI is located in the 200-year floodplain, however detailed flood mapping is required to determine risks based on base flood elevations. Detailed flood mapping was included as part of the Lathrop Safety Element Amendment in 2015 to address SB 5 200-Year Flood Protection and included detailed flood mapping.

RD 17 created a Joint Powers Authority (JPA) that includes San Joaquin County, Stockton, Manteca, and Lathrop to issue bonds to fund the local share of Phase 1 through 3 Improvements to the RD 17 levees. Lathrop is working with RD 17 to update that JPA to fund the local share of the needed Urban Level of Protection (ULOP) improvements to the RD 17 levees, to adopt fee programs and/or exactions paid and advanced from property owners in areas of entitled and planned development within RD17, and a new Enhanced Infrastructure Financing District. As of February 2016, Lathrop and Manteca have funded the required Urban Levee Design Criteria analysis of the RD 17 levees, identified the 200-year floodplain, calculated an estimated cost to provide the ULOP improvements, and requested State funds for the State share of this work. Lathrop will continue to work with all public agencies within RD 17 to provide for final design and construction of ULOP improvements that will allow findings of Adequate Progress toward providing ULOP as the improvements are constructed.

The San Joaquin Area Flood Control Agency (SJAFCA) is a Joint Powers Authority that was created in May 1995 for the purpose of addressing flood protection for the City of Stockton and surrounding County. On

November, 16, 2017, the Joint Exercise of Powers Agreement was expanded to include the Cities of Lathrop and Manteca. SJAFCA coordinates and partners with State and Federal agencies to address FEMA's Flood Insurance Rate Maps, levee standards, and flood protection issues.

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. The Planning Area has the potential to be inundated by four dams: Tulloch Dam, San Luis Dam, New Exchequer Dam (Lake McClure), and New Melones Dam. The dam inundation area for each dam is shown in Figure 3.9-4. Each dam is briefly described below:

- The Tulloch Dam, owned and operated by the Oakdale and South San Joaquin Irrigation Districts (collectively known as the Tri-Dam Project), is a gravity dam located on the Stanislaus River in both Calaveras and Tuolumne Counties. This dam was built in 1958 at a height of 205 feet with a reservoir capacity of 68,400 acre-feet. The Tulloch Dam is a jurisdictional dam.
- The San Luis Dam (or B.F. Sisk Dam), jointly owned and operated by the Bureau of Reclamation and the State of California, is a zoned earthfill dam that provides supplemental irrigation water to land in western Merced, Fresno and Kings Counties, as well as generates power. This dam, located on San Luis Creek near Los Banos, was completed in 1967 at a height of 382 feet with a reservoir capacity of 2,041,000 acre-feet. The San Luis Dam is a non-jurisdictional dam.
- Pine Flat Dam is a concrete gravity structure completed by the United States Army Corps of Engineers in 1954. The Pine Flat Dam is utilized for flood control, irrigation, power production, and recreation. This solid concrete gravity dam is located on the Kings River north of Squaw Valley in Fresno County. Pine Flat Dam has a height of 440 feet and a storage capacity of 1,000,000 acre-feet. The Pine Flat Dam is a jurisdictional dam.
- The New Melones Dam, owned and operated by Bureau of Reclamation's Central Valley Project, is utilized for irrigation, power production, and downstream flood control. This earth and rockfill dam is located on the Stanislaus River in southern Mother Lode, off of Highway 49. New Melones Dam was completed in 1979 at a height of 625 feet and a storage capacity of 2,400,000 acre-feet. The New Melones Dam is a non-jurisdictional dam.
- The New Exchequer Dam, owned and operated by the Merced Irrigation District, is utilized for irrigation, power production, and downstream flood control. This concrete gravity-arch dam is located on the Merced River in Mariposa County. New Melones Dam was completed in 1967 at a height of 490 feet and a storage capacity of 1,024,600 acre-feet. The New Exchequer Dam is a jurisdictional dam.

These dams do not have a history of failure; however, they are identified as having the potential to inundate the Planning Area in the unlikely event of dam failure. The dam owners/operators, Oakdale and South San Joaquin Irrigation Districts, the Merced Irrigation District, the Bureau of Reclamation, the United States Army Corps of Engineers, and the State of California, are responsible for the management, monitoring, and improvements to these dams to reduce the risk of dam failure and inundation.

The entire Planning Area may be subject to inundation in the event of dam failure. Despite the number of dams near San Joaquin County, the risk of dam failure inundating portions of the County is considered low, and the degree and nature of risk for each dam is unknown. Dam failure can occur under three general conditions: as a result of an earthquake, an isolated incident due to structural instability, or because of intense rain in excess of design capacity.

Despite the number of dams near San Joaquin County, the risk of dam failure inundating portions of the County is considered low, and the degree and nature of risk for each dam is unknown. Dam failure can occur under three general conditions: as a result of an earthquake, an isolated incident due to structural instability, or because of intense rain in excess of design capacity.

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:

- 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.

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

Lathrop Municipal Code

CHAPTER 12.28 PROTECTION OF WATER COURSES

12.28.020 Rules and regulations.

- A. It shall be unlawful for any person to interfere with, destroy or use in any manner whatsoever any levee, embankment, channel, dam, reservoir, rain or stream gauges, telephone line, piling; or other stream protection work constructed by the city or by any drainage district organized under the laws of the state, without having received a written permit therefor from the public works director, which permit shall be revocable whenever, in the opinion of the public works director the public interest and welfare require the revocation thereof. Application for the use of any levee, embankment, channel, dam or reservoir shall be made to the public works director, setting forth the particular use desired, and the purpose and duration thereof. The public works director shall investigate such applications and may impose such terms and conditions as may be necessary to insure the proper maintenance of the property for flood control and drainage purposes.
- B. It shall be unlawful for any person to place on or cause to be placed in any drainage ditch, water course, channel or conduit, or upon any property over which the city or any drainage district has an easement for flood control or drainage purposes duly recorded in the office of the city clerk, any wires, fence, building or other structure, or any refuse, rubbish, tin cans or other matter that may impede, retard or change the direction of the flow of water in such drainage ditch, water course, channel or conduit, or that will catch or collect debris carried by such water, or is placed where the natural flow of the storm and flood waters would carry the same downstream to the damage and detriment of either private or public property adjacent to said drainage ditch, water course, channel or conduit.

- C. It shall be unlawful for any person to change the drainage on his or her property so as to divert the drainage to the nearest public road, without first obtaining a permit to do so from the public works director.
- D. It shall be unlawful for any person to fill or obstruct or maintain any fill or obstruction in any drainage ditch, water course, channel or conduit carrying storm or drainage water unless a permit to do so has been obtained from the public works director.
- E. It shall be unlawful for any person to do anything to any drainage ditch, water course, channel or conduit carrying storm or drainage water that will in any manner obstruct or interfere with the flow of water through such ditches, water courses, channels or conduits unless a permit to do so has been obtained from the public works director.
- F. It shall be unlawful for any person to level land in a manner which would flood adjacent properties or public roadways.
- G. Every property owner, whether it be a person or his lessee or tenant, through whose property a drainage ditch, water course, channel or conduit carrying storm or drainage water passes, shall keep and maintain the same free from obstacles that will prevent or retard the flow of water through such ditch, water course, channel or conduit except that same may be filled or altered if a permit to do so has been first obtained pursuant to this chapter. (Prior code § 158.02)

CHAPTER 13.28 - STORMWATER MANAGEMENT AND DISCHARGE CONTROL

13.28.020 Purpose and intent. The purpose of this chapter is to establish minimum stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public residing in watersheds within the city of Lathrop, pursuant to and consistent with the Federal Clean Water Act (33 U.S.C. Section 1251 et seq.) and the Porter-Cologne Water Quality Act (California Water Code Section 13000 et seq.). This chapter seeks to meet that purpose through the following objectives:

- A. To comply with all federal and state laws, lawful standards and orders applicable to stormwater and urban runoff pollution control;
- B. To prohibit any discharge which may interfere with the operation of, or cause any damage to the storm drain system or impair the beneficial use of the receiving waters;
- C. To prohibit illicit discharges into the storm drain system;
- D. To reduce non-stormwater discharge to the storm drain system to the maximum extent practicable;
- E. Minimize increases in stormwater and runoff from any development in order to reduce flooding, siltation, and streambank erosion and maintain the integrity of drainage channels;
- F. Minimize nonpoint source pollution caused by stormwater runoff from development that would otherwise degrade local water quality; and
- G. Minimize the total annual volume of surface water runoff that flows from any specific site during and following development. (Ord. 07-265 § 1)

13.28.130 REQUIREMENT TO PREVENT, CONTROL AND REDUCE STORMWATER POLLUTANTS.

- A. Authorization to Adopt and Impose Best Management Practices (BMPs). The city may adopt requirements identifying best management practices for any activity, operation, or facility which may cause or contribute to pollution or contamination of stormwater, the storm drain system, or waters of the United States. Where best management practice requirements are promulgated by the city or any federal, state of California, or regional agency for any activity, operation, or facility which would otherwise cause the discharge of pollutants to the storm drain system or a waters of the United States, every person undertaking such activity or operation, or owning or operating such facility shall comply with such requirements.
- B. New Development and Redevelopment. The city may adopt requirements identifying appropriate design standards and best management practices to control the volume, rate, and potential pollutant load of stormwater runoff from new development and redevelopment projects as may be appropriate to minimize the generation, transport and discharge of pollutants. The city shall incorporate such requirements in any land use entitlement and construction or building-related permit to be issued relative to such development or redevelopment. The owner and developer shall comply with the terms, provisions, and conditions of such land use entitlements and building permits as required in this chapter.
- C. Responsibility to Implement Best Management Practices. Notwithstanding the presence or absence of requirements promulgated pursuant to subsections A and B of this section, any person engaged in activities or operations, or owning facilities or property which will or may result in pollutants entering stormwater, the storm drain system, or waters of the United States shall implement best management practices to the extent they are technologically achievable to prevent and reduce such pollutants. The owner or operator of a commercial or industrial establishment shall provide reasonable protection from accidental discharge of prohibited materials or other wastes into the municipal storm drain system or watercourses. Facilities to prevent accidental discharge of prohibited materials or other wastes shall be provided and maintained at the owner or operator's expense.
- D. Maintenance Agreements. All structural and nonstructural permanent stormwater BMPs not in the control of the city of Lathrop shall have an enforceable maintenance agreement to ensure the system functions as designed. The agreement shall include any and all maintenance easements required to access and inspect the stormwater BMPs, and to perform routine maintenance as required. Such agreements shall specify the parties responsible for the proper maintenance of all stormwater BMPs.

City of Lathrop Stormwater Management Program

The City has an adopted a stormwater management program (SWMP) for compliance with requirements of the Phase 2 NPDES municipal stormwater permit. The SWMP is composed of six program elements developed to reduce contaminants discharged into receiving water bodies. The six Minimum Control Measure (MCM) elements of the SWMP are public education and outreach, public involvement/participation, illicit discharge detection and elimination, construction site runoff control, post construction runoff control in new development and redevelopment, and pollution prevention/good housekeeping for municipal operations. For each MCM, the City has selected a suite of BMPs and measurable goals to address the specific stormwater problems identified within the city limits.

In association with the SWMP, the City adopted a Storm Water Ordinance, construction standards, and design review guidelines to reduce contaminants in stormwater runoff. Of particular relevance to the proposed project is the City's coordination of BMP review and implementation under the construction site runoff control program. New development and redevelopment control measures include development of structural controls, development of nonstructural controls, development of ordinances or regulatory mechanisms, and development of long-term operation and maintenance (O&M) practices.

Pollution prevention/good housekeeping for municipal operations addresses routine O&M activities for drainage systems, roadways, parks and open spaces, and other municipal operations to help ensure a reduction in pollutants entering the storm sewer system. The pollution prevention/good housekeeping program also includes a training component to prevent and reduce stormwater pollution from municipal operations. The pollution prevention/good housekeeping BMPs can be separated into two broad categories: source controls and materials management.

Source controls are BMPs designed to prevent or reduce pollutants at the source and include BMPs such as storm drainage system maintenance, structural floatable controls, street maintenance staff training, flood control projects, and litter ordinances. Materials management BMPs are designed to reduce pollutants with nonstructural controls such as pesticide education and spill prevention control.

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

No specific development projects are proposed or would be approved as part of the General Plan update, however land uses and growth identified under the proposed General Plan Land Use Map would result in future development projects throughout the Planning Area. 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 that disturbs one or more acres will require an approved SWPPP that includes best management practices for grading and preservation of topsoil. A SWPPP is not required if the project will disturb less 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).

As described previously, 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 development allowed under the General Plan would be within areas currently designated for urban uses many of which are currently undeveloped. Therefore, new development and infrastructure projects have the potential to result in increases in the amount of impervious surfaces throughout Lathrop. 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: Delta Waterways (Northern Portion), Delta Waterways (Southern Portion), French Camp Slough (Portion), Lone Tree Creek, and Tom Paine Slough (in Delta Waterways Southern Portion). The Delta Waterways (Eastern Portion) includes 2,927 acres listed in 2011 for Agricultural Return Flows, Atmospheric Deposition, Highway/Road/Bridge Runoff, Industrial Point Sources, Municipal Point Sources, Natural Sources, Resource Extraction, Miscellaneous, Urban Runoff/Storm Sewers. The Delta Waterways (Southern Portion) includes 3,125 acres listed as early as 1996 for Chlorpyrifos (Agriculture, Urban Runoff/Storm Sewers), DDT (Agriculture), Diazinon (Agriculture, Urban Runoff/Storm Sewers), Electrical Conductivity (Agriculture), Group A Pesticides (Agriculture), Invasive Species (Source Unknown), Mercury (Resource Extraction), and Unknown Toxicity (Source Unknown). The other impaired water bodies range in size from 6.3 to 14.8 miles with unknown or agricultural-related pollutant sources. Agricultural uses could be the main contributing factor for waterways that are impaired due to Group A Pesticides, Chlorpyrifos, Diazinon, and Electrical Conductivity. In this case, land conversion to urban use may improve some runoff pollutant levels for certain categories of pollutants.

Storm water runoff may also 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 Lathrop 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. This is considered a potentially significant impact, which would be minimized through the implementation of the policies

and actions listed below, as well as adherence to the City's adopted Municipal Code requirements described previously in the Regulatory Setting (Section 3.9-2).

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 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. Chapter 13.28 of the City's Municipal Code establishes minimum storm water management requirements and controls and outlines discharges which violate industrial or construction activity NPDES permit. Chapter 13.28.130 of the City's Municipal Code regulates stormwater quality and prohibits discharges of pollutants into surface waters unless the discharge is authorized by an NPDES storm water discharge permit. Compliance with existing City construction and stormwater management codes, and submittal of a site-specific drainage study and SWPPP, would reduce these potential impacts related to stormwater quality.

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 Lathrop Municipal Code, the City of Lathrop 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 Lathrop 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

3.9 HYDROLOGY AND WATER QUALITY

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 Lathrop 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**PUBLIC SAFETY ELEMENT POLICIES**

- PS-3.3 Regional Coordination. Continue to work cooperatively with the San Joaquin County Flood Control and Water Conservation District, the County Office of Emergency Services, SJAFC, local reclamation districts and other agencies to:
- A. Consider the need to expand the capacity of flood control facilities based on changing flood conditions associated with climate change and extreme weather;
 - B. Address storm drainage issues; and
 - C. Preplan for flood disaster response, such as required evacuation in the event of a serious breach of an upstream dam capable of the flooding the community.
- PS-3.7 Mitigation. Require all development projects to demonstrate how storm water 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 offsite flooding.
- PS-3.8 Construction Activities. Ensure that construction activities will not result in adverse impacts to existing flood control and drainage facilities, and adequate drainage and erosion control measures are provided during construction of new development.
- PS-3.9 Adequate Infrastructure. Maintain and regularly assess the status of local storm drainage infrastructure to ensure that the system is functioning property.

PUBLIC FACILITIES AND SERVICES ELEMENT POLICIES

- PFS-4.1 Maintain Capacity. Maintain and improve storm drainage infrastructure and flood control facilities in order to protect the community from flood hazards.
- PFS-4.2 Regional Partnerships. Continue to work cooperatively with the San Joaquin Area Flood Control Agency and other outside agencies to meet SB-5 requirements to provide a 200-year Urban Level of Protection and other needs and priorities relative to storm drainage issues. Also, continue to participate with the San Joaquin Valley Stormwater Quality Partnership to meet objectives related to compliance with the City's Small MS4 Phase 2 permit.
- PFS-4.3 Maintenance Districts. Continue to fund the operation and maintenance of stormwater facilities and regulatory compliance through the creation of maintenance districts and/or other appropriate mechanisms that avoid burdening the City's finances.
- PFS-4.4 National Programs. Cooperate in regional programs to implement the National Pollutant Discharge Elimination System program.
- PFS-4.5 Development Review. Continue to require all development projects to:

- A. 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 and as required by the City's Small MS4 Phase 2 permit; and
- B. Analyze their drainage and stormwater conveyance impacts and either demonstrate that the City's existing infrastructure can accommodate increased stormwater flows, or make the necessary improvements to mitigate all potential impacts.

PFS-4.6 Stormwater Runoff. Stormwater runoff may be directed towards permeable surfaces to the greatest extent feasible to allow for more percolation of stormwater into the ground.

PFS-4.7 Stormwater Capture. Encourage the use of professionally designed stormwater capture methods to aid in the reuse of rainwater for non-potable uses in compliance with applicable State regulations.

PFS-4.8 Stormwater Treatments. Promote Best Management Practices (BMPs) and Low Impact Development measures (LID) to treat stormwater before discharge from the site. The facilities shall be sized to meet regulatory requirements.

PFS-4.9 Naturalized Stormwater Facilities. Maintain stormwater facilities in a naturalized condition where appropriate, incorporating recreational trails, parkway vegetation, and other amenities, minimizing grading, and ensuring that vegetation does not reduce channel capacity, and consistent with the Recreation and Resources Element.

PFS-4.10 Dual-Use Detention Basins. Allow recreational uses in dual-use detention basins for parks, ball fields, and other uses where appropriate.

PFS-4.11 Data Collection. As necessary to meet storm drainage goal(s), map, track, and analyze data on all current storm drain facilities in order to provide clear and accurate forecasts for future demand.

RECREATION AND RESOURCES ELEMENT POLICIES

RR-4.4 Natural Water Bodies and Drainage Systems. Limit the disturbance of natural water bodies and drainage systems in Lathrop by conserving natural open space areas, protecting channels, and minimizing the impacts from stormwater and urban runoff.

RR-8.8 Management Strategies. Manage water resources as part of a broader integrated approach that includes groundwater, surface water, conservation, water quality, reuse, environmental stewardship, and other water management strategies.

PUBLIC SAFETY ELEMENT ACTIONS

PS-3d Update the Storm Drainage Master Plan every five years. The update shall be reviewed periodically for adequacy and consistency with the General Plan.

PS-3e Identify which storm water and drainage facilities are in need of repair and address these needs through the City's Capital Improvement Program.

PS-3g Continue to review development projects to identify potential stormwater and drainage impacts and require new, unentitled development to include measures to ensure that off-site runoff is

not increased during rain and flood events. As part of the development review process, require developers to prepare hydrological studies as necessary. Studies shall encompass the project site as well as the entire drainage area.

PUBLIC FACILITIES AND SERVICES ELEMENT ACTIONS

- PFS-4a Update the City's master plans regarding stormwater runoff, flooding, and removal of surface water contaminants every five years, or as needed. The update shall be reviewed periodically for adequacy and consistency with the General Plan.
- PFS-4b Continue to complete gaps in the drainage system in areas of existing development.
- PFS-4c Identify which storm water and drainage facilities are in need of repair or reconstruction and address these needs through the City's Capital Improvement Program.
- PFS-4d Continue to review 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.
- PFS-4e Project designs should minimize drainage concentrations, minimize impervious coverage, utilize pervious paving materials, utilize low impact development (LID) strategies, and utilize Best Management Practices (BMPs) to reduce stormwater runoff.
- PFS-4f Promote the use of LID strategies in new development and redevelopment projects, including but not limited to the use of canopy trees and shrubs, vegetated swales, and permeable paving.
- PFS-4g Require new development to mitigate increases in stormwater peak flows and/or volume. Mitigation measures, such as LID strategies, should take into consideration impacts on adjoining lands in the City.
- PFS-4h Continue to implement a comprehensive municipal stormwater pollution-prevention program in compliance with requirements of the Water Quality Control Plan In collaboration with San Joaquin County and the Cities of Tracy, Lodi, Manteca, and Patterson, continue to implement the Multi-Agency Post-Construction Stormwater Standards Manual to manage stormwater runoff from new development and redevelopment.

RECREATION AND RESOURCES ELEMENT ACTIONS

- RR-4c Require new development which has the potential to result in water quality impacts to the City's waterways and the local groundwater basin to implement all feasible mitigation measures to reduce impacts.
- RR-4d Publicize volunteer-based programs that organize community habitat restoration and/or cleanup events and provide public education regarding the benefits of city and regional water resources.

Impact 3.9-2: General Plan implementation could result in the depletion of groundwater supplies, 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 Lathrop 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.

The 2014 SGMA enacted groundwater legislation in California that requires the formation of Groundwater Sustainability Agencies (GSA) who will be responsible for developing Groundwater Sustainability Plans to manage groundwater basins. The City is located within the Tracy Sub-basin as of February 2019 and has been in coordination with the GSA to develop a Groundwater Sustainability Plan (GSP). The GSP must be adopted and submitted to the DWR by January 31, 2022. The City's GSP was adopted by the City of Lathrop GSA in December 2021.

As discussed in Section 3.15, Utilities and Service Systems, the City's 2020 UWMP documents current and projects future water demands and supplies through 2040, as shown in Table 3.15-1. Water supplies to meet future demands include surface water purchased from SSJID, City produced groundwater and recycled water. The City's water supply is projected to increase by about 54 percent from 2020 to 2040, primarily due to implementation of the City's UMWP. Future City groundwater pumping is estimated based on the safe yield for all groundwater pumping within the City's planning area which is not predicted to experience any additional restrictions as a result of the City's GSP.

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. Undeveloped land west of Interstate 5 and east of the San Joaquin River and the River Islands Phase II tract have a land use designation that allows a range of development densities. The proposed General Plan does not increase the acreage of developable land uses from the previous General Plan. In addition, the General Plan does not designate areas currently designated for open spaces uses for additional urban uses. However, when compared to existing conditions, development allowed under the proposed General Plan would allow currently undeveloped portions of Lathrop to develop with additional impervious surfaces.

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 undeveloped lands.

Subsequent development projects proposed within the Planning Area, such as residential, commercial, light industrial, and infrastructure projects, would result in new impervious surfaces and could reduce stormwater infiltration and groundwater recharge. 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 potentials; and impervious surfaces such as pavement significantly reduce infiltration capacity and increase surface water runoff. The amount of new pavement and the extent to which it affects infiltration depends on the site-specific soil type. Projects located in urban areas would have less of an impact than projects converting open lands and spaces. The City must evaluate individual projects as they are proposed to ensure that they would not result in a significant interference with recharge.

The City plans to utilize its existing groundwater wells to supply water in the future. As discussed in the City's UWMP the current estimated annual groundwater yield is 4,720 AFY and the City currently has no plans to install additional groundwater wells or expand its groundwater production. Additionally, as described in the UWMP the City's ability to utilize groundwater wells will not be impacted by groundwater levels within the Tracy groundwater basin, and would not require the City to limit groundwater production to maintain a sustainable groundwater budget. Based on the available information, it is anticipated that 100% the City's current estimated groundwater yield is available for the planning horizon.

The General Plan includes policies and actions to support groundwater recharge and water conservation. For example, Policy RR-8.6 supports the sustainable yield and calls for the City to operate the City's well system in such a manner as to not exceed the sustainable yield of the local groundwater aquifers. While policy RR-8.7 supports groundwater recharge through the promotion of and the use of permeable surface materials and areas of open space, in order to decrease surface runoff and promote groundwater recharge. Subsequent development projects proposed within the Planning Area would be subject to these policies as well as additional policies and actions listed below that support groundwater conservation and recharge.

The General Plan includes policies and implementation actions that support water conservation and aim to diversify the City's water sources. The General Plan and development codes are consistent with local groundwater objectives and promote sustainable yields throughout the planning horizon. 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

POLICIES

- RR-8.2 Ground Water. Protect the quantity and quality of Lathrop's groundwater through reduced potable water use, increased water conservation, and recharge opportunities.
- RR-8.6 Sustainable Yield. Operate the City's well system in such a manner as to not exceed the sustainable yield of the local groundwater aquifers.
- RR-8.7 Groundwater Recharge. Promote the use of permeable surface materials and provide for ample areas of open space, including parks and greenways, and naturalized land, in order to decrease surface runoff and promote groundwater recharge.
- RR-8.8 Management Strategies. Manage water resources as part of a broader integrated approach that includes groundwater, surface water, conservation, water quality, reuse, environmental stewardship, and other water management strategies.
- PFS-2.4 SSJID Water Supply Agreement. Renew and update the water supply agreement with SSJID as needed to supplement the City's existing system in order to meet projected demand and to reduce the City's reliance on groundwater resources.
- PFS-2.5 Development Review. Consider the effect of incremental increases in the demands on groundwater supply and water quality when reviewing development applications.
- PFS-10.4 Promotion. Promote the use of recycled water and treated wastewater to the extent allowable and feasible, including use for irrigation, agriculture, industrial, and groundwater recharge purposes, when such opportunities become available.

IMPLEMENTATION ACTIONS

- RR-8a Regularly review and update the City's water conservation measures to be consistent with current best management practices for water conservation, considering measures recommended by the State Department of Water Resources and the California Urban Water Conservation Council.
- RR-8c Continue to implement and update as necessary standards for water conserving landscape practices, including the use of drought tolerant plants, for both public and private projects, as well as guidance provided by the Lathrop Municipal Code Chapter 17.92 (Water Efficient Landscape Ordinance), and Chapter 13.08 (Water Conservation and Rationing Provisions).
- PFS-2a Update the IWRMP, regarding water supply and distribution, every five years, or as needed. The update shall reflect the most recent adopted groundwater studies that establish a safe yield for the groundwater basin and/or establish maximum extraction from the basin. The update shall be reviewed periodically for adequacy and consistency with the General Plan.
- PFS-2b Continue to rely on existing groundwater and surface water resources, while maintaining and improving the infrastructure, in collaboration with the SSJID, other water districts, and other local jurisdictions where applicable, to provide access to the water supply.

PFS-4e Project designs should minimize drainage concentrations, minimize impervious coverage, utilize pervious paving materials, utilize low impact development (LID) strategies, and utilize Best Management Practices (BMPs) to reduce stormwater runoff.

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 of Lathrop 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.

In addition to complying with the NPDES programs and Municipal Code stormwater requirements described previously, 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 and require development to include measures to ensure that off-site runoff is not increased during rain and flood events.

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 propose or authorize any specific development projects. 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, and would require a project level analysis for site specific impacts. 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 plans can be prepared to control storm water runoff, both during and after construction.

The City of Lathrop, in collaboration with San Joaquin County, Tracy, Lodi, Manteca, and Patterson prepared a Multi-Agency Post-construction Stormwater Standards Manual to provide consistent guidance for municipal workers, developers and builders in implementing the requirements under the Statewide Small MS4 NPDES permit (2013-0001-DWQ).

Through implementation of the General Plan policies and actions listed below, implementation of the Lathrop Municipal Code requirements, adherence to the Lathrop Stormwater Development Standards Plan, Post-construction Stormwater Standards Manual, 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 **less than significant**.

GENERAL PLAN POLICIES AND IMPLEMENTATION ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

PUBLIC FACILITIES AND SERVICES POLICIES

PFS-4.1 Maintain Capacity. Maintain and improve storm drainage infrastructure and flood control facilities in order to protect the community from flood hazards.

PFS-4.2 Regional Partnerships. Continue to work cooperatively with the San Joaquin Area Flood Control Agency and other outside agencies to meet SB-5 requirements to provide a 200-year Urban Level of Protection and other needs and priorities relative to storm drainage issues. Also, continue to participate with the San Joaquin Valley Stormwater Quality Partnership to meet objectives related to compliance with the City's Small MS4 Phase 2 permit.

PFS-4.3 Maintenance Districts. Continue to fund the operation and maintenance of stormwater facilities and regulatory compliance through the creation of maintenance districts and/or other appropriate mechanisms that avoid burdening the City's finances.

PFS-4.5 Development Review. Continue to require all development projects to:

- A. 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 and as required by the City's Small MS4 Phase 2 permit; and
- B. Analyze their drainage and stormwater conveyance impacts and either demonstrate that the City's existing infrastructure can accommodate increased stormwater flows, or make the necessary improvements to mitigate all potential impacts.

PFS-4.6 Stormwater Runoff. Stormwater runoff may be directed towards permeable surfaces to the greatest extent feasible to allow for more percolation of stormwater into the ground.

PFS-4.7 Stormwater Capture. Encourage the use of professionally designed stormwater capture methods to aid in the reuse of rain water for non-potable uses in compliance with applicable State regulations.

PFS-4.9 Naturalized Stormwater Facilities. Maintain stormwater facilities in a naturalized condition where appropriate, incorporating recreational trails, parkway vegetation, and other amenities, minimizing grading, and ensuring that vegetation does not reduce channel capacity, and consistent with the Recreation and Resources Element.

PFS-4.10 Dual-Use Detention Basins. Allow recreational uses in dual-use detention basins for parks, ball fields, and other uses where appropriate.

PFS-4.11 Data Collection. As necessary to meet storm drainage goal(s), map, track, and analyze data on all current storm drain facilities in order to provide clear and accurate forecasts for future demand.

RECREATION AND RESOURCES POLICIES

RR-4.4 Natural Water Bodies and Drainage Systems. Limit the disturbance of natural water bodies and drainage systems in Lathrop by conserving natural open space areas, protecting channels, and minimizing the impacts from stormwater and urban runoff.

RR-4.7 Wildlife Corridors. Participate in the planning of drainage channels and other areas that provide potential wildlife linkages between open space areas in the community and the vicinity.

PUBLIC FACILITIES AND SERVICES IMPLEMENTATION ACTIONS

PFS-4a Update the City's master plans regarding stormwater runoff, flooding, and removal of surface water contaminants every five years, or as needed. The update shall be reviewed periodically for adequacy and consistency with the General Plan.

PFS-4b Continue to complete gaps in the drainage system in areas of existing development.

PFS-4c Identify which storm water and drainage facilities are in need of repair or reconstruction and address these needs through the City's Capital Improvement Program.

PFS-4d Continue to review 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.

PFS-4e Project designs should minimize drainage concentrations, minimize impervious coverage, utilize pervious paving materials, utilize low impact development (LID) strategies, and utilize Best Management Practices (BMPs) to reduce stormwater runoff.

PFS-4f Promote the use of LID strategies in new development and redevelopment projects, including but not limited to the use of canopy trees and shrubs, vegetated swales, and permeable paving.

PFS-4g Require new development to mitigate increases in stormwater peak flows and/or volume. Mitigation measures, such as LID strategies, should take into consideration impacts on adjoining lands in the City.

RECREATION AND RESOURCES IMPLEMENTATION ACTIONS

RR-4c Require new development which has the potential to result in water quality impacts to the City's waterways and the local groundwater basin to implement all feasible mitigation measures to reduce impacts.

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 along the natural creeks and drainages that traverse the area. The primary flood hazard is the San Joaquin River and its tributaries, notably Old River (contiguous with the western Study Area boundary) and Paradise cut along the southwestern Study Area boundary. A levee running from Airport Way in Manteca west and northwest along the San Joaquin River provides flood protection for the land north and east of the River. This levee is under the jurisdiction of Reclamation District No. 17 (RD 17).

The 100-year flood plain is largely confined to the southern and western portions of the City limits and SOI. Additionally, the 500-year flood plain is located in the eastern and northern portions of the City limits and SOI.

The 200-year floodplain for the Planning Area, as mapped by the City of Lathrop and San Joaquin County, is shown on Figure 3.9-3. As shown in the figure, the 200-year floodplain encompasses the entirety of the City's SOI and City limits. Existing uses within the 200-year floodplain include urban uses such as commercial, industrial, and residential, as well as agricultural and open space uses.

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 Lathrop regulates storm water discharge in accordance with the NPDES permit through Chapter 13.28 of the Lathrop Municipal Code, Stormwater Quality Management Discharges. In addition to complying with the NPDES 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.

Additionally, Section 17.30.030, 200-Year flood protection requirements for new development, requires certain findings prior to approving certain projects within a 200-year floodplain. The review authority shall not approve the execution of a development agreement, a tentative map, or a parcel map for which a tentative map is not required, or a discretionary permit or other discretionary entitlement that would result in the construction of a new building, or construction that would result in an increase in allowed occupancy for an existing building, or issuance of a ministerial permit that would result in the construction of a new residence for property that is located within the 200 Year Flood Zone unless the review authority finds, based on substantial evidence in the record, one of the following:

1. The facilities of the State Plan of Flood Control or other flood management facilities protect the new development site to the urban level of flood protection in urban and urbanizing areas or the national Federal Emergency Management Agency standard of flood protection in non-urbanized areas; or
2. Conditions imposed on the new development will protect the property to the urban level of flood protection in urban and urbanizing areas or the national Federal Emergency Management Agency standard of flood protection in non-urbanized areas; or
3. The local flood management agency has made adequate progress on the construction of a flood protection system that will result in flood protection equal to or greater than the urban level of flood protection in urban or urbanizing areas, or the national Federal Emergency Management Agency standard of flood protection in non-urbanized areas, for a new development site located within a flood hazard zone intended to be protected by the system. For urban and urbanizing areas protected by project levees, the urban level of flood protection shall be achieved by 2028; or
4. The new development site located in an undetermined risk area has met the urban level of flood protection based on substantial evidence in the record.

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).

Lathrop is located approximately 65 miles from the Pacific Ocean at an elevation of approximately 20 feet above mean sea level. Based on tsunami inundation maps prepared by the Department of Conservation, California Emergency Management Agency, and California Geological Survey, Lathrop 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.

As described previously, the Planning Area has the potential to be inundated by four dams: Tulloch Dam, San Luis Dam, Pine Flat Dam, New Exchequer Dam (Lake McClure), and New Melones Dam. The dam inundation area for each dam is shown in Figure 3.9-4. As such, the City is at significant risk from inundation in the result of a dam failure. 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, Division of Dam Safety (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 likely 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 Lathrop is not within a tsunami hazard area and would not be subject to substantial impacts from seiche events. Therefore, this is considered a **less than significant** impact.

GENERAL PLAN POLICIES AND IMPLEMENTATION ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

PUBLIC SAFETY ELEMENT POLICIES

- PS-3.1 Regulatory Compliance. Coordinate with local, state, and federal agencies to ensure that the City's regulations related to flood control are in compliance with federal, State, and local standards.
- PS-3.2 FEMA Coordination. Coordinate with the Federal Emergency Management Agency (FEMA) to ensure that Federal Insurance Rate Maps correctly depict flood hazards in the City.
- PS-3.3 Regional Coordination. Continue to work cooperatively with the San Joaquin County Flood Control and Water Conservation District, the County Office of Emergency Services, SJAFCFA, local reclamation districts and other agencies to:
- A. Consider the need to expand the capacity of flood control facilities based on changing flood conditions associated with climate change and extreme weather;
 - B. Address storm drainage issues; and

C. Preplan for flood disaster response, such as required evacuation in the event of a serious breach of an upstream dam capable of the flooding the community.

PS-3.4 Evaluate Hazards. Require evaluation of potential flood hazards prior to approval of development projects to determine whether the proposed development is reasonably safe from flooding and consistent with California Department of Water Resources Urban Level of Flood Protection Criteria (ULOP). The City shall not approve the execution of a development agreement, a tentative map, or a parcel map for which a tentative map is not required, or a discretionary permit or other discretionary entitlement that would result in the construction of a new building, or construction that would result in an increase in allowed occupancy for an existing building, or issuance of a ministerial permit that would result in the construction of a new residence for property that is located within a 200-year flood hazard zone, unless the adequacy of flood protection as described in Government Code §65865.5(a), 65962(a), or 66474.5(a), has been demonstrated.

PS-3.5 New Development. New development may be permitted in areas not identified as "urban" or "urbanizing" provided that:

1. Such areas are protected from 100-year flooding by FEMA-accredited levees or equivalent flood protection as shown on an adopted FEMA Flood Insurance Rate Map, a FEMA-approved Letter of Map Revision or a Conditional Letter of Map Revision, subject to conditions specified in the letter; or
2. Where not protected by FEMA-accredited 100-year levees, such areas are subject to all applicable requirements of Municipal Code Chapter 8.30 (Floodplain Management), the California Building Standards Code as adopted by the City, and the latest promulgated FEMA standards for development in the 100-year floodplain, provided that new development defined as "urban" or "urbanizing."

PS-3.6 Local Coordination. Continue to work closely with the Cities of Manteca and Stockton, San Joaquin County, RD 2062, and RD 17, to improve levee systems east of the San Joaquin River to provide ULOP for urban and urbanizing areas in Lathrop by 2028, including ensuring that findings of "adequate progress" will continue to be made until improvements are in place to provide ULOP.

PUBLIC FACILITIES AND SERVICES ELEMENT POLICIES

PFS-4.1 Maintain Capacity. Maintain and improve storm drainage infrastructure and flood control facilities in order to protect the community from flood hazards.

PFS-4.2 Regional Partnerships. Continue to work cooperatively with the San Joaquin Area Flood Control Agency and other outside agencies to meet SB-5 requirements to provide a 200-year Urban Level of Protection and other needs and priorities relative to storm drainage issues. Also, continue to participate with the San Joaquin Valley Stormwater Quality Partnership to meet objectives related to compliance with the City's Small MS4 Phase 2 permit.

PUBLIC SAFETY ELEMENT IMPLEMENTATION ACTIONS

PS-3a 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

3.9 HYDROLOGY AND WATER QUALITY

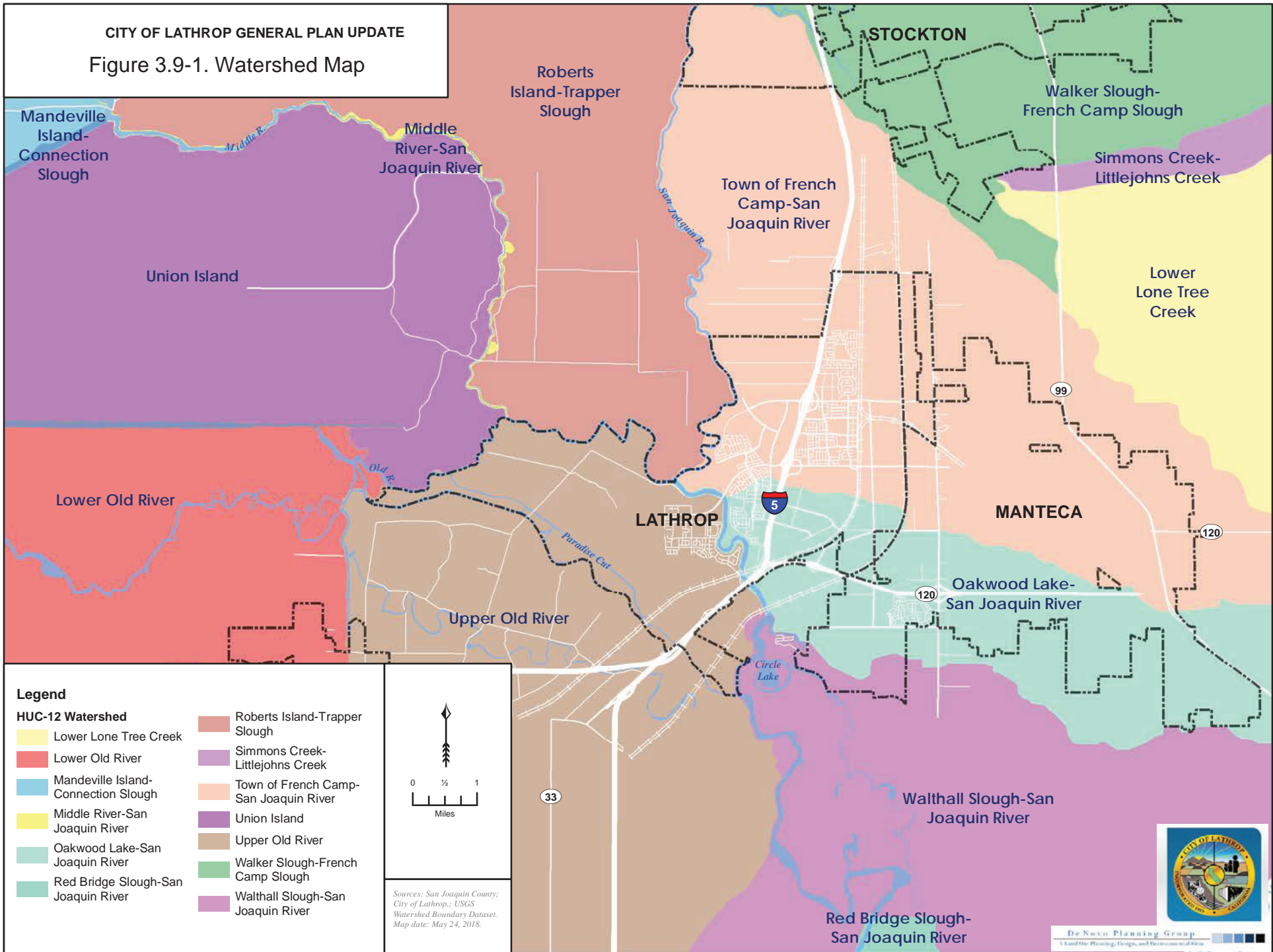
Municipal Code, the City's Emergency Operations Plan, and building codes as required and ensure that the City's regulations continue to require that new development within flood hazard zones is consistent with this Public Safety Element and is required to meet the flood protection requirements of State law, including but not limited to Government Code Sections 65007, 65865.5, 65962 and 66474.5.

- PS-3b Communicate with FEMA annually regarding updates to Flood Insurance Rate Maps and Letter of Map Revisions.
- PS-3c Periodically review county, state, and federal flood control best practices and incorporate appropriate standards into the Municipal Code.
- PS-3d Update the Storm Drainage Master Plan every five years. The update shall be reviewed periodically for adequacy and consistency with the General Plan.
- PS-3e Identify which storm water and drainage facilities are in need of repair and address these needs through the City's Capital Improvement Program.
- PS-3f Complete gaps in the drainage system in areas of existing development.
- PS-3g Continue to review development projects to identify potential stormwater and drainage impacts and require new, unentitled development to include measures to ensure that off-site runoff is not increased during rain and flood events. As part of the development review process, require developers to prepare hydrological studies as necessary. Studies shall encompass the project site as well as the entire drainage area.
- PS-3h Work with the San Joaquin County Flood Control District and SJAFCA to apply for grants that provide funding for local drainage controls, FEMA's Hazard Mitigation Grant and Flood Mitigation Program, CalEPA and the CA State Water Resources Control Board offer grants to municipalities throughout California.
- PS-3i Disseminate information on flooding, flood control on private property, floodplains, and flood preparedness to the public as part of the City's participation in the FEMA CRS program.
- PS-3j Require applications for development in areas subject to 200-year flooding to indicate the depth of predicted 200-year flooding on the basis of official maps approved by the City of Lathrop Floodplain Administrator.
- PS-3k Coordinate with RD 17 and RD 2062 as required for the purpose of ensuring that ULOP is available as soon as possible and that "adequate progress" findings can be made.

PUBLIC FACILITIES AND SERVICES ELEMENT IMPLEMENTATION ACTIONS

- PFS-4a Update the City's master plans regarding stormwater runoff, flooding, and removal of surface water contaminants every five years, or as needed. The update shall be reviewed periodically for adequacy and consistency with the General Plan.
- PFS-4d Continue to review 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.

CITY OF LATHROP GENERAL PLAN UPDATE
Figure 3.9-1. Watershed Map

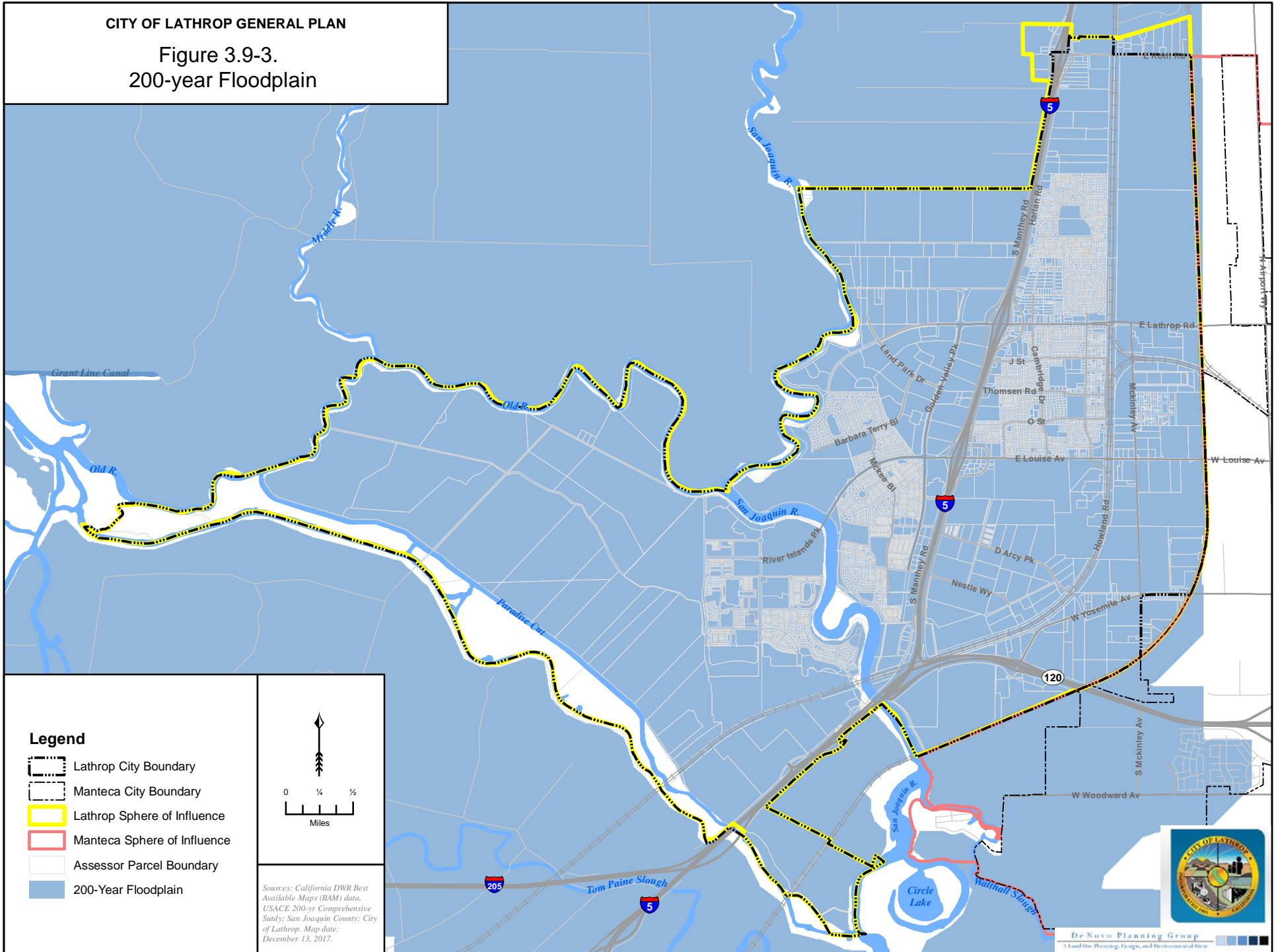


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CITY OF LATHROP GENERAL PLAN

Figure 3.9-3.
200-year Floodplain



Legend

-  Lathrop City Boundary
-  Manteca City Boundary
-  Lathrop Sphere of Influence
-  Manteca Sphere of Influence
-  Assessor Parcel Boundary
-  200-Year Floodplain

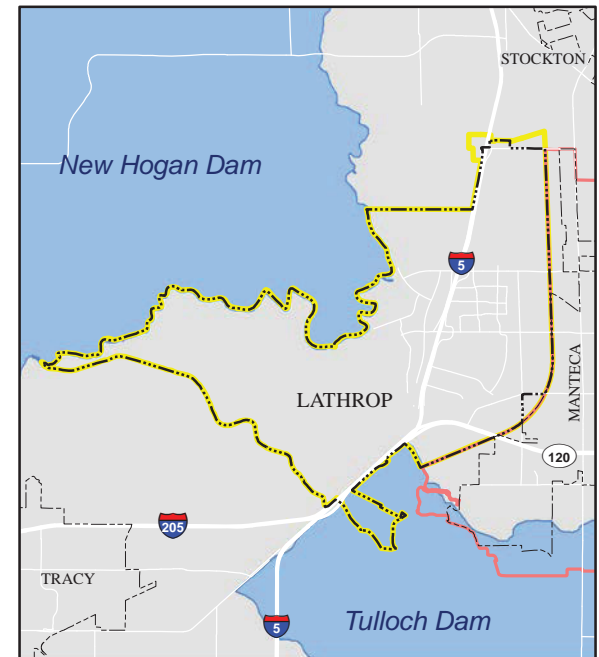
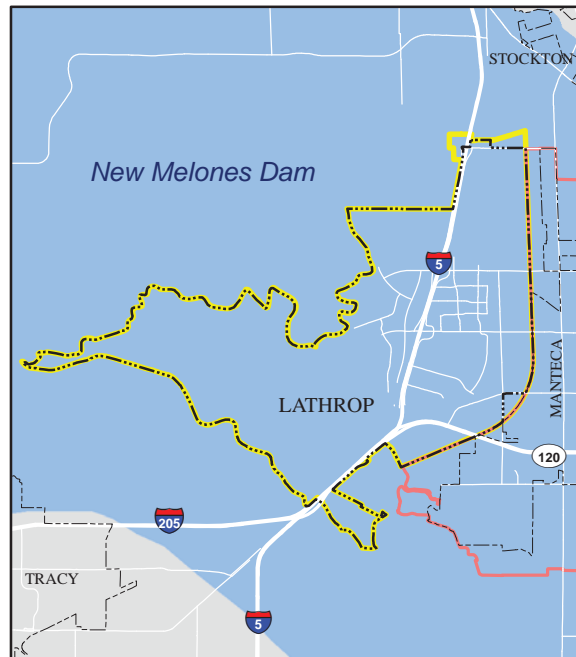
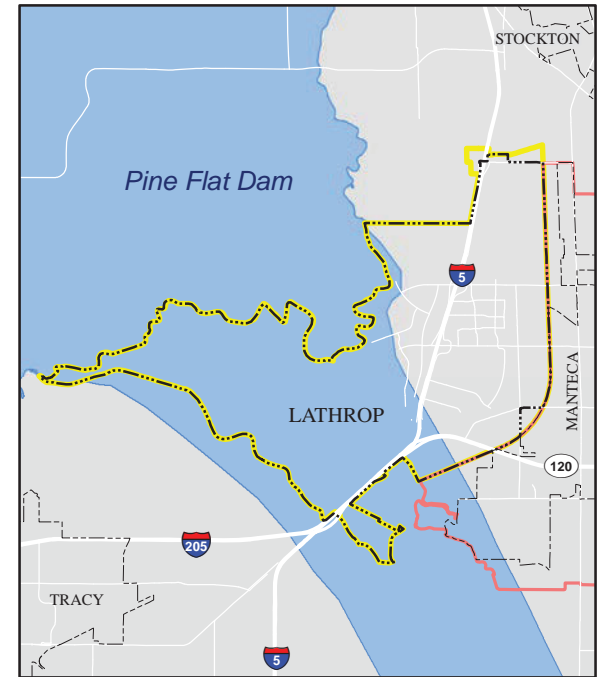
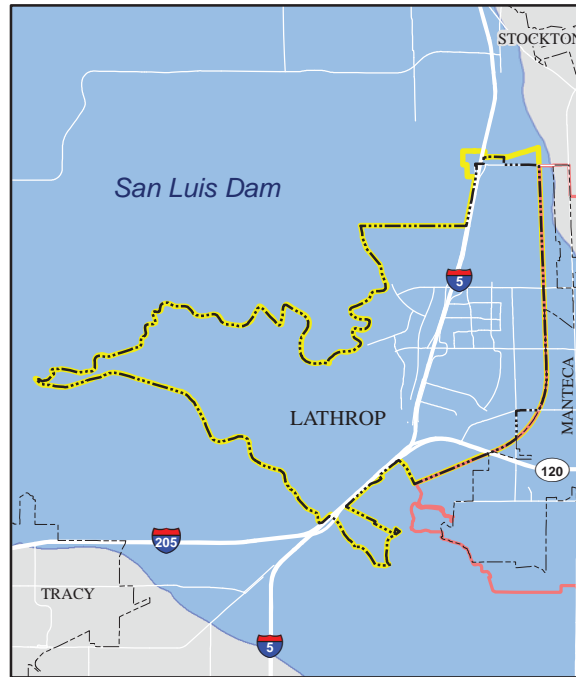


Sources: California DWR Best Available Maps (BAM) data, USACE 200-yr Comprehensive Study; San Joaquin County; City of Lathrop. Map date: December 13, 2017.







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Figure 3.9-4.
Dam Inundation Areas



Legend

-  Lathrop City Boundary
-  Surrounding City Limits
-  Lathrop Sphere of Influence
-  Manteca Sphere of Influence
-  Dam Inundation Area



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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.

Comments related to the potential for land use conflicts and the potential for air quality impacts and noise and vibration impacts were received during the public review period or scoping meeting for the Notice of Preparation and are addressed in detail in their respective EIR Chapters (3.3 Air Quality and 3.12 Noise). Full comments received are included in Appendix A.

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. The Area of Interest (AOI) is a geographic area beyond the sphere of influence in which land use decisions or other governmental actions of one local agency (the "Acting Agency") impact directly or indirectly upon another local agency ("the Concerned Agency"). The AOI includes land in the northwest portion of the Planning Area north of the city limits and SOI, and areas in the Stewart Tract outside of the existing City Limits and SOI. Lands within the northwest portion of the Planning Area had previously been included within the SOI and was subsequently removed during the 2016 Municipal Services Review Sphere Amendment. All lands currently within the AOI are outside of the Lathrop City Limits and SOI.

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 Lathrop'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 Lathrop General Plan includes the entire city limits, the City's SOI, and lands within the AOI. Figure 2.0-2 in Chapter 2.0, Project Description, shows Lathrop's Planning Area boundaries.

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 San Joaquin County Assessor's office maintains a database of existing land uses on individual parcels, including the number of dwelling

3.10 LAND USE, POPULATION, AND HOUSING

units and related improvements such as non-residential building square footage. This information is used as the basis for property tax assessments and is 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. Existing land uses are based on data provided by the County Assessor and Parcel Quest. The predominant land uses in the City and Planning Area are single-family residential at 5,286.86 total acres, agricultural uses 3,291.71 total acres, industrial manufacturing (1,235.19 acres), institutional (1,636.46 acres). Additional uses in the City and Planning Area include commercial, multifamily residential, parks and recreation, open space, office, and communication/utilities uses.

Development Trends

Lathrop began with a store and schoolhouse prior to construction of the Central Pacific Railroad around 1870, and was known as Wilson's Station. The Town's growth through the 1870's was steady, reaching a population of about 600 by 1879. Lathrop entered a period of decline in the 1880's which was to continue for nearly 50 years. With the transfer of the railroad roundhouse and machine shop to Tracy, the transfer of rural postal customers to Manteca, and a major fire in 1911, Lathrop's population and economy dwindled until World War II. The war brought Permanente Metals and the Sharpe Army Depot to town. Permanente produced aircraft parts and magnesium bombs, while the Depot became one of the major army supply depots in the Western United States. During the 1940's, Lathrop expanded from its original townsite to an area of about five square miles. Housing tracts were constructed during postwar years and Lathrop became home to large industrial employers including Best Fertilizer, and Libby-Owens-Ford which produced auto glass. Residential growth was slow during the 1950's and 1960's, but accelerated through the '70's and '80's. Nearly all of the vacant land between the original townsite and Interstate 5 has been developed. With about 3,700 people and 1,100 homes in 1980, Lathrop expanded to a population of 6,841 in 1990 and about 7,000 in early 1991. Lathrop became a municipality by a majority vote in the election held in 1989. As of 2020 the City of Lathrop had a population of 26,503 and with 7,284 residential units. According to the California, Department of Finance (E-5 Population and Housing Estimates 1/22), Lathrop has an estimated population of 31,331 with 8,972 total housing units.

Population and Households

Table 3.10-1 summarizes the population and household data for Lathrop and San Joaquin County from 1990 through 2020.

TABLE 3.10-1: POPULATION AND HOUSEHOLD GROWTH

	1990	2000	2010	2020	2022*	1990-2000 % CHANGE	2000-2010 % CHANGE	2010-2020 % CHANGE
<i>LATHROP</i>								
Population	6,841	10,445	18,023	26,503	31,331	53%	72%	48%
Households	1,927	2,908	4,782	5,503	--	51%	64%	15%
Persons per household	3.55	3.59	3.77	3.88	3.65	1%	5%	3%
<i>SAN JOAQUIN COUNTY</i>								
Population	480,628	563,598	685,306	773,505	784,298	17%	22%	13%
Households	166,274	181,629	215,007	228,567	--	9%	18%	6%
Persons per household	2.94	3.00	3.12	3.22	3.10	2%	4%	3%

SOURCE: U.S. CENSUS, 1990, 2010; LATHROP HOUSING ELEMENT, 2016; CALIFORNIA DEPARTMENT OF FINANCE, 2021 - 2022 ESTIMATES. * ESTIMATED BY DOF JANUARY 2022.

Lathrop incorporated in 1989 and by 1990, the US Census Bureau recorded the population at 6,841. From 1990 to 2000, the city’s population increased by 51% from 6,841 to 10,445 persons. From 2000 to 2010 Lathrop experienced population growth increasing by approximately 72% from 10,445 to 18,023. San Joaquin County's total population increased by approximately 20% during the decades of 1990-2000 and 2000-2010. As of 2020, Lathrop’s population was estimated to be 26,806, an increase of 49% from the 2010 population of 18,023. As of January 2022 the California, Department of Finance estimated Lathrop’s population to be 31,331.

Over the years, the average household size has fluctuated slightly with a high of 3.88 in 2020 and a low of 3.55 in 1990.

Housing Units

As shown in Table 3.10-2, the number of housing units in Lathrop has increased at rates similar to the population with significant increases since 1990. In 2020, there were 7,284 housing units in the city. From 2000 to 2010, housing units increased from 2,991 to 5,261, a 76% increase, while between 2010 and 2020 the city experienced a 38% increase.

TABLE 3.10-2: HOUSING UNITS

	1990	2000	2010	2020	2022*	1990-2000 % CHANGE	2000-2010 % CHANGE	2010-2020 % CHANGE
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3.10 LAND USE, POPULATION, AND HOUSING

Lathrop	2,040	2,991	5,261	7,284	8,972	47%	76%	38%
San Joaquin County	158,659	189,160	233,755	249,058	258,566	19%	24%	6.6%

SOURCE: U.S. CENSUS, 2000, 2010; LATHROP HOUSING ELEMENT, 2016, 2010 CALIFORNIA DEPARTMENT OF FINANCE, 2020, 2022. * ESTIMATED BY DOF JANUARY 2022.

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. The San Joaquin Council of Governments (SJCOC) is the lead agency for developing the RHNP for the San Joaquin County area that includes the Cities of Escalon, Lathrop, Lodi, Manteca, Ripon, Stockton, and Tracy. Lathrop’s fair share of the adopted RHNA for 2014-2023 is summarized in Table 3.10-3

TABLE 3.10-3: REGIONAL HOUSING NEEDS ALLOCATION (2014-2023 RHNA)

<i>EXTREMELY LOW INCOME VERY LOW INCOME LOW INCOME</i>	<i>MODERATE INCOME</i>	<i>ABOVE MODERATE INCOME</i>	<i>TOTAL</i>
<i>2014 - 2023</i>			
<i>1,778</i>	<i>957</i>	<i>2,421</i>	<i>5,156</i>

SOURCE: SJCOG, 2014-2023 REGIONAL HOUSING NEEDS PLAN (RHNP)

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. The City’s Housing Element, provides for the accommodation of the 2014-2023 RHNA that has been assigned to the City of Lathrop.

Regional Transportation Plan/Sustainable Communities Strategy

SJCOG approved its most-recent Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) in June 2018, which continues to provide a “sustainability vision” through year 2042 that recognizes the significant impact the transportation network has on the region’s public health, mobility, and economic vitality. The Plan serves as a guide for achieving public policy decisions that will result in balanced investments for a wide range of multimodal transportation improvements. The plan charts a course for closely integrating land use and transportation – so that the region can grow smartly and sustainably. It outlines more than \$11.461 billion in transportation system investments through 2042. The Plan was prepared through a collaborative and comprehensive process with input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses and local stakeholders within San Joaquin County.

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:

3.10 LAND USE, POPULATION, AND HOUSING

- 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 cities some flexibility in the processing of subdivisions. Lathrop controls this process through the subdivision regulations in the Municipal Code (Title 16 - SUBDIVISIONS). These regulations ensure that minimum requirements are adopted for the protection of the public health, safety and welfare; and that the subdivision includes adequate community improvements, municipal services and other public facilities. Lathrop's subdivision provisions support the Subdivision Map Act and, in so doing, also support implementation of the City's General Plan.

Delta Protection Act of 1992

The western portion of the General Plan Area is within the "Secondary Zone" defined in the Resource Management Plan required in the California Delta Protection Act of 1992, as shown on Figure 3.10-3. As stated in the act the "basic goals of the state for the delta are the following:

- (a) Protect, maintain, and, where possible, enhance and restore the overall quality of the delta environment, including, but not limited to, agriculture, wildlife habitat, and recreational activities.
- (b) Assure orderly, balanced conservation and development of delta land resources.
- (c) Improve flood protection by structural and nonstructural means to ensure an increased level of public health and safety.

"Secondary zone" means all the delta land and water area within the boundaries of the delta not included within the primary zone, subject to the land use authority of local government, and that includes the land and water areas as shown on the map titled "Delta Protection Zones" on file with the State Lands Commission. (Section 29731) However, this division does not confer any permitting authority upon the commission or require any local government to conform their general plan, or land use entitlement decisions, to the resource management plan, except with regard to lands within the primary zone. The resource management plan does not preempt local government general plans for lands within the secondary zone. (Section 29764)

The Delta Reform Act of 2009

While there are many agencies involved in both the near and long-term management of the Delta, the Sacramento-San Joaquin Delta Reform Act of 2009 (Delta Reform Act) established the Delta Stewardship Council (Council) to create a comprehensive, long-term, legally enforceable plan to guide how multiple federal, state, and local agencies manage the Delta's water and environmental resources. The 2009 legislation directed the Council to oversee implementation of this plan through coordination and oversight of state and local agencies proposing to fund, carry out, and

approve Delta-related activities. It also granted the Council regulatory and appellate authority over certain actions that take place in whole or in part in the Delta and Suisun Marsh, referred to as covered actions.

Since 2010, the Council has developed, amended, and begun implementing the Delta Plan, addressing multiple complex challenges in the process. Much progress has been made, but much remains to be done. Developed to achieve the state's coequal goals of a reliable statewide water supply and a protected, restored Delta ecosystem in a manner that preserves the values of the Delta as a place, the Delta Plan includes 14 regulatory policies and 95 recommendations. Collectively, these policies and recommendations address current and predicted challenges related to the Delta's ecology, flood management, land use, water quality, and water supply reliability. The Delta Plan's policies and recommendations are based on best available science and depend on cooperation and coordination among federal, state, and local agencies.

LOCAL

City of Lathrop General Plan

Lathrop's current General Plan was last comprehensively updated in 1991, with amendments in 1992, 1997, 2001, 2003, 2004, 2006, 2010, 2011, 2013, 2015, 2016, 2018, 2020, and 2021. An update to the Housing Element was completed in in 2019.

The General Plan has three basic functions:

1. To enable the City Council, upon the advice of its Planning Commission, to express agreement on goals and policies for current and future development.
2. To provide clear guidance in judging whether projects proposed by public agencies and private developers are in close agreement with policies of the General Plan.
3. To allow and provide the basis for making intelligent changes to the Plan as time and changing circumstances may dictate, while being true to its purpose.

The City's General Plan includes a broad goal policy framework that guides land use and planning decisions within the city. The land use element is included in the Lathrop General Plan Part IV (Section A) of the Community Development Element.

Planned land uses within the City include low, medium and high density residential, office, retail, industrial, commercial and conservation land and open space which are included within one of the specific planning areas identified by the City's Land Use Map. Table 3.10-4 shows General Plan Land use designations throughout the Planning Area. Figure 5.0-1 included in Chapter 5.0 (Alternatives) illustrates the City's current General Plan Land Use Designations and their respective distributions throughout the Planning Area.

3.10 LAND USE, POPULATION, AND HOUSING

TABLE 3.10-4: EXISTING CITY OF LATHROP LAND USE DESIGNATIONS

LAND USE	CITY LIMITS	SOI	AREA OF INTEREST	TOTAL PLANNING AREA
	ACREAGE	ACREAGE	ACREAGE	ACREAGE
AOI - Area of Interest			2,122.16	2,122.16
AOI-Area of Interest: AOI-Area of Interest			2,122.16	2,122.16
City Proper	4,519.76	120.49		4,640.25
CC: Community Commercial	59.46			59.46
CP: Community Park	35.59			35.59
ES: Elementary School	26.37			26.37
FC: Freeway Commercial	132.34	54.54		186.88
FS: Fire Station	8.20			8.20
GI: General Industrial	1,065.37			1,065.37
HD: High Density Residential	8.96			8.96
LD: Low Density Residential	879.61			879.61
LI: Limited Industrial	1,410.97	65.94		1,476.92
MD: Medium Density	177.44			177.44
NC: Neighborhood Commercial	29.74			29.74
NP: Neighborhood Park	40.33			40.33
OS: Open Space	57.54			57.54
P: Public	63.55			63.55
PO: Professional Office	15.97			15.97
RecR: Recreational Residential	54.13			54.13
ROW: ROW	251.12			251.12
SC: Service Commercial:	185.85			185.85
VC: Village Center	17.23			17.23
CL - Central Lathrop	1,373.62			1,373.62
CP-CL: Community Park	80.09			80.09
HR-CL: High Density Residential	75.69			75.69
K-8-CL: Elementary School	37.42			37.42
NC-CL: Neighborhood Commercial	12.02			12.02
NP-CL: Neighborhood Park	44.80			44.80
OC-CL: Office Commercial	226.09			226.09
OS-CL: Open Space	48.37			48.37
P-SP-CL: Public/Semi-Public	10.94			10.94
R/MU-CL: Residential/Mixed Use	41.41			41.41
ROW-CL: ROW	10.06			10.06
SPC-CL: Specialty Commercial	7.82			7.82
VR/K-8/DS-CL: Elementary School	17.85			17.85
VR-CL: Variable Density Residential	695.19			695.19
WWTP-CL: Wastewater Treatment Plant	65.88			65.88
LG - Lathrop Gateway	303.97	62.79		366.76

LAND USE	CITY LIMITS	SOI	AREA OF INTEREST	TOTAL PLANNING AREA
	ACREAGE	ACREAGE	ACREAGE	ACREAGE
CO-LG: Commercial Office	68.17			68.17
LI-LG: Limited Industrial	184.34			184.34
SC-LG: Service Commercial: Lathrop Gateway	38.05	55.77		92.83
ROW-LG: ROW	13.41	7.02		20.43
RI - River Islands	4,412.46			4,412.46
MU-RI: Mixed Use Town Center	164.58			164.58
NC-RI: Neighborhood Retail	23.38			23.38
RCO-RI: Resource Conservation	667.29			667.29
RGC-RI: Regional Commercial	500.20			500.20
RH-RI: Residential High	34.37			34.37
RL-RI: Residential Low	2,813.73			2,813.73
RM-RI: Residential Medium	208.91			208.91
SL - South Lathrop Specific Plan	301.83			301.83
CO-SL: Commercial Office	13.00			13.00
LI-SL: Limited Industrial	250.75			250.75
OS-SL: Open Space River/Levee Park	12.79			12.79
P/QP-SL: Public/Quasi Public Facilities	10.34			10.34
ROW-SL: ROW	14.94			14.94
ST - Stewart Tract	737.11		432.52	1,169.63
RCO-ST: Resource Conservation	181.37			181.37
RC-ST: Recreation Commercial	77.03		273.88	350.91
RR-ST: Recreation Residential			145.03	145.03
R-ST: Residential	12.41			12.41
UR-ST: Urban Reserve	421.80			421.80
ROW-ST:ROW	45.28		13.54	58.82
Grand Total	11,648.75	183.28	2,554.68	14,386.70

SOURCES: SAN JOAQUIN COUNTY, 2021; CITY OF LATHROP GIS LAND USE DATA FILE 2017; DE NOVO PLANNING GROUP, 2021.

City of Lathrop Zoning Ordinance

Title 17 of the Lathrop Municipal Code 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 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. More specifically, the code is adopted to achieve the following objectives:

- A. To provide a zone plan to guide the physical development of the city in such a manner as to achieve progressively the general arrangement of land uses described and depicted in the general plan;

3.10 LAND USE, POPULATION, AND HOUSING

- B. To foster wholesome, serviceable and attractive living environment, the beneficial development of areas which exhibit conflicting patterns of use, and the stability of existing land uses which conform with objectives, policies, principles and standards of the general plan;
- C. To prevent excessive population densities and overcrowding of land with structures;
- D. To promote a safe, effective circulation system, the provision of adequate off-street parking and truck loading facilities, and the appropriate location of community facilities.
- E. To protect and promote appropriately located commercial and industrial activities in order to preserve and strengthen the city's economic base;
- F. To protect and enhance real property values and city's natural assets;
- G. To ensure unimpeded development of such new urban expansion that is logical, desirable and in conformance with objectives and policies of the general plan;
- H. To provide and protect open space in accordance with policies of the resources management element of the general plan, including avoiding the premature development of prime agricultural lands.

Local Agency Formation Commission of San Joaquin County

In 1963, the State Legislature created a 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 a LAFCO include preserving agricultural and open space land resources and providing for efficient delivery of services. The San Joaquin LAFCO has authority over land use decisions in San Joaquin 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;
- Extensions of service beyond an agency's jurisdictional boundaries;
- Development of, and amendments to, Spheres of Influence (SOI). The 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; and
- Provision of new or different services by districts.

In addition, LAFCO conducts Municipal Service Reviews (MSRs) for services within its jurisdiction. A MSR typically includes a review of existing municipal services provided by a local agency 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.

San Joaquin County General Plan

San Joaquin County adopted its General Plan in December 2016. The County's General Plan provides a comprehensive set of goals, policies, and implementing actions to guide the County's growth through the year 2035.

The County's General Plan establishes allowed land uses for lands within the City's SOI and AOI. While the City of Lathrop General Plan Land Use Map identifies planned land uses within the SOI, San Joaquin County has ultimate land use planning and project approval authority within the SOI unless the lands are annexed to the City.

3.10 LAND USE, POPULATION, AND HOUSING

The County's land use designations for areas within the SOI and AOI are summarized in Table 3.10-5 and the County's land use designations for the unincorporated area around the City are shown on Figure 3.10-2.

TABLE 3.10-5: SAN JOAQUIN COUNTY LAND USE DESIGNATIONS IN AOI AND SOI

<i>LAND USE</i>	<i>ACREAGE*</i>
AOI	2,509.58
Agriculture/General	1,949.81
Agriculture/Urban Reserve	400.81
Commercial/Freeway Service	16.75
Industrial/Limited	50.92
Open Space/Resource Conservation	91.29
SOI	200.93
Agriculture/General	9.24
Agriculture/Urban Reserve	62.73
Commercial/Freeway Service	12.07
Industrial/General	4.91
Industrial/Limited	111.99
Grand Total	2,710.51

**NOTE: NON-PARCEL SPECIFIC ACREAGE INCLUDES ROW.*

SOURCE: SAN JOAQUIN COUNTY, 2017; DE NOVO PLANNING GROUP, 2018.

San Joaquin County Aviation System Airport Land Use Compatibility Plans

In July 2009, the San Joaquin County's Aviation System Airport Land Use Commission adopted the Countywide Airport Land Use Compatibility Plan (ALUCP) for all airports within San Joaquin County except Stockton Metropolitan, which sets forth the "referral area boundaries" around each airport in the County and the limits on land use, building height, and population density in those areas. The ALUCP regulates land use in three major areas: safety zones, noise zones, and height restrictions. It provides land use compatibility guidelines for lands near the airport, to avert potential safety problems and to ensure unhampered airport operations. The ALUCP establishes two compatibility areas: safety and noise. In May 2016, the San Joaquin County's Aviation System Airport Land Use Commission adopted the Stockton Metropolitan Airport Land Use Compatibility Plan (ALUCP), which establishes the planning boundaries around airport that define height/airspace protection, noise, and safety areas for policy implementation, and areas within which notification of airport proximity is required as part of real estate transactions. Both the Countywide ALUCP and Stockton Metropolitan ALUCP were updated in 2018 to ensure consistency between the two ALUCPs.

Under California Government Code Section 65302.3(a), general plans must be consistent with any airport land use plan adopted pursuant to Public Utilities Code Section 21675. The Stockton Metropolitan Airport is the closest airport to Lathrop. The northernmost portion of the City of and City's Planning Area are located the airport influence area for the Stockton Metropolitan Airport identified in the ALUCP.

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. Goal LU-1 of the General Plan aims to accommodate a mix and distribution of uses that meet the needs of the community. The land uses allowed under the proposed General Plan (Figure 2.0-2) provide opportunities for cohesive new growth at in-fill locations within existing urbanized areas of the city, as well as new growth adjacent to existing urbanized areas within the existing City Limits, and would not create physical division within the community. In addition, Goal LU-5 aims to ensure that new development is compatible with and well integrated with existing development. 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 developed uses as well as open spaces. 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 and well integrated with adjacent communities and land uses. Additional information including policies and actions related to street connectivity can be found in Section 3.14 (Transportation and Circulation) of this DEIR.

GENERAL PLAN GOALS POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

LAND USE ELEMENT GOALS

GOAL LU-5 Ensure that new development is compatible with existing development.

3.10 LAND USE, POPULATION, AND HOUSING

GOAL LU-1 Accommodate a mix of land uses that meet the needs of residents, businesses, and visitors with places to live, work, shop, be entertained and culturally engaged.

LAND USE ELEMENT COMPATIBILITY POLICIES

- LU-5.1 Require new development to be compatible and complementary to existing development. Where appropriate and feasible, promote connections between neighborhoods and services and facilities.
- LU-5.2 Prohibit the establishment or encroachment of incompatible uses into industrial-designated lands. Examples include, but are not limited to, new residential uses in areas designated for industrial development, which may be subject to existing and future nuisance impacts associated with industrial operations and associated activities.
- LU-5.3 Require that new residential development be designed to protect residents from potential conflicts with adjacent land uses, and other features including rail corridors, and high-volume roadways.
- LU-5.4 In industrial areas located within 1,000 feet of existing and planned sensitive receptors, promote industrial uses that are environmentally sustainable with limited potential to create nuisances such as noise and odors.
- LU-5.5 Ensure that industrial development projects, including warehouse, distribution, logistics, and fulfillment projects, mitigate adverse impacts (including health risks and nuisances) to nearby residential land uses and other existing and planned sensitive receptors.
- LU-5.6 In considering land use change requests, consider factors such as compatibility with surrounding uses in terms of privacy, noise, and changes in traffic levels.

LAND USE ELEMENT COMPATIBILITY ACTIONS

- LU-5.a Through the development review process, screen development proposals for land use and transportation network compatibility with existing surrounding or abutting development or neighborhoods.
- LU-5.b Through the development review process, analyze land use compatibility and require adequate buffers and/or architectural enhancements to protect sensitive receptors from intrusion of development activities that may cause unwanted nuisances and health risks.
- LU-5.c When industrial projects, including warehouse projects, fulfillment centers, and other projects that may generate high volumes of truck trips and/or air quality emissions are proposed within 1,000 feet of existing or planned residential uses or other sensitive receptors, the City shall require the preparation of a Health Risk Assessment (HRA) that meets the standards established by the Office of Environmental Health Hazard Assessment (OEHHA), and the San Joaquin Valley Air Pollution Control District (SJVAPCD). Projects shall not be approved until it can be demonstrated that the project would not result in an exceedance of the established thresholds of significance for public health risks at nearby sensitive receptors.

LU-5.d When industrial projects, including warehouse projects, fulfillment centers, and other projects that may generate high volumes of truck trips and/or air quality emissions are proposed within 1,000 feet of existing or planned residential uses or other sensitive receptors, the City shall require the implementation of best management practices (BMPs) to reduce pollution exposure to sensitive receptors, particularly diesel particulate matter (DPM). The appropriate BMPs shall be established on a case-by-case basis, and should consider the following tools, methods, and approaches:

- Creating physical, structural, and/or vegetative buffers that adequately prevent or substantially reduce pollutant dispersal between warehouses and any areas where sensitive receptors are likely to be present, such as homes, schools, daycare centers, hospitals, community centers, and parks.
- Providing adequate areas for on-site parking, on-site queuing, and truck check-in that prevent trucks and other vehicles from parking or idling on public streets.
- Placing facility entry and exit points from the public street away from sensitive receptors, e.g., placing these points on the north side of the facility if sensitive receptors are adjacent to the south side of the facility. Exceptions can be made for emergency vehicle access (EVA) points.
- Locating warehouse dock doors and other onsite areas with significant truck traffic and noise away from sensitive receptors.
- Screening dock doors and onsite areas with significant truck traffic and noise with physical, structural, and/or vegetative barriers that adequately prevent or substantially reduce pollutant dispersal from the facility towards sensitive receptors.
- Posting signs clearly showing the designated entry and exit points from the public street for trucks and service vehicles.
- Posting signs indicating that all parking and maintenance of trucks must be conducted within designated on-site areas and not within the surrounding community or public streets.

LU-5.e Update the Lathrop Municipal Code to include Good Neighbor Guidelines for Warehouse Distribution Facilities. The new Good Neighbor Guidelines should include:

- a. A definition of the type and size of facility that is subject to the Guidelines;
- b. Standards to minimize exposure to diesel emissions to sensitive receptors that are situated in close proximity to the proposed facility;
- c. Standards and practices that eliminate diesel trucks from unnecessarily traversing through residential neighborhoods;
- d. Standards and practices that eliminate trucks from using residential areas and repairing vehicles on the streets;
- e. Strategies to reduce and/or eliminate diesel idling within the facility's site;

3.10 LAND USE, POPULATION, AND HOUSING

- LU-5.f Update the Central Lathrop Specific Plan (CLSP) to accomplish the following objectives:
- a. Bring the Specific Plan’s land use map into consistency with the General Plan Land Use Map (Figure LU-1)
 - b. Establish a circulation network that keeps future truck trips as far from existing and planned sensitive receptors as feasible;
 - c. Establish site design standards for new industrial projects;
 - d. Identify financing and cost-recovery methods to fund roadway and infrastructure improvements.
 - e. Circulation design standards that promote safe transportation routes that limit impacts to developed areas to the south, and connectivity enhancements to provide better connectivity to I-5.
 - f. Infrastructure improvements to improve roadway operations
 - g. Opportunities to provide employee-serving amenities onsite, such as parks and plazas, outdoor seating areas, fitness facilities, and daycare centers as a means to reduce vehicle trips, while supporting air quality, public health, and sustainability goals.

LAND USE ELEMENT MIX OF LAND USES - POLICIES

- LU-1.1 Support a full spectrum of conveniently located residential, commercial, industrial, public, and quasi-public uses that support business development, regional transportation objectives and the livability of residential neighborhoods.
- LU-1.3 Maintain a supply of developable lands sufficient to meet desired levels of housing, jobs, economic, educational, and recreational needs of the city over the planning horizon.
- LU-1.4 Continue to support the development of a variety of housing types and densities that meet the needs of individuals and families, and offers residents of all income levels, age groups and special needs sufficient housing opportunities and choices. (Additional policies specifically related to Housing are included in the General Plan’s Housing Element)
- LU-1.5 Support the preservation of designated Open Space lands. This does not apply to the development or expansion of parks uses and amenities, which may also be considered open space uses.
- LU-1.6 Ensure adequate school sites are accommodated throughout the city by allowing new schools to be located in a variety of compatible land use designations, including residential, commercial, and mixed-use designations.
- LU-1.7 Ensure consistency between the Land Use Map and implementing plans, ordinances, and regulations.
- LU-1.8 Recognize that the General Plan and Land Use Map may be amended in accordance with State law in order to ensure that there is an adequate supply of commercial, industrial, public facility, parks, residential, and other desired land uses to serve the City’s needs.

- LU-1.9 Promote equitable land use patterns to ensure that all residents in neighborhoods have access to community amenities and transportation choices, and have safe places to walk and bike.

LAND USE ELEMENT MIX OF LAND USES - ACTIONS

- LU-1.a Update the City's Zoning Code and Map as appropriate to ensure consistency with this land use element and designations shown on Figure LU-1. As part of the update, create a new Public/Quasi-Public zoning district applicable to the City proper.
- LU-1.b Review the Zoning Ordinance and update as appropriate to reflect Land Use goals, policies, and implementation actions included in this Plan.
- LU-1.c Review the City's adopted Specific Plans for consistency with the General Plan, and update as appropriate to ensure consistency with this land use element and designations shown on Figure LU-1.
- LU-1.d As part of development review process, ensure that residential and non-residential developments fall within the minimum and maximum density requirements and or allowed floor-area-ratios stipulated on the Land Use Map and included within the Land Use Descriptions. Projects shall also be reviewed for consistency with the development standards and density requirements established by any applicable Specific Plan governing the area in question. In instances where there is an inconsistency between the General Plan and a Specific Plan that has not been updated after adoption of this General Plan, the development densities and intensities established by the General Plan shall prevail.

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.

The Delta Plan contains a set of regulatory policies with which State and local agencies are required to comply with. The Delta Reform Act specifically established a certification process for compliance with the Delta Plan. This means that State and local agencies that propose to carry out, approve, or fund a qualifying action in whole or in part in the Delta, called a "covered action," must certify that this action is consistent with the Delta Plan and must file a certificate of consistency with the Council that includes detailed findings. Areas Subject to the Delta Plan are included within the Delta's Primary and Secondary zones. No areas on the city or Planning Area are within the "Primary Zone" of the Delta. However, the majority of the General Plan Area is within the "Secondary Zone." Figure 3.10-3 shows lands within the Planning Area that are subject to the Delta Plan.

The City of Lathrop has prepared the General Plan to include numerous policies and actions intended to ensure construction and maintenance activities associated with future development projects under the proposed General Plan do not conflict with the Delta Plan. For example, General Plan Action RR-7a requires the City to review all projects affecting areas within the Delta Secondary Zone to ensure they are consistent with the criteria and policies set forth by the Delta Stewardship Council's "Delta Plan". Additionally, General Plan Action RC-7b requires City staff to provide opportunities for review of and comment by the Reclamation Districts, the Delta Stewardship Council, Delta Protection Commission, and SWRCB during project review, as applicable. Overall, consistency with the General Plan policies and actions described above would ensure future development projects under the proposed General Plan would not conflict with the Delta Plan.

REGIONAL PLANS

The northernmost portion of the Planning Area is located within the Airport Influence Area for the Stockton Metropolitan Airport identified in the Stockton Metropolitan ALUCP. Construction and maintenance activities associated with future development projects under the proposed General Plan could result in conflicts with the adopted ALUCP for the Stockton Metropolitan Airport. The City of Lathrop has prepared the General Plan to include policies and actions intended to ensure consistency between the General Plan and the Stockton Metropolitan ALUCP.

General Plan Policy LU-3.5 ensures that development within the Stockton Metropolitan Airport Influence Area is consistent with the compatible uses identified in the Project Review Guidelines for the Airport Land Use Commission. Additionally, General Plan Action LU-3f states that the City will refer all applications for development within the Stockton Metro Airport Area of Influence to the ALUC and the Stockton Metro Airport for comment to ensure that all future plans have limited impacts. Consistency with the General Plan policies and actions described above would ensure future development projects under the proposed General Plan would not conflict with an adopted ALUCP.

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 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 require modifications to the City's Zoning Ordinance to provide consistency between the General Plan and zoning; however, these modifications do not propose, and will not remove or adversely modify portions of the Municipal Code that were adopted to mitigate an environmental effect.

The General Plan update includes modifications to the General Plan Land Use Map. The proposed Land Use Map is depicted in Figure 2.0-2. The revisions to the Land Use Map are consistent with the City's objectives provided in Chapter 2.0, Project Description, and included open space conservation uses along river corridors and in locations of the city with sensitive habitats. While the proposed General Plan has been developed to be largely consistent with adopted plans and regulations, the General Plan Land Use Map designates lands for development and identifies lands for intensification of land use (development at higher densities and intensities). In some cases, the redesignation reflects existing development on parcels and would not provide for additional density. However, there would be no parcels currently designated as conservation and open space uses that would be allowed to develop with urban uses under the proposed Project.

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. Potential environmental impact associated with conflicts with land use requirements would be **less than significant**.

3.10 LAND USE, POPULATION, AND HOUSING

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

LAND USE ELEMENT POLICIES

- LU-1.7 Ensure consistency between the Land Use Map and implementing plans, ordinances, and regulations.
- LU-3.5 Ensure that development within the Stockton Metropolitan Airport Influence Area (Figure 4.2-1 of the General Plan Existing Conditions Report) is consistent with the compatible uses identified in the Project Review Guidelines for the Airport Land Use Commission.

LAND USE ELEMENT ACTIONS

- LU-3.f Refer all applications for development within the Stockton Metro Airport Area of Influence to the Airport Land Use Commission and the Stockton Metro Airport for comment.

RECREATION AND RESOURCE ELEMENT ACTIONS

- RR-4b Require new development, infrastructure, long-range planning, and similar projects, to comply with the requirements of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan to ensure that potentially significant impacts to special-status species and sensitive resources are adequately addressed.
- RR-6a Review development, infrastructure, and planning projects for consistency with SJVAPCD requirements during the CEQA review process. Require project applicants to prepare air quality analyses to address SJVAPCD and General Plan requirements, which include analysis and identification of:
- A. Air pollutant emissions associated with the project during construction, project operation, and cumulative conditions.
 - B. Potential exposure of sensitive receptors to toxic air contaminants.
 - C. Significant air quality impacts associated with the project for construction, project operation, and cumulative conditions.
 - D. Mitigation measures to reduce significant impacts to less than significant or the maximum extent feasible where impacts cannot be mitigated to less than significant.
- RR-7a Review all projects affecting areas within the Delta Secondary Zone to ensure they are consistent with the criteria and policies set forth by the Delta Stewardship Council's "Delta Plan". Recognize that areas already anticipated for development in the General Plan within the Secondary Zone are not subject to the Delta Plan.
- RR-7b As applicable, provide opportunities for review of and comment by the Reclamation Districts, the Delta Stewardship Council, Delta Protection Commission, and SWRCB during project review.
- RR-7c Review any projects located adjacent to priority habitat restoration areas, as identified in the Delta Plan, and consult the California Department of Fish and Wildlife, as warranted, to

ensure that any impacts do not have a significant effect on the opportunity to restore habitat as described in the Delta Plan.

- RR-7d Review and regulate new development, infrastructure, and levee improvement projects to ensure consistency with Federal and State flood and floodway requirements, including BDCP and Delta Plan policies as applicable.
- RR-8a Regularly review and update the City's water conservation measures to be consistent with current best management practices for water conservation, considering measures recommended by the State Department of Water Resources and the California Urban Water Conservation Council.
- RR-8c Continue to implement and update as necessary standards for water conserving landscape practices, including the use of drought tolerant plants, for both public and private projects, as well as guidance provided by the Lathrop Municipal Code Chapter 17.92 (Water Efficient Landscape Ordinance), and Chapter 13.08 (Water Conservation and Rationing Provisions).

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. At full buildout, the proposed General Plan could accommodate over 25,000 housing units and approximately 44 million square feet of non-residential building square footage within the Planning Area. As shown in Table 2.0-2 in Chapter 2.0, the proposed General Plan would result in approximately 17,379 new housing units. This new growth may increase the city's population by approximately 66,562 residents and 49,250 employees compared to existing conditions within the city. The actual amount of development that will occur throughout the 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. New development and growth are largely dictated by existing development conditions, market conditions, and land turnover rates. Very few communities in California actually develop to the full potential allowed in their respective General Plans during the planning horizon.

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

3.10 LAND USE, POPULATION, AND HOUSING

result in growth in Lathrop 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, which are allocated by the SJCOG, 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 minimize 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 minimize 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.

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)

Developed land in the Planning Area that is comprised of residential uses is 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 within the City Limits and well-delineated residential neighborhoods, employment centers, and community amenities. The proposed General Plan Land Use Map includes an expansion to the City's total amount of residential dwelling units when compared to existing levels of development. Additional development allowed under the proposed General Plan allows for the diversification of the City's housing supply to meet the needs of the community at various socioeconomic levels. While the proposed General Plan may result in development that could remove residences, development allowed under the General Plan identifies lands for a variety of housing densities and types would result in an increase in the total number of residences and provide additional 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**. The policies listed below would further ensure that a range of housing types are provided in the City.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS**LAND USE ELEMENT POLICIES**

- LU-1.1 Support a full spectrum of conveniently located residential, commercial, industrial, public, and quasi-public uses that support business development, regional transportation objectives and the livability of residential neighborhoods.
- LU-1.3 Maintain a supply of developable lands sufficient to meet desired levels of housing, jobs, economic, educational, and recreational needs of the city over the planning horizon.
- LU-1.4 Continue to support the development of a variety of housing types and densities that meet the needs of individuals and families, and offers residents of all income levels, age groups and special needs sufficient housing opportunities and choices. (Additional policies specifically related to Housing are included in the General Plan's Housing Element)

ECONOMIC DEVELOPMENT ELEMENT POLICIES

- ED-3.1 Encourage Diversity of Housing Types. Complement the City's inventory of single-family homes with additional housing in other configurations, such as apartments and townhouses, to ensure that there are housing opportunities for diverse workforce households, including young entry-level workers, middle-aged workers who live alone and in families, and empty-nesters.
- ED-3.2 Support Efforts for Housing at a Range of Price Points. Recognizing that a workforce that supports a diverse local economy will have a broad range of income levels, work to ensure that in the City's housing inventory includes below-market rate options, market rate

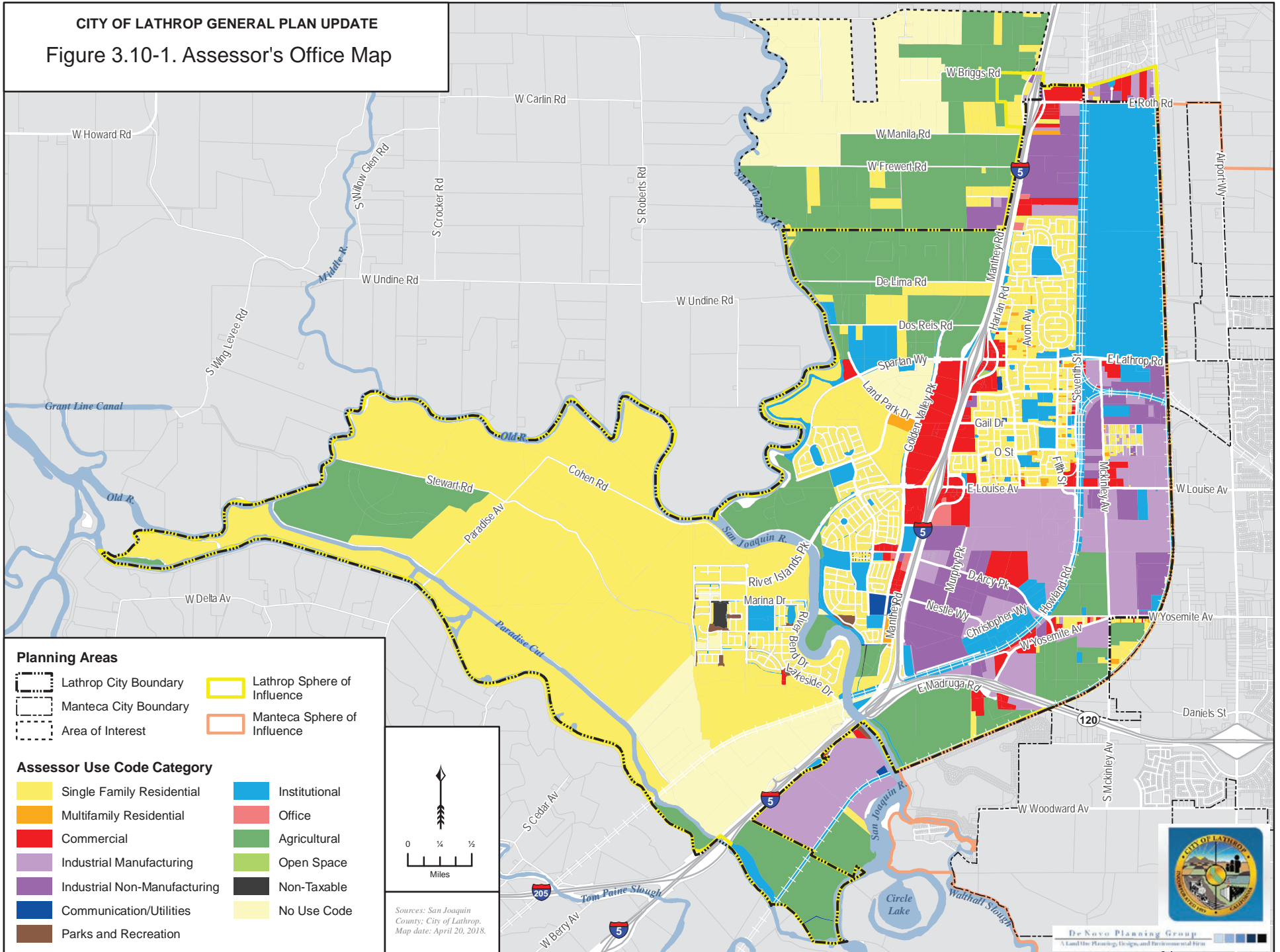
3.10 LAND USE, POPULATION, AND HOUSING

options that are more affordable (e.g., “missing middle” housing) and market rate housing that meets needs for entry-level housing, move-up housing, and executive housing.

ECONOMIC DEVELOPMENT ELEMENT ACTIONS

- ED-3.a Consistent with the Housing and Land Use Elements, ensure that the City provides sufficient land zoned for a range of residential densities that will accommodate low-density single-family detached family housing to higher-density units suitable for singles, couples, and smaller households, at a range of income levels.
- ED-3.b Consistent with the Housing Element, ensure that the City removes un-necessary governmental constraints to preservation, maintenance, and development of housing for all income levels.

CITY OF LATHROP GENERAL PLAN UPDATE
Figure 3.10-1. Assessor's Office Map

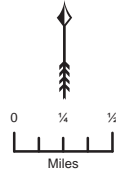


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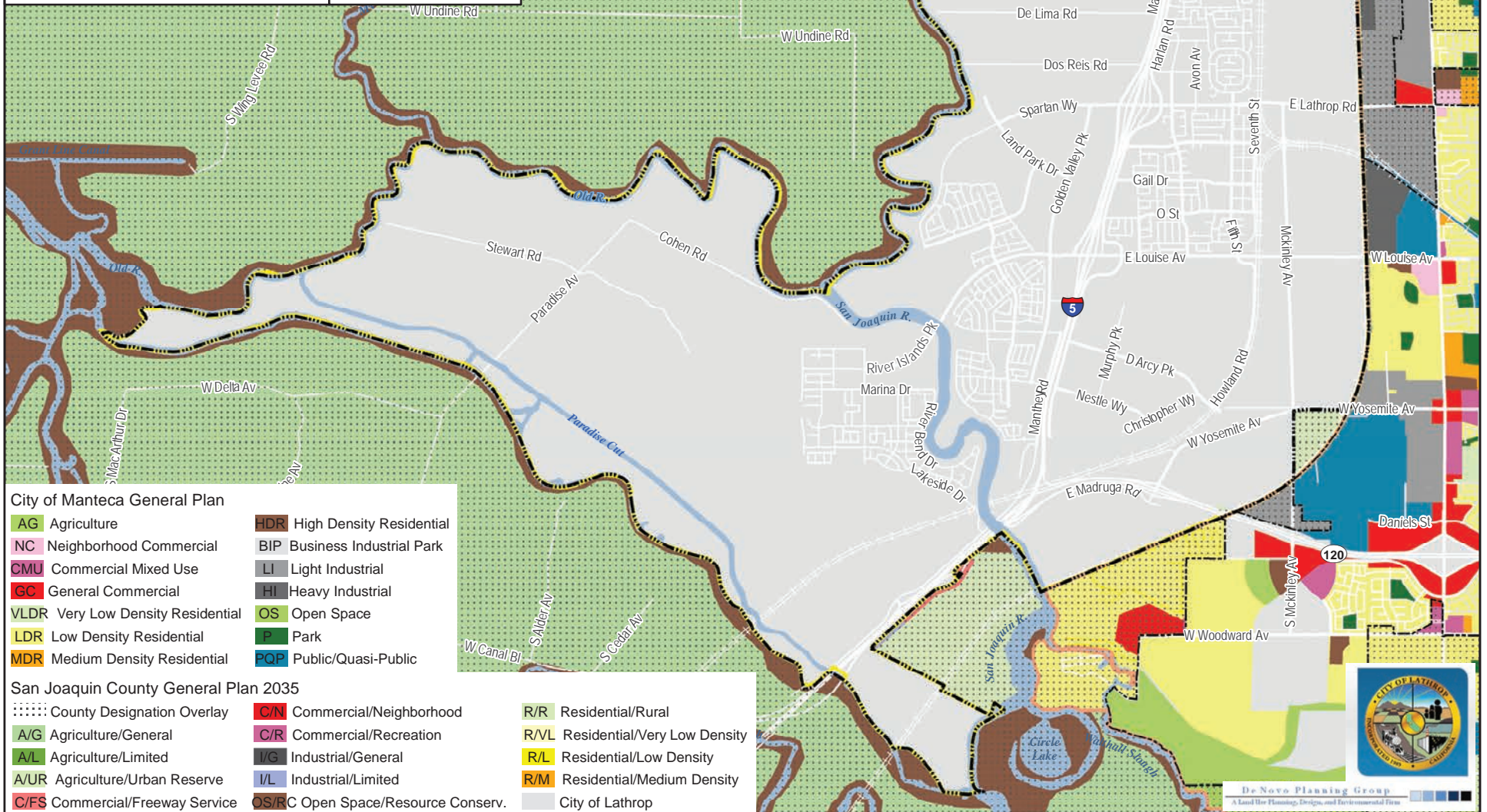
CITY OF LATHROP GENERAL PLAN UPDATE
Figure 3.10-2. Surrounding Land Uses

Legend

- Lathrop City Boundary
- Manteca City Boundary
- Lathrop Sphere of Influence
- Manteca Sphere of Influence



Sources: San Joaquin County; City of Lathrop; City of Manteca.
 Map date: April 13, 2018.



City of Manteca General Plan

- | | |
|-----------------------------------|------------------------------|
| AG Agriculture | HDR High Density Residential |
| NC Neighborhood Commercial | BIP Business Industrial Park |
| CMU Commercial Mixed Use | LI Light Industrial |
| GC General Commercial | HI Heavy Industrial |
| VLDR Very Low Density Residential | OS Open Space |
| LDR Low Density Residential | P Park |
| MDR Medium Density Residential | PQP Public/Quasi-Public |

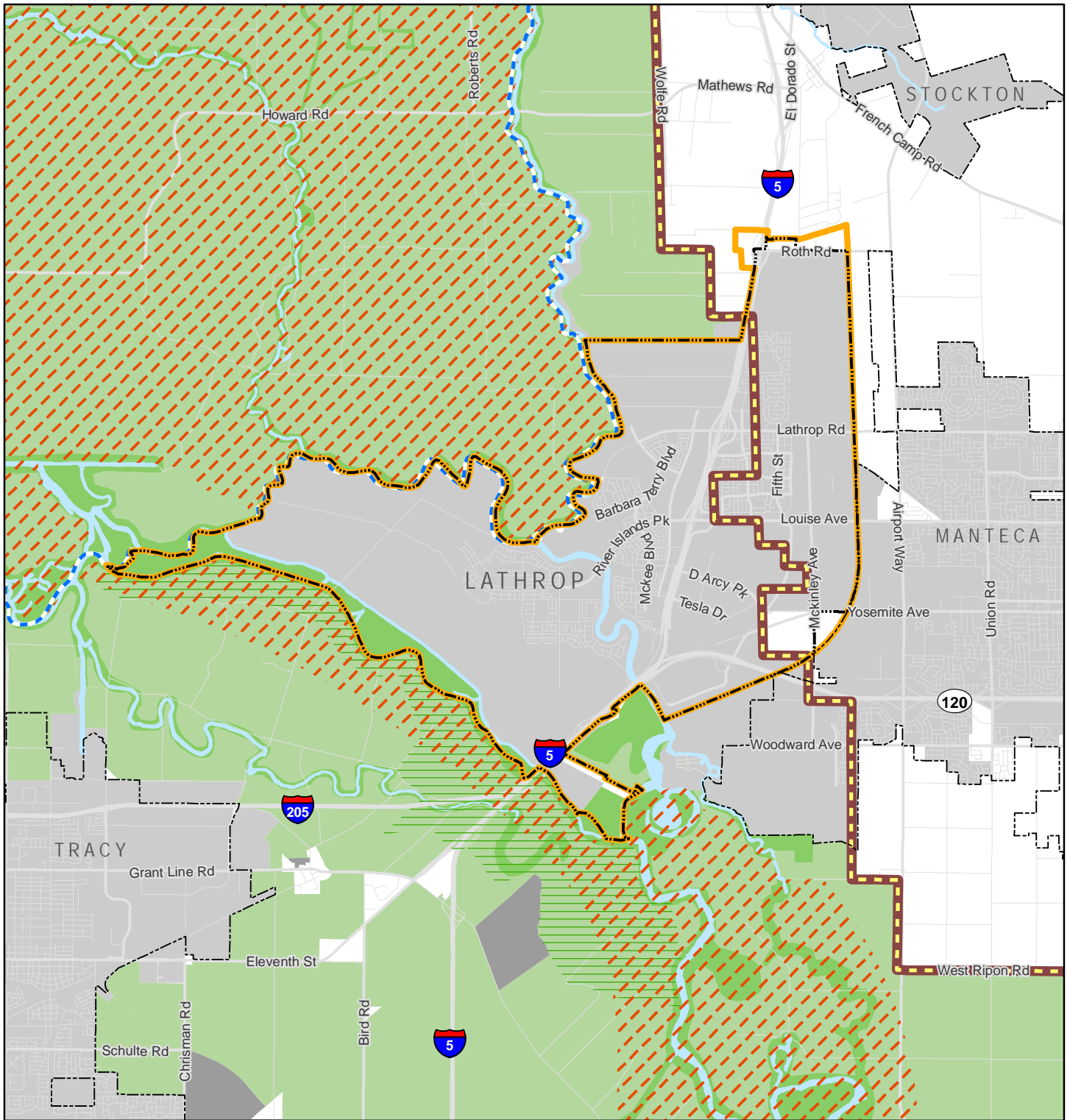
San Joaquin County General Plan 2035

- | | | |
|----------------------------------|-------------------------------------|-----------------------------------|
| County Designation Overlay | C/N Commercial/Neighborhood | R/R Residential/Rural |
| A/G Agriculture/General | C/R Commercial/Recreation | R/VL Residential/Very Low Density |
| A/L Agriculture/Limited | I/G Industrial/General | R/L Residential/Low Density |
| A/UR Agriculture/Urban Reserve | I/L Industrial/Limited | R/M Residential/Medium Density |
| C/F/S Commercial/Freeway Service | OS/R/C Open Space/Resource Conserv. | City of Lathrop |



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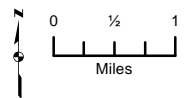


Legend

- | | |
|---|------------------------------------|
| Lathrop City Boundary | Delta Plan Planned Land Use |
| Other Incorporated Areas | Agriculture |
| Lathrop Sphere of Influence | Open Space/Recreation |
| Legal Delta Boundary | Natural Preserve/Marsh |
| Primary Delta Zone | Areas Designated for Development |
| Secondary Delta Zone | Public/Quasi-Public |
| Priority Habitat Restoration | Water |
| Other Floodplains to be Protected from Encroachment | |

CITY OF LATHROP GENERAL PLAN UPDATE

Figure 3.10-3 The Delta Plan



Data sources: Delta Stewardship Council; San Joaquin County. Map date: October 15, 2021.

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This section provides a background discussion and analysis of mineral and energy resources in Lathrop. 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

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.

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.

3.11 MINERAL RESOURCES

From 1981 to 2010, California consumed an average of about 180 million tons of construction aggregate (all grades) per year. (CGS, 2012)

The California Geological Survey issued Special Report 199 designating areas within the Stockton-Lodi P-C Region based on the significance of mineral resources. The Stockton-Lodi P-C Region contains about 969 million tons PCC-grade aggregate resources and 67 million tons PCC-grade sand resources. These resources are classified into different mineral resource zone designations, MRZ-1, MRZ-2, MRZ-2 (PCC sand), MRZ-3, and MRZ-4.

MRZ-2 (PCC-1) zones are identified as areas where adequate information indicates that fine aggregate (naturally sand) mineral deposits are present, or where it is judged that a high likelihood for their presence exists. The fine sand aggregate found in these areas are typically used to produce PCC-grade aggregate. PCC-1 indicates that it produces general use cement, as opposed to type 2 or 3 used for structures in water or in high early strength periods. The primary mineral resources in San Joaquin County are sand, gravel, and natural gas, with limited mining of peat, gold, and silver. In 2012, the California Geological Survey assessed the Stockton-Lodi Production-Consumption (P-C) Region mineral resources, with a focus on aggregate resources. Mineral resources in the region are classified based on whether the aggregate meets the specifications for use in PCC. This aggregate is termed “PCC-grade aggregate.” The material quality specifications for PCC-grade aggregate are more restrictive than the specifications for aggregate for other applications. As a result of the strict specifications, PCC-grade aggregate deposits are scarcer and more valuable than other aggregate resources.

To be considered significant for the purpose of mineral land classification, a mineral deposit or group of deposits, must meet criteria adopted by the State Mining and Geology Board. These criteria include marketability and threshold values. The threshold value is approximately \$17.375 million for a construction aggregate deposit. PCC-grade aggregate sells for about \$13 per ton in the Stockton-Lodi P-C Region; therefore, \$17,375,000 equates to about 1.3 million tons of PCC-grade aggregate material.

Approximately 232 million tons of PCC-grade aggregate reserves are permitted for production in the County (CGS, 2012). There are 34 active and inactive aggregate mines within San Joaquin County (San Joaquin County, 2009).

Planning Area

Figure 3.11-1: Mineral Resource Zones shows mineral resources within and near the Planning Area.

As shown on Figure 3.11-1, the southeastern portion of the Planning Area near the Stewart Tract and Oakwood Lake is located in Resource Sector D, which consists of a large PCC-grade sand deposit situated along the San Joaquin Rivers. This sector is classified as MRZ-2 (PCC sand). The Planning Area also contains areas that are designated as MRZ-3 “areas containing mineral deposits the significance of which cannot be evaluated from available data.” Table 3.11-2 identifies significant mineral resources within the City, and Planning Area.

TABLE 3.11-2: MINERAL RESOURCES WITHIN THE PLANNING AREA

<i>CLASSIFICATION</i>	<i>DESCRIPTIONS</i>	<i>CITY LIMITS (AC)</i>	<i>SPHERE OF INFLUENCE (AC)</i>
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.	509.0	286.2
MRZ-3	Areas containing mineral deposits, the significance of which cannot be evaluated.	2708.2	120.4
Totals		3217.2	406.6

SOURCE: CALIFORNIA DEPARTMENT OF CONSERVATION DIVISION OF MINES AND GEOLOGY, ACCESSED DECEMBER 2017

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.

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 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 (Significant and Unavoidable)

Within the Planning Area, mineral resources include sand and gravel. The western portion of the planning area within and adjacent to the Stewart Tract area is designated as MRZ-2, which consists of a large PCC-grade sand deposit situated along the San Joaquin River and in south Lathrop. The area is classified as an important MRZ for PCC grade aggregate by the DOC. PCC-grade aggregate is valuable in central California where it used for a variety of construction purposes. Brown Sand and Gravel, Incorporated, has produced processed sand located within the area designated as resources of regional significance just south of Lathrop within the AOI. Lands adjacent to the existing quarry within the City Limits, the majority of which are currently designated as for urban reserve, and resource conservation uses. A small portion of the MRZ-2 zone is designated for more intensive developed uses, including commercial and residential uses. In addition, a large area designated MRZ-3 is located in the central and south portion of the Planning Area within zones designated for residential, commercial and industrial uses a by the existing and proposed General Plan.

General Plan GOAL RR-5 aims to balance the extraction of mineral resources with future development and conservation opportunities and includes policies to allow the extraction of resources. Additionally, Policy RR-5.2 Ensures that areas with mineral resources can be mined while productive and are ultimately reused for suitable development or open space, to the extent feasible. The Lathrop General Plan and Land Use Map have been developed to focus development within the existing city limits and promote infill development to conserve resources throughout the region. No urban expansions are planned beyond what has been currently identified for urban development. The following General Plan goals, policies, and actions have been included to limit impacts to mineral resources. However, implementation of the General Plan and development allowed under the Land Use Map would permanently convert undeveloped portions of Planning Area to urban uses and this may preclude the recovery of mineral resources from the Plan Area. Therefore, this impact would remain **significant and unavoidable**.

GENERAL PLAN GOALS POLICIES AND ACTIONS THAT MINIMIZE IMPACTS*RECREATION AND RESOURCE ELEMENT**GOAL***GOAL RR-5. BALANCE THE EXTRACTION OF MINERAL RESOURCES WITH FUTURE DEVELOPMENT AND CONSERVATION OPPORTUNITIES.***POLICIES*

RR-5.1 Resource Extraction. Allow the extraction of mineral resources, consistent with federal, state, and local regulations, as an interim use.

RR-5.2 Appropriate Reuse. As feasible, ensure that areas with mineral resources can be mined while productive and are ultimately reused for suitable development or open space.

IMPLEMENTATION ACTIONS

RR-5a Continue to identify areas in the Planning Area that have potential resource deposits, including but not limited to sand and gravel.

RR-5b Continue to work with property owners to develop reclamation plans for areas with mineral resource deposits.

Impact 3.11-2: General Plan implementation would 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 (Significant and Unavoidable)

The Plan Area is designated as MRZ-2 by the City's General Plan and the City's General Plan includes policies in support of the reclamation of MRZ-2 mineral resources and specifically includes those resources in the Planning Area.

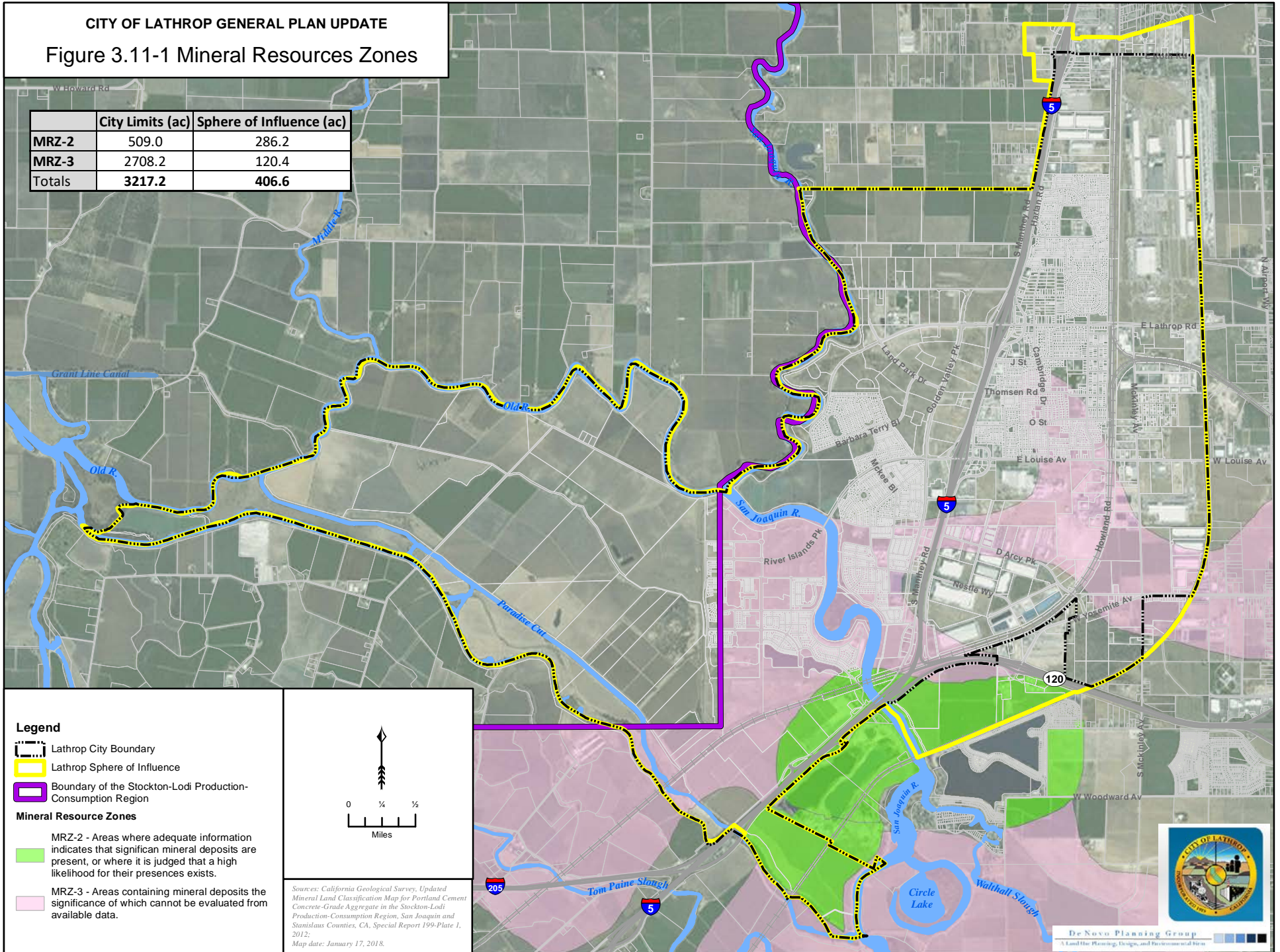
The City's existing General Plan indicates that the lands classified as MRZ-2 are considered important to the area and of regional and statewide significance. Specifically, the General Plan identifies Mineral Resources Policy 1 which indicates that MRZ-2 lands should be mined and reclaimed, if determined practical and feasible, prior to their use for various urban purposes. Mineral Resources Policy 2 indicates that the depth of the known sand deposits of regional significance is considerable and that potential for mining to the depth is recognized for the lands between the I-5/SR 120 merge and the UPRR. Mineral Resources Policy 3 requires lands classified MRZ-2 with potential to mine to depth to have the combining "mineral resource open space zone." While Policies 1 through 3 encourage the mining and reclamation of MRZ-2 lands, which includes those in the Plan Area, Policy 4 provides for development of such lands with urban uses without first being mined if compelling reasons can be stated by the City in support of such actions and the requirements of the relevant Public Resources Code sections are fulfilled. The analysis in this Draft EIR is limited to the environmental impacts of implementing the proposed General Plan and is not focused on the project's social or economic merits.

Brown Sand and Gravel, Incorporated, will continue to produce processed sand located within the areas identified as resources of local significance just south of Lathrop within portions of the AOI. As described previously, the Lathrop General Plan and Land Use Map has been developed to focus development within the existing city limits and promote infill development to conserve resources throughout the region. No urban expansions are planned beyond what has been currently identified for urban development. General Plan goals, policies, and actions described previously under Impact 3.11-1 have been included to limit impacts to mineral resources. However, implementation of the General Plan and development allowed under the Land Use Map would permanently convert undeveloped portions of Planning Area to urban uses. Therefore, this impact would remain **significant and unavoidable**.

CITY OF LATHROP GENERAL PLAN UPDATE

Figure 3.11-1 Mineral Resources Zones

	City Limits (ac)	Sphere of Influence (ac)
MRZ-2	509.0	286.2
MRZ-3	2708.2	120.4
Totals	3217.2	406.6

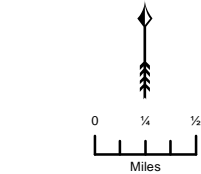


Legend

- Lathrop City Boundary
- Lathrop Sphere of Influence
- Boundary of the Stockton-Lodi Production-Consumption Region

Mineral Resource Zones

- MRZ-2 - Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood for their presences exists.
- MRZ-3 - Areas containing mineral deposits the significance of which cannot be evaluated from available data.



Sources: California Geological Survey, Updated Mineral Land Classification Map for Portland Cement Concrete-Grade Aggregate in the Stockton-Lodi Production-Consumption Region, San Joaquin and Stanislaus Counties, CA, Special Report 199-Plate 1, 2012;
Map date: January 17, 2018.



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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 Lathrop. The analysis of potential noise-related impacts in this section was prepared with assistance from Saxelby Acoustics.

Comments related to this environmental topic were received during the Draft EIR Public Scoping Meeting. Verbal comments were provided to the General Plan update team related to the potential for noise and vibration from heavy duty trucks to impact residents. All comments received during the 30-day NOP Public Review Comment Period are included in Appendix A.

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. All dB levels used in this report are A-weighted values, unless otherwise stated.
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 + 5 dB and nighttime hours weighted by +10 dB. Typically, 1 dB higher than Ldn for transportation noise sources.
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.
L_{dn}	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
L_{eq}	Equivalent or energy-averaged sound level.
L_{max}	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

COMMON OUTDOOR ACTIVITIES	NOISE LEVEL (DBA)	COMMON INDOOR ACTIVITIES
	--110--	Rock Band
Jet Fly-over at 300 m (1,000 ft)	--100--	
Gas Lawn Mower at 1 m (3 ft)	--90--	
Diesel Truck at 15 m (50 ft), at 80 km/hr (50 mph)	--80--	Food Blender at 1 m (3 ft) Garbage Disposal at 1 m (3 ft)
Noisy Urban Area, Daytime Gas Lawn Mower, 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;
- 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 community noise equivalent level (CNEL) 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 day/night 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. Heavy truck counts were also provided by the traffic engineer. 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.

Traffic noise levels are predicted at the sensitive receptors located at the closest typical setback distance along each project-area roadway segments. 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 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. The distances reported in Table 3.12-2 are generally considered to be conservative estimates of noise exposure along roadways in the City of Lathrop.

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TABLE 3.12-2: PREDICTED EXISTING TRAFFIC NOISE LEVELS (2020 BASELINE)

ROADWAY	SEGMENT	NOISE LEVEL AT CLOSEST RECEPTORS (DB, LDN) ¹	DISTANCES TO TRAFFIC NOISE CONTOURS, LDN (FEET)		
			60 dB	65 dB	70 dB
Roth Road	I-5 to Harlan Road	70.1	473	220	102
Harlan Road	South of Roth Road	68.7	383	178	83
Roth Road	Harlan Road to McKinley Avenue	67.1	299	139	64
Roth Road	McKinley Avenue to City Limits	65.2	239	111	51
Lathrop Road	I-5 to Harlan Road	67.1	297	138	64
Harlan Road	North of Lathrop Road	64.4	195	91	42
Lathrop Road	Harlan Road to 5th Street	66.1	128	59	28
Lathrop Road	5th Street to McKinley Avenue	66.9	217	100	47
Lathrop Road	McKinley Avenue to City Limits	67.1	297	138	64
Spartan Way	Golden Valley Parkway to Lathrop Road	56.6	59	27	13
Golden Valley Parkway	Spartan Way to River Island Parkway	63.3	167	78	36
Spartan Way	I-5 to Golden Valley Parkway	60.7	111	52	24
Harlan Road	South of Lathrop Road	67.0	146	68	31
Cambridge Avenue	South of Lathrop Road	53.6	19	9	4
5th Street	South of Lathrop Road	56.4	29	13	6
McKinley Avenue	South of Lathrop Road	71.5	294	136	63
River Island Parkway	West of McKee Boulevard	58.2	123	57	26
River Island Parkway	Golden Valley Parkway to McKee Boulevard	59.4	198	92	43
Golden Valley Parkway	River Island Parkway to Towne Centre Drive	57.0	109	50	23
River Island Parkway	I-5 to Golden Valley Parkway	65.9	249	115	54
Louise Avenue	I-5 to Harlan Road	71.6	589	273	127
Harlan Road	North of Louise Avenue	56.7	104	48	22
Louise Avenue	5th Street to McKinley Avenue	64.9	342	159	74
Cambridge Avenue	North of Louise Avenue	54.8	22	10	5
5th Street	North of Louise Avenue	54.6	22	10	5
McKinley Avenue	South of Louise Avenue	63.5	171	79	37
Louise Avenue	McKinley Avenue to City Limits	66.5	271	126	58
McKee Boulevard	River Island Parkway to Town Centre Drive	55.7	26	12	6
Towne Centre Drive	Golden Valley Parkway to McKee Boulevard	48.0	16	7	3
Harlan Road	Louise Avenue to D'Arcy Parkway	69.3	418	194	90

TABLE 3.12-2: PREDICTED EXISTING TRAFFIC NOISE LEVELS (2020 BASELINE)

ROADWAY	SEGMENT	NOISE LEVEL AT CLOSEST RECEPTORS (DB, LDN) ¹	DISTANCES TO TRAFFIC NOISE CONTOURS, LDN (FEET)		
			60 dB	65 dB	70 dB
D'Arcy Parkway	East of Harlan Road	66.4	268	125	58
Manthey Road	Towne Centre Drive to Stewart Road	56.7	60	28	13
D'Arcy Parkway	North of Yosemite Avenue	62.7	301	140	65
Yosemite Avenue	D'Arcy Parkway to McKinley Avenue	64.8	208	97	45
Yosemite Avenue	McKinley Avenue to City Limits	67.8	250	116	54
Somerston Parkway	North of Lakeside Drive	56.0	27	12	6
Lakeside Drive	Stewart Road to Somerston Parkway	54.3	21	10	5
Stewart Road	Manthey Road to Lakeside Drive	50.6	28	13	6
Yosemite Avenue	South of SR 120	61.1	119	55	26
Yosemite Avenue	SR 120 to D'Arcy Parkway	69.3	415	193	89
Paradise Road	Stewart Road to City Limits	43.7	8	4	2
Golden Valley Parkway	South of Dos Reis Road	N/A	N/A	N/A	N/A
Golden Valley Parkway	South of Inland Passage Way	46.3	7	3	1
Golden Valley Parkway	West of Somerston Parkway	N/A	N/A	N/A	N/A
Golden Valley Parkway	South of Dell'Osso Drive	N/A	N/A	N/A	N/A
Stanford Crossing	West of Golden Valley Parkway	N/A	N/A	N/A	N/A
River Island Parkway	West of Somerston Parkway	56.1	46	22	10
Cambay Parkway	West of Lakeside Drive	N/A	N/A	N/A	N/A
Cambay Parkway	East of Paradise Road	N/A	N/A	N/A	N/A
Cambay Parkway	West of Paradise Road	N/A	N/A	N/A	N/A
Paradise Road	South of Cambay Parkway	47.2	14	6	3
McKinley Avenue	South of Yosemite Avenue	65.1	99	46	21

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

SOURCE: FHWA-RD-77-108 WITH INPUTS FROM FEHR & PEERS TRANSPORTATION CONSULTANTS, CALTRANS, AND SAXELBY ACOUSTICS 2022.

Railroad Noise Levels

To quantify noise exposure from existing train operations, a continuous (24-hour) noise level measurement survey was conducted along the westernmost Union Pacific railroad line. Noise measurement data for the easternmost Union Pacific line which also carries commuter trains for the Altamont Corridor Express (ACE) was obtained from the Existing Conditions Report for the City of Manteca General Plan Update (De Novo Planning Group, October 2017).

The purpose of the noise level measurements was to determine typical sound exposure levels (SEL) for railroad line operations, while accounting for the effects of travel speed, warning horns and other factors which may affect noise generation. In addition, the noise measurement equipment was programmed to identify individual train events, so that the typical number of train operations could be determined.

Table 3.12-3 shows a summary of the continuous noise measurement results for railroad activity within the city.

TABLE 3.12-3: RAILROAD NOISE MEASUREMENT RESULTS

MEASUREMENT LOCATION	RAILROAD TRACK	GRADE CROSSING /WARNING HORN	TRAIN EVENTS PER 24-HR PERIOD	AVERAGE SEL AT 50'
LT-3	UP	No grade crossing. No horn usage observed.	16	104 dBA
Lathrop/Manteca Rail Station	UP/ACE	Yes	26	108 dBA

SOURCE: SAXELBY ACOUSTICS - 2018

Noise measurement equipment consisted of Larson Davis Laboratories (LDL) model 831 precision integrating sound level meters equipped with a GRAS ½" microphone. The measurement system was calibrated using a B&K 4230 acoustical calibrator before and after testing. Audio recordings of events were captured along with sound measurement data to help with source identification of events. The measurement equipment meets all of the pertinent requirements of the American National Standards Institute (ANSI) for Type 1 (precision) sound level meters.

To determine the distances to the day/night average (Ldn) railroad contours, it is necessary to calculate the Ldn for typical train operations. This was done using the SEL values and above-described number and distribution of daily train operations. The Ldn may be calculated as follows:

$$Ldn = SEL + 10 \log N_{eq} - 49.4 \text{ dB, where:}$$

SEL is the mean Sound Exposure Level of the event, N_{eq} is the sum of the number of daytime (7 a.m. to 7 p.m.) events plus 10 times the number of nighttime (10 p.m. to 7 a.m.) events per day, and 49.4 is ten times the logarithm of the number of seconds per day. Based upon the above-described noise level data, number of operations and methods of calculation, the Ldn value for railroad line operations have been calculated, and the distances to the Ldn noise level contours are shown in Table 3.12-4.

TABLE 3.12-4: APPROXIMATE DISTANCES TO THE RAILROAD NOISE CONTOURS

EXTERIOR NOISE LEVEL AT 100 FEET, L _{DN}	DISTANCE TO EXTERIOR NOISE LEVEL CONTOURS, FEET		
	60 dB L _{DN}	65 dB L _{DN}	70 dB L _{DN}
UNION PACIFIC – NO WARNING HORNS			
69 dB	372	173	80
UNION PACIFIC / ACE – WITH WARNING HORNS			
77 dB	642'	298'	138'

SOURCE: SAXELBY ACOUSTICS - 2018.

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.

In the City of Lathrop, 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:

- HVAC Systems
- Pump Stations
- Steam Valves
- Generators
- Air Compressors
- Conveyor Systems
- Pile Drivers
- Drill Rigs
- Welders
- Cooling Towers/Evaporative Condensers
- Lift Stations
- Steam Turbines
- Fans
- Heavy Equipment
- Transformers
- Grinders
- Gas or Diesel Motors
- Cutting Equipment

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- Outdoor Speakers
- Chippers
- Loading Docks
- 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, special events such as concerts, and athletic fields. Typical noise levels associated with various types of stationary noise sources are shown in Table 3.12-5.

TABLE 3.12-5: TYPICAL STATIONARY SOURCE 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
Skate Park	60 dB	316	562	178	316
School Playground / Neighborhood Park	54 dB	158	281	89	158
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: Saxelby Acoustics 2018.

DIAMOND PET FOODS, INC.

Diamond Pet Foods operates a manufacturing facility located at 250 Roth Road, near the northern city limits. Based upon short-term noise monitoring, the facility was measured to generate a noise level of 61 dBA Leq at a distance of approximately 1,200 feet. Assuming the facility were to operate continuously, the day/night (Ldn) average noise level would be 67.4 dBA Ldn at 1,200 feet and the distance to the 60 dBA Ldn noise contour would be 2,813 feet.

COMMUNITY NOISE SURVEY

A community noise survey was conducted to document ambient noise levels at various locations throughout the City. Short-term noise measurements were conducted at five locations throughout the City on Thursday February 22, 2018. In addition, three continuous 24-hour noise monitoring sites were also conducted to record day-night statistical noise level trends. The data collected included the hourly average (Leq), median (L50), and the maximum level (Lmax) during the measurement period. Noise monitoring sites and the measured noise levels at each site are summarized in Table 3.12-6 and Table 3.12-7. Figure 3.12-1 shows the locations of the noise monitoring sites.

Community noise monitoring equipment included Larson Davis Laboratories (LDL) model 812 and 831 precision integrating sound level meters equipped with ½" microphones. The measurement systems were calibrated using a B&K model 4230 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.

TABLE 3.12-6: 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
1	Stewart Road & Manthey Road. 350' to centerline of I-5.	72	61-72 (66)	60-73 (64)	71-92 (76)	62-69 (66)	61-69 (65)	69-77 (72)
2	South of De Lima Road. West of I-5. 190' to centerline of I-5.	74	66-71 (69)	64-70 (68)	77-87 (81)	64-71 (68)	62-70 (66)	74-84 (78)
3	Princeville St. & Pinewood Dr. 200' to railroad centerline. Site not shielded by existing 8' tall sound wall.	64	50-64 (59)	46-55 (49)	67-83 (76)	50-62 (58)	48-56 (51)	65-83 (77)

SOURCE – SAXELBY ACOUSTICS– 2018.

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TABLE 3.12-7: EXISTING SHORT-TERM COMMUNITY NOISE MONITORING RESULTS

SITE	LOCATION	TIME ¹	MEASURED SOUND LEVEL, dB			NOTES
			LEQ	L50	LMAX	
1	Near Paradise Road & Old River	1:50 p.m.	48	44	65	Light breeze. Jet overflight.
2	Park at Huntington & Broadmoor	1:08 p.m.	42	40	52	Light breeze. Distant construction noise.
3	Near S. McKinley Ave. & Roth Rd.	3:54 p.m.	61	60	71	Pet food industrial. Truck brakes occasionally. Distant backup alarms. Traffic on Roth Rd.
4	Near 15820 Harlan Rd. 220' to I-5 centerline	3:01 p.m.	75	74	82	I-5 is dominant noise source.
5	Near W. Yosemite Ave. & ACE tracks	2:18 p.m.	70	66	81	RR at 150 ft. Traffic is primary noise source. Occasional trucks.

1 - ALL COMMUNITY NOISE MEASUREMENT SITES HAVE A TEST DURATION OF 10:00 MINUTES.

SOURCE - SAXELBY ACOUSTICS 2018.

The results of the community noise survey shown in Table 3.12-6 and 3.12-7 indicate that existing transportation (traffic and railroad) noise sources were the primary contributors of noise observed in the City with commercial and industrial noise contributing to the ambient noise environment in some locations.

3.12.2 REGULATORY SETTING

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.

LOCAL

City of Lathrop Noise Ordinance

The City of Lathrop Noise Ordinance sets general limits for community noise exposure. The Noise Ordinance standards are contained in Section 8.20 of the Lathrop Municipal Code. Construction activities are exempt from these regulations, when conducted according to Section 8.20.110, as outlined below.

8.20.110 CONSTRUCTION OF BUILDINGS AND PROJECTS.

It shall be unlawful for any person within a residential zone or within a radius of five hundred (500) feet therefrom, to operate equipment or perform any outside construction or repair work on buildings, structures or projects or to operate any pile driver, power shovel, pneumatic hammer, derrick, power hoist, or any other construction type device between the hours of ten p.m. of one day and seven a.m. of the next day, or eleven p.m. and nine a.m. Fridays, Saturdays and legal holidays, in such a manner that a reasonable person of normal sensitiveness residing in the area is caused discomfort or annoyance unless beforehand a permit therefore has been duly obtained from the office or body of the city having the function to issue permits of this kind. No permit shall be

required to perform emergency work as defined in Sections 8.20.010 through 8.20.040. (Prior code § 99.40)

3.12.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the Project will have a significant impact related to noise if it will result in:

- a. 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?
- b. Generate excessive groundborne vibration or groundborne noise levels?
- c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The proposed Project is not located within two miles of a public or private airport. Therefore item “c” is not discussed any further in this study.

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.

TRANSPORTATION NOISE INCREASE CRITERIA

Table 3.12-8 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 3.12-8: 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 3.12-8 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 Ldn. 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 Ldn. The rationale for the Table 3.12-8 criteria is that, as ambient noise levels increase, a smaller increase in noise resulting from a project is sufficient to cause annoyance.

These transportation noise thresholds of significance shown in Table 3.12-8 are established by the proposed General Plan via Policy N-1.4.

NON-TRANSPORTATION NOISE INCREASE CRITERIA

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 Table N-3 of the General Plan Noise Element, or the project will result in an increase in ambient noise levels by more than 3 dB, whichever is greater.

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 3.12-9 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 3.12-9: EFFECTS OF VIBRATION ON PEOPLE AND BUILDINGS

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.

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 3.12-10 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 3.12-10: 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 (Significant and Unavoidable)

The FHWA Highway Traffic Noise Prediction Model (FHWA-RD 77-108) was used to develop Ldn (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 Leq values for free-flowing traffic conditions, and is generally considered to be accurate within 1.5 dB. To predict Ldn values, it is necessary to determine the hourly distribution of traffic for a typical 24-hour period.

Existing (Baseline 2020) and Proposed General Plan Buildout volumes and truck counts 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 3.12-11 shows the future noise levels and the increase in noise levels associated with traffic on the local roadway network under the proposed General Plan, versus the existing (Baseline 2020) conditions.

TABLE 3.12-11: BASELINE (2020) VS. PROPOSED GENERAL PLAN

ROADWAY	SEGMENT	NOISE LEVELS (L_{DN} , dB) AT NEAREST SENSITIVE RECEPTORS				
		BASELINE (2020)	PROPOSED GP	CHANGE	CRITERIA ¹	SIGNIFICANT?
Roth Road	I-5 to Harlan Road	70.1	73.8	3.7	+1.5 dB	Yes
Harlan Road	South of Roth Road	68.7	69.3	0.6	+1.5 dB	No
Roth Road	Harlan Road to McKinley Avenue	67.1	73.3	6.2	+1.5 dB	Yes
Roth Road	McKinley Avenue to City Limits	65.2	72.5	7.3	+1.5 dB	Yes
Lathrop Road	I-5 to Harlan Road	67.1	69.1	2.0	+1.5 dB	Yes
Harlan Road	North of Lathrop Road	64.4	66.7	2.3	>65 dB	Yes
Lathrop Road	Harlan Road to 5th Street	66.1	70.0	3.9	+1.5 dB	Yes
Lathrop Road	5th Street to McKinley Avenue	66.9	71.1	4.2	+1.5 dB	Yes
Lathrop Road	McKinley Avenue to City Limits	67.1	70.0	2.9	+1.5 dB	Yes
Spartan Way	Golden Valley Parkway to Lathrop Road	56.6	60.7	4.1	+5.0 dB	No
Golden Valley Parkway	Spartan Way to River Island Parkway	63.3	71.9	8.6	>65 dB	Yes
Spartan Way	I-5 to Golden Valley Parkway	60.7	74.3	13.6	>65 dB	Yes
Harlan Road	South of Lathrop Road	67.0	68.3	1.3	+1.5 dB	No
Cambridge Avenue	South of Lathrop Road	53.6	56.4	2.8	+5.0 dB	No
5th Street	South of Lathrop Road	56.4	56.7	0.3	+5.0 dB	No
McKinley Avenue	South of Lathrop Road	71.5	73.6	2.1	+1.5 dB	Yes
River Island Parkway	West of McKee Boulevard	58.2	67.6	9.4	>65 dB	Yes
River Island Parkway	Golden Valley Parkway to McKee Boulevard	59.4	66.2	6.8	>65 dB	Yes
Golden Valley Parkway	River Island Parkway to Towne Centre Drive	57.0	67.3	10.3	>65 dB	Yes
River Island Parkway	I-5 to Golden Valley Parkway	65.9	73.4	7.5	+1.5 dB	Yes
Louise Avenue	I-5 to Harlan Road	71.6	73.4	1.8	+1.5 dB	Yes
Harlan Road	North of Louise Avenue	56.7	58.0	1.3	+5.0 dB	No
Louise Avenue	5th Street to McKinley Avenue	64.9	68.6	3.7	>65 dB	Yes
Cambridge Avenue	North of Louise Avenue	54.8	54.8	0.0	+5.0 dB	No
5th Street	North of Louise Avenue	54.6	58.9	4.3	+5.0 dB	No
McKinley Avenue	South of Louise Avenue	63.5	73.1	9.6	>65 dB	Yes
Louise Avenue	McKinley Avenue to City Limits	66.5	71.2	4.7	+1.5 dB	Yes
McKee Boulevard	River Island Parkway to Town Centre Drive	55.7	59.4	3.7	+5.0 dB	No
Towne Centre Drive	Golden Valley Parkway to McKee Boulevard	48.0	51.7	3.7	+5.0 dB	No
Harlan Road	Louise Avenue to D'Arcy Parkway	69.3	69.8	0.5	+1.5 dB	No
D'Arcy Parkway	East of Harlan Road	66.4	66.9	0.5	+1.5 dB	No
Manthey Road	Towne Centre Drive to Stewart Road	56.7	56.7	0.0	+5.0 dB	No

3.12 NOISE

TABLE 3.12-11: BASELINE (2020) VS. PROPOSED GENERAL PLAN

ROADWAY	SEGMENT	NOISE LEVELS (L_{DN} , dB) AT NEAREST SENSITIVE RECEPTORS				
		BASELINE (2020)	PROPOSED GP	CHANGE	CRITERIA ¹	SIGNIFICANT?
D'Arcy Parkway	North of Yosemite Avenue	62.7	63.0	0.3	+3.0 dB	No
Yosemite Avenue	D'Arcy Parkway to McKinley Avenue	64.8	72.0	7.2	>65 dB	Yes
Yosemite Avenue	McKinley Avenue to City Limits	67.8	72.7	4.9	+1.5 dB	Yes
Somerston Parkway	North of Lakeside Drive	56.0	66.0	10.0	>65 dB	Yes
Lakeside Drive	Stewart Road to Somerston Parkway	54.3	54.3	0.0	+5.0 dB	No
Stewart Road	Manthey Road to Lakeside Drive	50.6	54.1	3.5	+5.0 dB	No
Yosemite Avenue	South of SR 120	61.1	72.3	11.2	>65 dB	Yes
Yosemite Avenue	SR 120 to D'Arcy Parkway	69.3	73.2	3.9	+1.5 dB	Yes
Paradise Road	Stewart Road to City Limits	43.7	67.8	24.1	>65 dB	Yes
Golden Valley Parkway	South of Dos Reis Road	N/A	75.0	N/A	N/A	N/A
Golden Valley Parkway	South of Inland Passage Way	46.3	74.4	28.1	>65 dB	Yes
Golden Valley Parkway	West of Somerston Parkway	N/A	69.3	N/A	N/A	N/A
Golden Valley Parkway	South of Dell'Osso Drive	N/A	63.9	N/A	N/A	N/A
Stanford Crossing	West of Golden Valley Parkway	N/A	57.2	N/A	N/A	N/A
River Island Parkway	West of Somerston Parkway	56.1	68.8	12.7	>65 dB	Yes
Cambay Parkway	West of Lakeside Drive	N/A	64.6	N/A	N/A	N/A
Cambay Parkway	East of Paradise Road	N/A	64.3	N/A	N/A	N/A
Cambay Parkway	West of Paradise Road	N/A	67.2	N/A	N/A	N/A
Paradise Road	South of Cambay Parkway	47.2	69.5	22.3	>65 dB	Yes
McKinley Avenue	South of Yosemite Avenue	65.1	77.9	12.8	+1.5 dB	Yes

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 LDN 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 FEHR & PEERS TRANSPORTATION CONSULTANTS, CALTRANS, AND 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 Tables 3.12-11, the related traffic noise level increases with a 20-year circulation system buildout of the proposed General Plan are predicted to increase between 0.3 to 28.1 dB versus the existing Baseline (2020) conditions.

In order to reduce these impacts, the use of sound walls or quiet pavements could be employed. Construction of new sound walls could be a feasible mitigation measure. However, many of the

impacted residential uses along the roadway segments listed above are accessed directly via driveways off the main roadway or may even already have a sound wall. A new sound wall would require many driveway openings, resulting in partial noise barriers. These openings in the sound wall would substantially reduce the noise barrier performance. Additionally, raising the heights of sound walls, or construction of new noise barriers would result in encroachment into private property. Such encroachment would require private property owners to allow permission to enter their property. Raising sound wall heights would likely require enlarging footings, thereby requiring demolition of existing sound walls. Therefore, use of new sound walls, or modifying sound walls is not considered to be practical.

Quiet pavements have been used to mitigate traffic noise and are typically assumed to provide a 3 to 5 dBA reduction. Assuming a minimum reduction of 3 dBA, quiet pavement placed along sensitive receptor areas on the impacted roadway segments could reduce traffic noise level increases. Many of the noise impacts outlined in the previous tables could potentially be mitigated through the use of quiet pavement. However, not all of the impacted roadway segments could be mitigated through use of quiet pavements due to the magnitude of the traffic noise increases. Additionally, widespread repaving of city streets with quiet pavements would be expensive and impractical.

General Plan Policies N-1.1 through N-1.18, and Actions N-1a through N-1f, identified below, are intended to minimize exposure to excessive noise, including noise associated with traffic. Specifically, Policies N-1.1 and N-1.14 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-1.1, for exposure to traffic noise meet or exceed the noise level standards shown in General Plan Tables N-1 and N-2. Policy N-1.14 and Actions N-1c would ensure that new development mitigates potential noise impacts through incorporating the noise control treatments necessary to achieve acceptable noise levels. Policy N-1.4 sets criteria for evaluating future increases in traffic noise levels. Implementation Action N-1a would ensure that the Lathrop Municipal Code, including the updated noise ordinance, is consistent with the noise standards established in the General Plan. Implementation Action N-1d 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 3.12-11, the traffic noise increases associated with the proposed General Plan exceed the applicable noise exposure criteria. Therefore, the proposed General Plan would have a **significant and unavoidable** impact relative to traffic noise on existing noise-sensitive uses in the City.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

POLICIES

- N-1.1 Noise Exposure. Consider the noise compatibility of existing and future development when making land use planning decisions. Require development and infrastructure projects to be consistent with the land use compatibility standards contained in Tables N-1, N-2, and N-3 to ensure acceptable noise exposure levels for existing and future development.
- N-1.2 Noise Mitigation. Require new development to mitigate excessive noise to the standards indicated in Tables N-1, N-2, and N-3 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-1.3 Indoor Residential Noise Level. 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-1.4 Acoustical Studies. Require acoustical studies for new discretionary developments and transportation improvements that have the potential to affect existing noise-sensitive uses such as schools, hospitals, libraries, care facilities, and residential areas; and for projects that would introduce new noise-sensitive uses into an area where existing noise levels may exceed the thresholds identified in this element. 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.
- A. 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 the project will result in an increase in ambient noise levels by more than 3 dB, whichever is greater.
 - B. Transportation Noise Sources –
 1. Where existing traffic noise levels are less than 60 dB Ldn at the outdoor activity areas of noise-sensitive uses, a +5 dB Ldn increase in roadway noise levels will be considered significant;
 2. Where existing traffic noise levels range between 60 and 65 dB Ldn at the outdoor activity areas of noise-sensitive uses, a +3 dB Ldn increase in roadway noise levels will be considered significant; and
 3. Where existing traffic noise levels are greater than 65 dB Ldn at the outdoor activity areas of noise-sensitive uses, a + 1.5 dB Ldn increase in roadway noise levels will be considered significant.

- N-1.5 Acoustical Studies. For projects that are required to prepare an acoustical analysis, the analysis shall:
- A. Be the responsibility of the applicant.
 - B. Be prepared by a qualified acoustical consultant experienced in the fields of environmental noise assessment and architectural acoustics.
 - C. Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions and the predominant noise sources.
 - D. Estimate existing and projected (20 years) noise levels in terms of the standards of Tables N-1, N-2, or N-3, and compare those levels to the adopted policies of the Noise Element.
 - E. Recommend appropriate mitigation measures to achieve compliance with the adopted policies and standards of the Noise Element.
 - F. Estimate noise exposure after the prescribed mitigation measures have been implemented.
 - G. If necessary, describe a post-project assessment program to monitor the effectiveness of the proposed mitigation measures.
- N-1.6 Open Space and Landscaping. Encourage the use of open spaces, trees, and landscaping to buffer new and existing development from noise sources.
- N-1.7 Fences and Sound Walls. When fences and/or sound walls are required for compliance with noise standards, ensure the fences and walls are built to be visually compatible with the surrounding area, at the minimum height necessary to achieve the required sound attenuation. Sound walls should incorporate treatments to resist graffiti.
- N-1.8 Roadway Noise. Encourage nonmotorized transportation alternatives for local trips and the implementation of noise sensitivity measures in the public realm, including traffic-calming road design, lateral separation, natural buffers, and setbacks to decrease excessive motor vehicle noise.
- N-1.9 Highway Noise. Coordinate with the California Department of Transportation (Caltrans) and the Transportation Corridor Agency (TCA) to achieve maximum noise abatement in the design of new highway projects or improvements along I-5.
- N-1.10 Truck Traffic. Limit local truck traffic, including loading and unloading, to specific routes, times, and speeds appropriate to each zoning district. Design development so that automobile and truck access to industrial and commercial properties abutting residential properties is located at the maximum practical distance from residential zones.
- N-1.11 Vehicular Traffic. Monitor and enforce existing speed limits and motor vehicle codes requiring adequate mufflers on all types of vehicles traveling through the city.

3.12 NOISE

- N-1.12 Railroad Noise. Work with the Federal Railroad Administration and passenger and freight rail operators to reduce exposure to rail and train noise in the city, including establishing train horn “quiet zones” consistent with the federal regulations.
- N-1.13 Airplane Noise. Work cooperatively with the SJCOG Airport Land Use Commission (ALUC), Stockton Airport, and other relevant air transportation agencies and airports to minimize noise impacts from airspace activities in the city, including but not limited to, airplane and helicopter flights.
- N-1.14 Noise-Compatible Land Uses Along Roadways, Highways, and Railroads. Support noise-compatible land uses along all existing and future roadways, highways, and railroads. For new residential development backing on to a roadway, freeway, and/or railroad right-of-way, the developer shall be required to provide appropriate mitigation measures to satisfy the performance standards in Table N-2.
- N-1.15 Construction Noise. Require construction activities to reduce noise impacts on adjacent uses to the criteria identified in Table N-3, or, if the criteria cannot be met, to the maximum extent feasible complying with Title 15 of the LMC (Building and Construction) and use best practices. Construction activities outside of the permitted construction hours identified in the LMC may be approved on a case-by-case basis by the Building Official.
- N-1.16 Temporary special events. 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 and the standards established by Chapter 8.20 of the LMC (Noise) through issuance of a temporary use permit (see Section 17.108.090 of the LMC [Review of Temporary Uses]).
- N-1.17 Temporary emergency operations and emergency equipment usage. Temporary emergency operations or emergency equipment usage may be exempt from noise standard criteria set by this element.
- N-1.18 Interjurisdictional Coordination. Coordinate with neighboring jurisdictions to minimize noise conflicts between land uses along the City's boundaries.

ACTIONS

- N-1a Update Chapter 8.20 of the LMC (Noise) to ensure that the noise standards are consistent with this General Plan, including Tables N-1, N-2, and N-3, and to require new residential, mixed-use with a residential component, and other noise-sensitive development to be designed to minimize noise exposure to noise sensitive uses through incorporation of site planning and architectural techniques. The update shall also include noise standards for residential uses within a mixed-use development, which may differ from other adopted residential noise standards.
- N-1b Review new development projects for compliance with the noise requirements established in this General Plan, including the standards established in Tables N-1,

N-2, and N-3. Where necessary, require new development to mitigate excessive noise 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 such as rubberized asphalt.

- N-1c Require acoustical studies for all new discretionary projects, including those related to development and transportation, which have the potential to generate noise impacts which exceed the standards identified in this General Plan. The studies shall include representative noise measurements, estimates of existing and projected noise levels, and mitigation measures necessary to ensure compliance with this element.
- N-1d Coordinate with Caltrans, the cities of Manteca, Tracy, and Stockton, San Joaquin County, and SJCOG ALUC and Stockton Airport, and all other agencies when necessary, to ensure that these agencies obtain City concurrence prior to initiating any noise mitigation or other project affecting Lathrop.
- N-1e Work with the Federal Rail Authority and passenger and freight rail service providers to establish a Quiet Zone at at-grade crossings in the city. Where new development would be affected by the train and rail noise, require project applicants to fund a fair-share of: a) studies associated with the application for a Quiet Zone, and b) alternative safety measures associated with the Quiet Zone (including, but not limited to signage, gates, lights, etc.).
- N-1f Work in cooperation with Caltrans, the Union Pacific Railroad (UPRR), San Joaquin Regional Rail Commission, and other agencies where appropriate to maintain noise level standards for both new and existing projects in compliance with Table N-2.

Additional or alternative criteria can be used for determining a substantial increase in noise levels. For instance, if the overall increase in noise levels occurs where no noise-sensitive uses are located, then the City may use their discretion in determining if there is any impact at all. In such a case, the following alternative factors may be used for determining a substantial increase in noise levels:

- the resulting noise levels;
- the duration and frequency of the noise;
- the number of people affected;
- conforming or non-conforming land uses;
- the land use designation of the affected receptor sites;
- public reactions or controversy as demonstrated at workshops or hearings, or by correspondence; and
- prior CEQA determinations by other agencies specific to the project.

3.12 NOISE

Table N-1 – Land Use Compatibility for Community Noise Environments Standards

Land Use Category	Community Noise Exposure <i>L_{dn}</i> or <i>CNEL</i> , dB			
	Normally Acceptable ¹	Conditionally Acceptable ²	Normally Unacceptable ³	Clearly Unacceptable ⁴
Residential – Low Density Single Family, Duplex, Mobile Homes	< or = 60	55 - 70	70-75	>75
Residential – Multi-Family	< or = 60	60 - 70	70-75	>75
Transient Lodging – Motels, Hotels	< or = 65	60 - 70	70-80	>80
Schools, Libraries, Churches, Hospitals, Nursing Homes	< or = 70	60 - 70	70-80	>80
Auditoriums, Concert Halls, Amphitheaters	< or = 70	-	>65	-
Sports Arena, Outdoor Spectator Sports	< or = 75	-	>70	-
Playgrounds, Neighborhood Parks	< or = 70	-	67.5-75	>72.5
Golf Courses, Riding Stables, Water Recreation, Cemeteries	< or = 75	-	70 - 80	>80
Office Buildings, Business Commercial and Professional	< or = 70	67.5 – 72.5	>75	-
Industrial, Manufacturing, Utilities, Agriculture	< or = 75	70 – 80	>75	-
<ol style="list-style-type: none"> 1. Normally Acceptable – Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements. 2. Conditionally Acceptable – New construction of development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice. 3. Normally Unacceptable – New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design. 4. Clearly Unacceptable – New Construction or development should generally not be undertaken. 				

Table N-2 – Maximum Allowable Noise Exposure from Mobile Noise Sources

Land Use ¹	Outdoor Activity Areas ^{2,3}	Interior Spaces	
		L _{dn} /CNEL, dB	L _{eq} , dB ⁴
Residential	60	45	-
Motels/Hotels	65	45	-
Mixed-Use	65	45	-
Hospitals, Nursing Homes	60	45	-
Theaters, Auditoriums	-	-	35
Churches	60	-	40
Office Buildings	65	-	45
Schools, Libraries, Museums	70	-	45
Playgrounds, Neighborhood Parks	70	-	-
Industrial	75	-	45
Golf Courses, Water Recreation	70	-	-

1. Where a proposed use is not specifically listed, the use shall comply with the standards for the most similar use as determined by the City.
2. Outdoor activity areas for residential development are considered to be the back yard patios or decks of single family units and the common areas where people generally congregate for multi-family developments. Where common outdoor activity areas for multi-family developments comply with the outdoor noise level standard, the standard will not be applied at patios or decks of individual units provided noise-reducing measures are incorporated (e.g., orientation of patio/deck, screening of patio with masonry or other noise-attenuating material). Outdoor activity areas for non-residential developments are the common areas where people generally congregate, including pedestrian plazas, seating areas, and outside lunch facilities; not all residential developments include outdoor activity areas.
3. In areas where it is not possible to reduce exterior noise levels to achieve the outdoor activity area standard using a practical application of the best noise-reduction technology, an increase of up to 5 dB L_{dn} over the standard will be allowed provided that available exterior noise reduction measures have been implemented and interior noise levels are in compliance with this table.
4. Determined for a typical worst-case hour during periods of use.

3.12 NOISE

Table N-3 – Performance Standards for Stationary Noise Sources, Including Affected Projects^{1,2,3,4}

Noise Level Descriptor	Daytime 7am to 10pm	Nighttime 10pm to 7am
Hourly L_{eq} , dB	55	45
<ol style="list-style-type: none"> 1. Each of the noise levels specified above should be lowered by 5 dB for simple tones, noises consisting primarily of speech or music, or recurring impulsive noises. Such noises are generally considered to be particularly annoying and are a primary source of noise complaints. 2. No standards have been included for interior noise levels. Standard construction practices should, with the exterior noise levels identified, result in acceptable interior noise levels. 3. Stationary noise sources which are typically of concern include, but are not limited to, the following: <ol style="list-style-type: none"> a. HVAC Systems b. Pump Stations c. Emergency Generators d. Steam Valves e. Generators f. Air Compressors g. Conveyor Systems h. Pile Drivers i. Drill Rigs j. Welders k. Outdoor Speaker l. Cooling Towers/Evaporative Condensers m. Lift Stations n. Boilers o. Steam Turbines p. Fans q. Heavy Equipment r. Transformers s. Grinders t. Gas or Diesel Motors u. Cutting Equipment v. Blowers 4. The types of uses which may typically produce the noise sources described above include but are not limited to: industrial facilities, pump stations, 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 athletic fields 		

Impact 3.12-2: General Plan implementation may result in exposure to excessive railroad noise sources (Less than Significant)

Table 3.12-4 indicates that the 60 dB Ldn railroad noise contours for the Union Pacific/ACE commuter/freight line may extend up to 642 feet from the railroad centerline. Future development located along these railroad lines could therefore be exposed to unacceptable exterior noise levels.

Specifically, Policies N-1.1 and N-1.14 support noise-compatible land uses in the vicinity of railroad 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-1.1, for exposure to railroad noise meet or exceed the noise level standards of the adopted General Plan. Policy N-1.14 and Actions N-1c would ensure that new development mitigates potential noise impacts through incorporating the noise control treatments necessary to achieve acceptable noise levels.

Implementation of these General Plan policies and actions would ensure that development allowed under the proposed General Plan is not exposed to noise levels associated with railroad operations in excess of the City's established standards. This is a **less than significant** impact.

Impact 3.12-3: 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 development projects and the details of future noise generating land uses that may be located in the city in the future 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 of the 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 may create noise levels in excess of the City's standards.

While no specific projects are proposed under the general plan update, changes in land use may allow for more intensive noise-generating uses in closer proximity to noise-sensitive uses. Where this occurs, detailed noise studies would be required to ensure that noise control measures are implemented into the project design. Such measures could include redesign of industrial buildings away from sensitive uses, construction of sound walls or berms between noise generating uses and sensitive uses, using buildings to create additional buffer distance and screening, or other site design measures to ensure that non-transportation (stationary) noise sources do not cause exterior noise levels to exceed allowable standards at sensitive receptors.

For example, a typical maintenance yard might generate noise levels of approximately 68 dBA L_{eq} at a distance of 100 feet, as shown in Table 3.12-5. This would exceed the City's proposed stationary noise standards of 55 dBA L_{eq} (daytime) and 45 dBA L_{eq} (nighttime). Construction of a 12-foot-tall

sound wall could reduce noise levels to approximately 55 dBA L_{eq} . For a daytime use, this would be sufficient to meet the City's 55 dBA L_{eq} daytime noise standard. For a yard which require nighttime operation, a sound wall would not be sufficient to achieve the 45 dBA L_{eq} nighttime noise standard. To achieve the nighttime noise standard, the distance from receptors would need to be increased by 250 feet for a 12-foot-tall wall to achieve the 45 dBA L_{eq} nighttime standard. While this is just a theoretical scenario, it illustrates that use of site design measures, screening walls, etc. can be sufficient to achieve compliance with the City's stationary noise standards, even when more intensive uses are proposed in closer proximity to sensitive receptors.

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 and N-2.1 through N-2.4 and Actions N-1b and N-1c would reduce noise associated with stationary sources. Specifically, Policy N-1.2 and Action N-1b require new development to mitigate excessive noise to the standards indicated in Tables N-1, N-2, and N-3 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. 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.

Impact 3.12-4: 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 3.12-12 provides a list of the types of equipment which may be associated with construction activities, and their associated noise levels.

TABLE 3.12-12: 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, Policy N-1.15 would reduce noise associated with construction noise. Implementation of the proposed policies and actions of the General Plan will ensure noise impacts from construction are **less than significant**.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

N-1.15 Construction Noise. Require construction activities to reduce noise impacts on adjacent uses to the criteria identified in Table N-3, or, if the criteria cannot be met, to the maximum extent feasible complying with Title 15 of the LMC (Building and Construction) and use best practices. Construction activities outside of the permitted construction hours identified in the LMC may be approved on a case-by-case basis by the Building Official.

Impact 3.12-5: 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, 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, these impacts may be considered significant. With implementation of Action N-2d below would ensure that construction vibrations do not cause damage to any adjacent structures, and thus, 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-2d: 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 3.12-6: General Plan implementation may result in exposure to groundborne vibration (Less than Significant)

Development facilitated by the General Plan could expose persons to excessive groundborne vibration levels attributable to trains. The proposed locations of buildings and their specific sensitivity to vibration are not known at this time; however, such uses located in close proximity to railroad tracks could be exposed to ground vibration levels exceeding FTA guidelines.

The proposed General Plan includes Action N-2b requires that individual development projects undergo project-specific environmental review and address potential vibration impacts associated with railroad operations. If project-level significant vibration impacts are identified, specific mitigation measures will be required under CEQA. The implementation of this policy would limit potential groundborne vibrations associated with railroad operations to a **less than significant** level.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

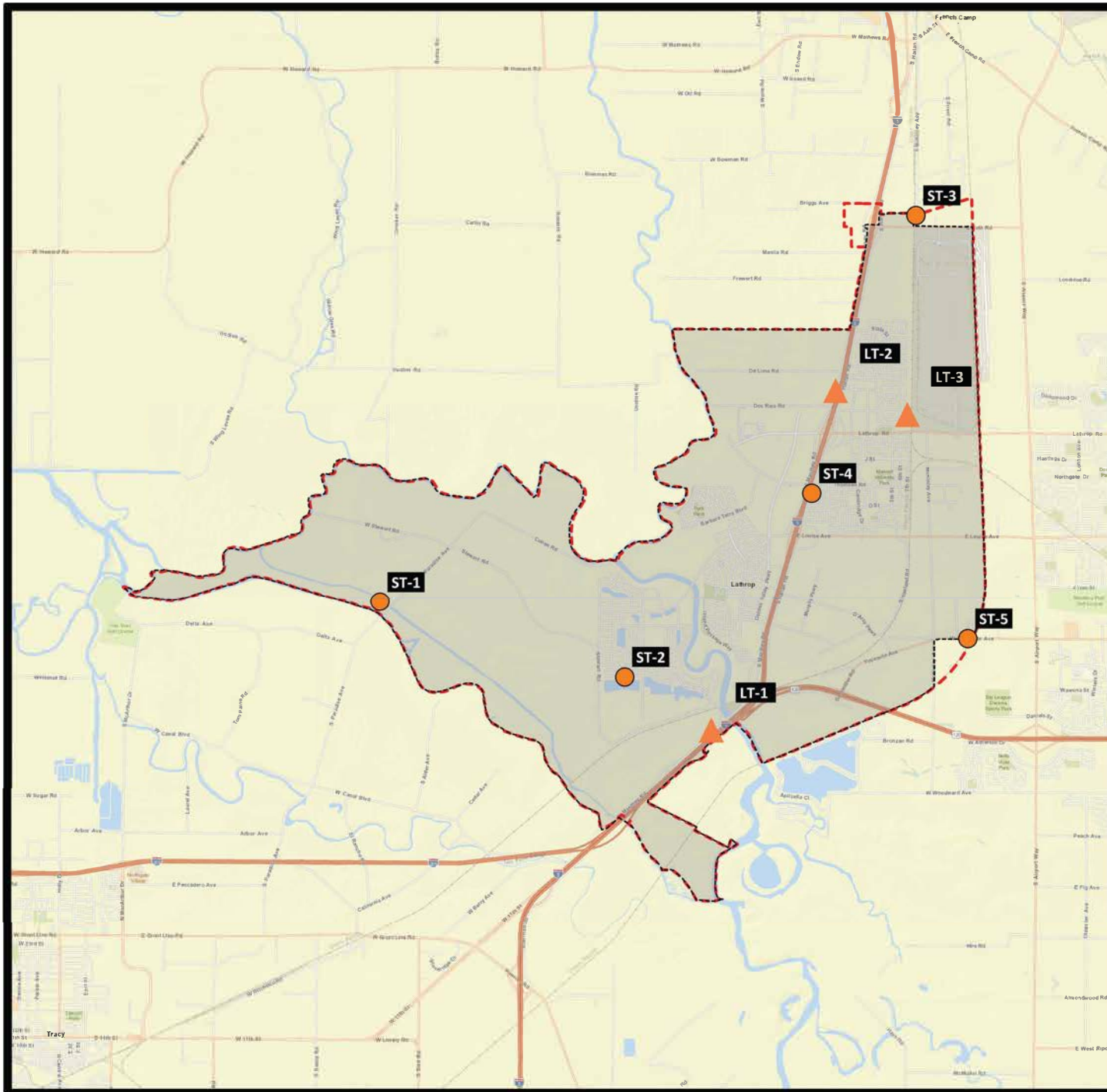
ACTIONS

N-2b Require new residential projects located adjacent to major freeways and railroad lines to follow the FTA vibration screening distance criteria to ensure that residential uses are not exposed to vibrations exceeding 72 VdB for frequent events (more than 70 events per day), 75 VdB for occasional events (30-70 events per day), or 80 VdB for infrequent events (less than 30 events per day).

Lathrop General Plan Update

City of Lathrop, California

Figure 3.12-1: Noise Measurement Sites



Legend

- Lathrop City Boundary
- Lathrop Sphere of Influence
- Noise Measurement - Long Term
- Noise Measurement - Short Term



0.5 mi 1.5 mi 2.5 mi

Projection: State Plane (California Zone 3) / NAD83 / feet
Rev. Date: 08/25/2018



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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 ENVIRONMENTAL SETTING

FIRE PROTECTION SERVICES

The Lathrop Planning Area is covered by two independent Fire Protection Districts, the Lathrop-Manteca Fire Protection District (LMFD) and French Camp-McKinley Fire District (French Camp). The LMFD provides fire protection services for all lands within the City of Lathrop, excluding lands north of Roth Road which are protected by French Camp. LMFD also provides service to some 84.7 square miles of rural area around Lathrop and Manteca (in the southern San Joaquin County area).

LMFD was established in 1936 to provide fire protection for the township of Lathrop, rural Lathrop and the rural areas surrounding Manteca. The Fire District was organized under the laws of the State of California, Health and Safety Code Section 13800, known as the Fire Protection District law of 1987. LMFD is governed by a five-member Board of Directors who are elected at-large to serve a four-year term. Since 1936 the Fire District has developed into a pro-active Fire Department covering 100 square miles including the City of Lathrop. The Fire District is organized to maintain career personnel on duty, 24 hours a day, year-round, to respond to emergencies from the fire stations. LMFD has three (3) Fire Stations located in the City of Lathrop.

The French Camp Fire District provides fire protection for the rural area primarily south of Stockton and north of Roth Road, both east and west of Interstate 5. French Camp service boundaries include some 16 square miles, including a small portion of Stockton. Approximately 805 acres of the French Camp Fire District is in the Lathrop proposed Area of Interest and about 149 acres is in the SOI. The District was established in 1946 to provide fire protection for the French Camp Community and surrounding area. The Fire District was organized under the laws of the State of California, Health and Safety Code Section 13800, known as the Fire Protection District law of 1987.

Lathrop-Manteca Fire Protection District (LMFPD)

Since the incorporation of Lathrop in 1989, the LMFD has worked with the City Council to develop plans to provide adequate coverage for potential urban growth of the city. This has included the imposition of Fire Facilities Fees for new development as well as a sharing in the Special Sales Tax (Measure C) passed city-wide.

The LMFD boundaries spread over about 100 square miles, with the bulk of the District (70%) outside of the City limits of Lathrop. Locations of the existing LMFD fire stations are presented in Figure 3-13-1 (Fire Station Locations).

LMFD calls are dispatched by the City of Stockton's emergency communications dispatch center along with the Manteca Fire Department, Stockton Fire Department, and Lodi Fire Departments. As described in the City's most recent Draft Municipal Services Review (2022 Draft MSR) LMFD tracks the following times segments and continuously works to improve response times. These times are provided from LMFD's records, specific to the City of Lathrop's capturing data from Jan 1, 2020 to Dec 31, 2020.

Alarm Processing Time: Defined as the time elapsed between receipt of alarm and the dispatch of apparatus to the emergency call. The LMFD benchmarks this according to the National Fire Protection Association Standard 1221: Installation, Maintenance, and Use of Emergency Services Communications Systems. Section 7.4.3 of this standard identifies the that elapsed alarm processing for the highest priority of life-threatening calls shall have an alarm processing time of 60 seconds for at least 90 percent of these total calls. The Lathrop Manteca Fire District currently contracts with the City of Stockton for dispatch services. In addition, the Fire District has moved its primary alerting system to an internet protocol system that increases the speed of which alarms are "pushed" to the emergency responding units. The Fire District meets this standard one hundred (100) percent of the time.

Turnout Time: This time is calculated from the receipt of the alarm by the station of unit and ends at the time the unit begins its rolling travel time. Benchmarks for these time standards are 60 seconds for 90% of the total Emergency Medical Calls and 80 seconds for 90% of the total Fire Calls. The Fire District's data shows a 60 second turnout time for EMS Calls for 88% percent of occurrences and have an 80 second turnout time for 95% of the fire occurrences.

Response Time: Response time is reflected by the turnout time and travel time that are added together to create a complete picture of the Fire District response time. In 2020, the Fire District responded to emergency incidents 70% of the time within five minutes at the 90th percentile with all combined responses. It should be noted that due to growth demands and development planning the fire district responds to areas of new development that are often outside of the existing service zones. While call volumes in those areas are generally lower, they do have an impact on the overall analyses. The

District has plans to add two (2) to three (3) additional fire stations/companies in order to service these developments. At buildout, the Fire District expects to be closely meeting travel distance times that are closer in alignment with LMFDF standards.

The Fire Prevention Bureau administers the District's fire prevention and code enforcement program. Plan checks are done by the Fire Prevention staff or a third-party plan check company along with construction and business inspections. Fire Company personnel conduct annual pre-incident inspections. Additional fire safety programs include smoke detector installation for the elderly and disabled and fire safety and awareness in the schools.

The Fire District responds, not only to fires of all types, but also medical emergencies, traffic accidents, service calls, Hazardous Material incidents, technical rescue incidents, and water rescues. The Fire District is an active member of the San Joaquin County Hazardous Materials Response Team. The Fire District is also part of the Urban Search and Rescue Team.

French Camp

The authorized personnel strength of French Camp consists of 16 employees, of which 7 are line staff and 9 are reserve personnel. The French Camp and Montezuma Fire Protection Districts rotate Fire Chiefs in order to provide coverage for the respective Fire Stations. The fire district is organized to maintain three personnel with automatic aid agreements with other agencies. On May 15, 2015, the District and Mountain House Community Services District (Mountain House CSD) entered into an agreement for the District to provide fire protection and emergency medical services to the community served by the Mountain House CSD. The District provides staffing to Mountain House CSD based on staffing response guidelines established by the jointly adopted Service Level Criteria using vehicles, equipment and apparatus of both Districts.

The District charges Mountain House CSD an established daily rate with the rate renegotiated every year. The District also bills Mountain House CSD for service, supplies and apparatus as needed. The original contract term extended from September 15, 2015 through June 30, 2020. The contract was extended through June 30, 2025. Station 16-1 in Mountain house is staffed with five (5) personnel on-duty.

French Camp maintains one Fire Station located at 310 East French Camp Road and also operates out of the Mountain House Fire Station located at 911 Traditions Street, Mountain House. The French Camp station is staffed by 2 engine companies and is staffed 24-hours per day. The organization responds to approximately 1,800 calls between Mountain House and French Camp.

According to response data by Lifecom Dispatch Center, and confirmed by Former Chief Paul Tualla, the District's 90 percentile "turnout time" and "travel" times in 2015 were 1:50 minutes and 6:01 minutes respectively to the Roth Road area. These times were below the average 90 percentile time for all rural fire districts at 2:42 minutes turnout time and 7:38 minutes response time. The Chief estimates the longest travel time was 7:24 minutes.

3.13 PUBLIC SERVICES AND RECREATION

The Fire District responds, not only to fires of all types, but also medical emergencies, traffic accidents, and water rescues. The Fire District is an active member of the San Joaquin County Hazardous Materials Response Team. The Fire District is also part of the Urban Search and Rescue Team.

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.

LATHROP-MANTECA FIRE PROTECTION DISTRICT

In its most recent report, the ISO Public Classification Program rates the LMFDD as a community classification of 3 for the City of Lathrop¹. This rating is unchanged since the ISO rating for the City of Lathrop in their January 2013 ISO report. The District is currently working with ISO to review the classification in 2022.

FRENCH CAMP

The ISO Public Classification Program rates the French Camp in their November 2017 report as a community classification of 4/4Y for the District². This is an improvement from the community classification of 4/8b for the District in the ISO November 23, 2010 report.

FIRE STATIONS

The Lathrop-Manteca Fire Protection District currently operates three fire stations within the Lathrop Planning area, as shown on Figure 3.13-1 and listed below.

- **Station 31 (800 E. J Street, Lathrop, CA 95330):** Station 31 services a large section of East Lathrop. The boundaries generally run from Interstate 5 at Roth Road to Louise Avenue. Station 31 is staffed with four personnel, including the on-duty Battalion Chief.
- **Station 34 (460 River Islands Parkway, Lathrop, CA 95330):** Station 34 is located on the west side of Interstate 5 within the City of Lathrop. This station officially opened on May 20th, 2006. This station responds to calls for service on the west side of Interstate 5 and on the east side of I-5, south of Louise Avenue. Staffing for this station includes one Captain, one Firefighter/Engineer, and one Firefighter.

¹ Personal communication with Steven Pickerill, LMFDD Deputy Fire Marshall, 11:30am on 8/16/2018.

² Personal communication with French Camp Office of Administration and Fire Prevention, 12:20pm on 8/16/2018.

- **Station 35 (19001 Somerston, Lathrop, CA 95330):** Station 35 is located in the southern portion of Lathrop west of Interstate 5. The primary response area for Station 35 is the River Islands development in the southwestern portion of the City of Lathrop. The fire station houses one of the LMFD's Type 3 (wildland) fire engines and the LMFD rescue unit. The station is staffed with one Captain, one Firefighter/Engineer, and one Firefighter as well as the District's Administrative offices and headquarters.

FRENCH CAMP

French Camp currently operates a single fire station located which is listed below:

- **Station 11-1 (310 E. French Camp Road, French Camp, CA):** The Station is staffed with at least two on-duty personnel and on Duty Chief available 24 hours a day, seven day a week. In addition, the Reserve Firefighter personnel are an important supplemental force to augment the line staff in firefighting duties in fire suppression of structural, wildland, and other types of fires. As of 2015, French Camp expanded fire protection service to the community of Mountain House on a contract basis.

POLICE PROTECTION SERVICES

San Joaquin County Sheriff's Department – Lathrop Police Services

Law enforcement services in the City of Lathrop are currently provided through contract with the San Joaquin County Sheriff's Department. Lathrop Police Services' officers are Deputy Sheriffs assigned to the City. They have unique training to include traffic enforcement, specific to an incorporated City.

Lathrop Police Services satellite office is located at 390 Towne Centre Dr, Lathrop, CA 95330. Since the City was incorporated, police service has been expanded to include eleven patrol cars. Lathrop Police Services is staffed 24 hours a day in a series of 3 patrol shifts with a minimum of 2 patrol officers per shift. Minimum staffing levels are set at 6 officers per day. Lathrop Police Services has 26 sworn officers, including 1 captain serving as police chief, 1 lieutenant, 3 sergeants, 1 detective, 20 deputy sheriffs and 3 civilian staff. If needed, additional assistance can be summoned under a mutual aid agreement with surrounding cities and the County. Existing police staffing levels in the City are approximately 1.31 per 1,000 residents. The current city-wide priority 1 average response time is 4 minutes. Priority 1 calls are where a threat is posed to life or a crime of violence.

The approval and/or pending development projects in the City will result in additional demand for law enforcement services. Capital costs for new facilities and equipment is funded through development impact fees and operational costs are funded through a combination of an increased tax base, participation in Community Facility District (CFD) and Measure C funding (A City initiated special tax which does not have a sunset clause).

The City of Lathrop is currently in the process of transitioning to its own police department. In April 2021 the Lathrop City Council approved a resolution that initiated the process of recruiting, hiring, and training for the establishment of the City's first police department. As of the time this

Draft EIR was prepared, the City is currently on schedule to formally deploy its own police department in July 2022.

MISCELLANEOUS PUBLIC SAFETY

Multi-Jurisdictional Local Government Emergency Response

The San Joaquin County Office of Emergency Services (OES) is the single coordinating center for major emergency activities. In cooperation with others, OES maintains and oversees the Multi-Hazard Functional Plan, which is the Countywide disaster preparedness program. OES also provides training for first responders, businesses, and other governmental agencies.

Community Emergency Response Team

The Community Emergency Response Team (CERT) Program educates people about disaster preparedness for hazards that may impact their area and trains them in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations. Using the training learned in the classroom and during exercises, CERT members can assist others in their neighborhood or workplace following an event when professional responders are not immediately available to help. CERT members also are encouraged to support emergency response agencies by taking a more active role in emergency preparedness projects in their community.

The Lathrop-Manteca Fire Protection District offers CERT training for those community members interested in this type of community service. The training covers many topics of preparedness including:

- Disaster preparedness;
- Disaster fire suppression;
- Disaster medical operations;
- Disaster psychology and team organization; and
- Disaster simulation.

PARKS AND RECREATIONAL FACILITIES

The City of Lathrop Parks and Recreation Department manages 108 acres of parks and open space throughout the City of Lathrop. Local parks offer amenities such as a community center with a gymnasium, open space, athletic fields, playgrounds, and picnic areas. The Parks and Recreation Department manages programs that are multi-generation in nature such as community events, sports camps, adult and youth sports programs, youth before and after school programs, art programs, and senior programs.

Types of Parks

COMMUNITY PARKS

Community parks are typically up to 20 acres in size, and include areas for active sports as well as space for family and group activities. Community parks are larger than neighborhood parks and provide services to fulfill the active and passive recreational needs of multiple neighborhoods. Community parks serve the needs of a local neighborhood by providing a close to home site for more active recreation that is not typically suitable or physically possible in a neighborhood park such as formal sports fields or lighted courts.

The City of Lathrop has three community parks totaling 35.5 acres. The facilities included in these parks are fields and courts for various sports, a community center building for arts and crafts, clubs, and social activities. Some of the community center buildings are joint-use facilities with the school district.

NEIGHBORHOOD PARKS

Neighborhood parks are typically a minimum of four acres in size, and serve as the focal point of the community providing the hub for both physical and social activities. Neighborhood parks should be designed to be flexible to serve a variety of seasonal recreation needs. These 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 essential access points for the City-wide green space network.

Currently, Lathrop has ten neighborhood parks accounting for 42.6 acres.

MINI PARKS

Mini-parks are generally less than 2 acres in size and provide residents with a social and recreational gathering place, similar to a neighborhood park, but on a smaller scale. Mini-parks should provide small-scale recreational and aesthetic benefits primarily in denser residential areas or commercial areas with high pedestrian use. Each resident should be within walking distance (1/2 mile) of a neighborhood or mini park.

Currently, Lathrop has eight mini parks totaling 7.6 acres.

OPEN SPACE CORRIDORS

The Open Space Corridor can take several forms, including the pedestrian parkway separate from auto traffic, a combined vehicle and pedestrian parkway, a buffer zone between residential and commercial or industrial areas, or as a lineal park or paseo connecting with other components of the Parks and Recreation system or located separate from other areas such as along reaches of the San Joaquin River or other waterways.

River Park North and South have been included in this classification, putting Lathrop at (2) two linear parks, accounting for 10.7 acres.

3.13 PUBLIC SERVICES AND RECREATION

City Parks

The City currently manages 25 distinct parks and four public facilities. Table 3.13-1 summarizes the City’s park facilities. Additional parks within the City of Lathrop will become available in the City of Lathrop as development continues within the River Islands development area.

TABLE 3.13-1: SUMMARY OF PARKS AND RECREATION FACILITIES

<i>PARK/FACILITY NAME</i>	<i>FACILITYTYPE</i>	<i>ACREAGE</i>
Apolinar Sangalang Park	Neighborhood Park	9.7
Armstrong Park	Mini Park	0.4
Basin Park	Neighborhood Park	4.4
Crescent Park	Mini Park	1.4
Crystal Cove Park	Neighborhood Park	3.3
Generations Center	Community Park	6.0
Lathrop Skate Park	Mini Park	0.3
Leland & Jane Stanford Park	Neighborhood Park	4.1
Libby Park	Mini Park	1.2
Michael Vega Park	Neighborhood Park	2.9
Milestone Manor Park	Mini Park	1.00
Mossdale Commons	Mini Park	1.45
Mossdale Landing Community Park	Community Park	20.4
Park West	Neighborhood Park	6.8
Reflections Park	Neighborhood Park	5.2
River Park North	Open Space Corridor	3.2
River Park South	Open Space Corridor	7.4
Somerston Park	Neighborhood Park	2.0
Summer House Park	Neighborhood Park	2.0
The Green	Mini Park	1.0
Thomsen Park	Mini Park	0.8
Tidewater Park	Neighborhood Park	2.1
Valverde Park	Community Park	9.1
William S. Moss Park	Neighborhood Park	4.1
Woodfield Park	Neighborhood Park	5.5

SOURCE: CITY OF LATHROP PARKS AND RECREATION Master Plan. 2020.

PARK STANDARDS

Lathrop has established the following standards for acres of parkland:

5 acres per 1000 residents including:

- 2 acres of neighborhood park for every 1000 new residents
- 3 acres a community park for every 1000 new residents

As described in the Lathrop Parks Master Plan (2020) Lathrop has 107.8 acres of parks identified in the parks inventory and notes that to continue to meet the adopted standard of 5 acres per 1000 residents (2 acres of neighborhood park space and 3 acres of community park space), Lathrop is short approximately 0.1 acre of park for the current (2020) population.

On a regional scale, the City is located in the Sacramento-San Joaquin Delta (Delta), which contains several recreational areas and facilities, primarily for water-based recreation. Regional County parks near the City include the 9.85-acre Dos Reis Regional Park and the 3.7-acre Mossdale Crossing Regional Park, both located along the San Joaquin River. Mossdale Crossing Park is located on the west side of Interstate 5. Each of these parks includes boat launch ramps, picnic/barbeque areas, and children's play areas. Dos Reis Regional Park also has camping facilities. Also in the vicinity is the Haven Acres Marina, a private marina located on the San Joaquin River north of Dos Reis Regional Park. This facility provides river access to the San Joaquin River and includes parking areas, a boat ramp, and 10 boat berths.

SCHOOLS

Schools within the City of Lathrop are part of the Manteca Unified School District (MUSD). The MUSD provides school services for grades K through 12 within the communities of Manteca, Lathrop, Stockton, and French Camp. The District is approximately 113 square miles and serves more than 23,000 students. Within the City of Lathrop, there are three elementary schools (Lathrop Elementary School, Joseph Widmer School, and Mossdale Elementary School) and one high school (Lathrop High School). River Islands has two charter elementary schools, located within the Banta Unified School District (River Islands Technology Academy and the S.T.E.A.M. Academy).

Table 3.13-2 lists MUSD schools in in Lathrop grades serves location and recent enrollment for each school.

3.13 PUBLIC SERVICES AND RECREATION

TABLE 3.13-2: PUBLIC SCHOOLS SERVING LATHROP

SCHOOL	GRADES SERVED	ADDRESS	ENROLLMENT 2019-20 SCHOOL YEAR
<i>ELEMENTARY AND MIDDLE SCHOOLS</i>			
Lathrop Elementary School	K-8	15851 5 th Street	895
Joseph Widmer Elementary School	K-8	751 Stonebridge Lane	792
Mossdale Elementary School	K-8	455 Brookhurst Boulevard	1,040
River Islands Technology Academy	K-8	1175 Marina Drive	1,021
Next Generation S.T.E.A.M. Academy	K-8	18001 Commercial Street	637
Total			4,385
<i>HIGH SCHOOLS</i>			
Lathrop High School	9-12	647 Spartan Way	1,337
Total			1,337

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 5,722 students, of which 4,385 were enrolled in elementary and middle school (grades K – 8) and 1,330 were enrolled in high school (grades 9 – 12).

District-wide MUSD Schools has a total enrollment of 23,834 students for the 2019-2020 school year. Table 3.13-3 provides a summary of the public school enrollment by grade within MUSD.

TABLE 3.13-3: ENROLLMENT BY GRADE MUSD (2019-2020)

MANTECA UNIFIED	GRADE LEVEL													TOTAL 2019-2020
	K	1	2	3	4	5	6	7	8	9	10	11	12	
Total	1,931	1,645	1,692	1,740	1,740	1,716	1,811	1,883	2,002	2,002	1,859	1,907	1,931	23,834

SOURCE: CALIFORNIA DEPARTMENT OF EDUCATION EDUCATIONAL DEMOGRAPHICS UNIT ENROLLMENT FOR 2019-2020

OTHER PUBLIC FACILITIES

Library Services

The Lathrop Branch Library is located at 459 Spartan Way. The Lathrop Branch 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 Manteca Bulletin is available for reading in the branch. Customers are able to receive hold requests, check out and return items, and to return materials from other library locations at this branch. The Lathrop Branch Library is open Monday through Thursday, from 1:00 to 6:00 PM, and Friday and Saturday from noon to 5:00 PM.

Lathrop Senior Center

The Lathrop Senior Center located at 15707 Fifth Street provides lunches, classes, and various trip and activities. There are no membership fees to participate at the center' however, some classes and activities have nominal fees. The facility is open Monday through Friday, 9:00 AM through 4:00 PM. In addition, each month, the Senior Advisory Committee meets at the Lathrop Senior Center, which is designed by the City of Lathrop to coordinate recreational, education, and social service opportunities for those aged fifty and above.

Lathrop Hospital and Medical Facilities

Lathrop is mostly served by hospital and medical facilities from neighboring communities in French Camp and Manteca. Health care facilities within Manteca encompass Doctor's Hospital of Manteca, Kaiser Permanente Manteca Medical Center, residential care facilities, as well as private physicians and other medical practitioners. The primary medical facility in French Camp is San Joaquin General Hospital. Lathrop does have an urgent care clinic located within city limits.

Doctor's Hospital of Manteca, provides acute care service for Manteca and the surrounding community. The hospital is located at 1205 east North Street in the City of Manteca. Doctor's Hospital of Manteca offers Comprehensive diagnostic and surgical services, Intensive care unit, Breast healthcare, including mammography, behavioral health care, a 67-bed adult inpatient psychiatric treatment center, expanded imaging services, hip and knee surgery, back pain treatment and surgery, bariatric (weight-loss) surgery. Kaiser Permanente Manteca Medical Center also provides acute care service for Manteca and the surrounding community. The hospital is located at 1777 West Yosemite Avenue. Residents typically travel to other facilities, for certain specialized services including severe trauma and psychiatric care.

San Joaquin General Hospital is a general acute care facility located at 500 W. Hospital Rd in the unincorporated community of French Camp. The hospital contains 196-beds and provides a range of services including general medical and surgical care, high-risk obstetrics, neonatal intensive care, and pediatrics and intensive care. The associated medical campus includes primary care and specialty outpatient clinics.

The San Joaquin County Public Health Services 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 Services and provide residential treatment, out-patient counseling, perinatal programs and community education and information.

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;
- 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 LATHROP MUNICIPAL CODE

The City of Lathrop Municipal Code has ordinances related to fire protection include Chapter 3.20 (Impact Fee Ordinance), which requires development impact fees to be charged to fund improvements to the City's infrastructure. Chapter 1.12 (Administrative Enforcement Procedures) describes the authority of the LMFDF fire marshal in determining imminent health and safety hazards, and the powers associated with such a determination. Chapter 16.28 (Improvements) describes the requirements of a subdivider to provide and connect water mains and fire hydrants to the City's water system, with approval of the number and location of fire hydrants to be determined by the Fire Chief.

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.

LATHROP MUNICIPAL CODE

The Lathrop Municipal Code contains ordinances regulating park fees within the City of Lathrop. Chapter 3.20 provides for the City's Impact Fee Ordinance, which requires development impact fees to be charged to fund improvements to the City's infrastructure. Chapter 12.20 allows the city council to authorize the adoption of fees for recreation programs and for the use of park facilities for non-city functions, and provides other provisions related to parks within the City of Lathrop.

LATHROP PARKS AND RECREATION MASTER PLAN

The City of Lathrop adopted a Parks and Recreation Master Plan in 2020. The Master Plan evaluates the parks and recreation needs of the community and develop strategies, policies, and actions that reflect those needs to create better places to recreate within Lathrop. This document provides the City's Parks and Recreation Department with precise direction and be a realistic guide over the Planning Period.

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

3.13 PUBLIC SERVICES AND RECREATION

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 17,379 new residential dwelling units and up to 30,630,722 square feet of non-residential building space within the city at full buildout.

This new growth would increase the City's population by approximately 66,562 residents and would include approximately 49,250 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 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 Lathrop.

As the demand for services increases, there will likely be a need for new or expanded service structures (e.g., office, maintenance, and administrative buildings and facilities, schools, parks, fire facilities, libraries, etc.) to provide for adequate staffing, equipment, and appropriate facilities to serve growth in the city.

Existing facilities may be expanded at their current location. New facilities may also be constructed. The Public/Quasi-Public, Park, 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.

It is also important to understand that special legal principles apply to impacts to school facilities. According to Government Code Section 65996, the development fees authorized by Senate Bill 50 (1998) (described earlier) are deemed to be “full and complete school facilities mitigation” for impact caused by new development. The legislation also recognized the need for the fee to be adjusted periodically to keep pace with inflation. The legislation indicated that in January 2000, and every two years thereafter, the State Allocation Board would increase the maximum fees according to the adjustment for inflation in the statewide index for school construction.

As previously stated, new or expanded 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 3.12 and 3.14 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.

Potential environmental impacts associated with the future construction of government facilities within the Plan Area are addressed throughout this EIR. This EIR analyzes the physical environmental effects that may occur as a result of development and introduction of new urban land uses within the Plan Area. Each future facility, if constructed, would fall within the range of environmental impacts disclosed in this EIR, and would be subject to relevant policies and actions included in this EIR. It is noted, however, that development of facilities within the Planning Area may also contribute to impacts described throughout this DEIR.

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. No new facilities are proposed at this time and any new facilities would be subject to site specific environmental reviews as required by CEQA and would be subject to all local and State requirements. Therefore, impacts related to the provisions and need for public facilities are ***less than significant***.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS**PUBLIC FACILITIES AND SERVICES ELEMENT POLICIES**

- PFS-1.1 Service Enhancements. Encourage the implementation of new techniques and technologies to provide the best available level of community services in a cost-effective manner.
- PFS-1.2 Evaluation of City Services and Programs. Evaluate existing city services and programs and compare the efficiency and net results of providing the programs and services.
- PFS-1.3 Public Facility Plans. Maintain and implement 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 the city.
- PFS-1.4 Revenue Sources. Identify and proactively pursue local, stable, and predictable sources of revenue to meet public facility, service, and infrastructure needs.
- PFS-1.6 Capital Improvements. Maintain and fund the capital improvement program to ensure the adequate and efficient provision of public facility and municipal improvements.
- PFS-1.7 Comprehensive Approach. Encourage the comprehensive, rather than piecemeal, development of public facilities and services.
- PFS-1.8 Cost Recovery. Recover the direct upfront costs and indirect long-term costs of providing services and facilities to new development through a combination of fees, exactions, and other methods based on an evaluation of long-term economic benefits and in a manner consistent with the City's cost recovery goals.
- PFS-1.9 Economic Development and Residential Growth Focus. Plan and develop public services and facilities to support economic development and residential growth.
- PFS-1.12 Infrastructure Rehabilitation. Prioritize the regular maintenance and rehabilitation of public facilities and critical infrastructure in Lathrop.
- PFS-1.13 Demonstrate Capacity. Require new development to demonstrate that the City's public services and facilities can accommodate the increased demand for said services and facilities associated with the project as part of the entitlement process.
- PFS-1.14 Mitigate Impacts. Require new development to offset or mitigate impacts to community services and facilities to ensure that service levels for existing users are not degraded or impaired by new development, to the satisfaction of the City.
- PFS-7.1 Fire and Police Facilities. Encourage the Lathrop Manteca Fire Protection District (LMFD) to maintain adequate staff and equipment to provide efficient, high quality, and responsive fire protection, and emergency medical services to existing and future growth in the city.
- PFS-7.2 Emergency Response Times. Work cooperatively with the LMFD and providers of emergency medical services to ensure acceptable response times in accordance with provider standards.

3.13 PUBLIC SERVICES AND RECREATION

PFS-7.3 Enhanced Service. Periodically review and, if necessary, amend the criteria for determining the circumstances under which fire, police, and emergency services will be enhanced.

PFS-7.4 Roadway Design and Maintenance. Design and maintain roadways to maintain acceptable emergency vehicle response times.

PFS-7.5 Department Consultation. Coordinate with LMFD and the Lathrop Police Department in the review of new development applications to ensure that adequate attention is being paid to fire and safety concerns during the design and planning of a project.

PFS-7.6 Crime Prevention. Promote and support community-based crime prevention programs, such as community policing, public education, youth crime prevention, and outreach programs, as an important tool to the provision of professional police services.

PFS-7.7 Community Awareness. Support the LMFD and the Lathrop Police Department in promoting community awareness regarding crime through public service organizations, and the establishment of citizen involved programs and patrols.

PFS-7.8 Site Design. Recognize the role of site design in crime prevention and implement best practices into existing plans and new development strategies.

PFS-7.9 Technology. Encourage and support efforts to improve police, fire, and emergency medical services through improved use of modern technology and industry best practices.

PFS-8.2 Adequate Facilities. Continue to engage Manteca Unified School District (MUSD) and the Banta Unified School District (BUSD) in the planning process for land use changes so that they can provide adequate educational opportunities for all students in a timely manner in accordance with the pace of residential development.

PFS-8.3 School Siting. Continue to work with the local school districts to ensure that adequate sites are designated and facilities are planned to accommodate new residential development, with a focus on providing neighborhood schools that address the following:

A. School locations are encouraged to be located near complimentary uses to contribute to the neighborhood character and provide opportunities for joint-use, including capacity to accommodate a broad range of programs and services and augment neighborhood parks and recreation facilities.

B. School districts are encouraged to comply with City standards in the site design and landscaping of school facilities.

PFS-8.4 Joint-Use of Facilities. Encourage the MUSD and BUSD to consider the joint-use of its facilities to support the provision of civic, cultural, and recreational uses in a cost-effective manner.

PFS-8.5 Financing and Proportionate Share. Encourage the local school districts to properly collect required development fees so that new development funds its proportionate share of the Districts' costs for new school facilities.

PUBLIC SAFETY ELEMENT POLICIES

- PS-2.2 Fire Protection Services. Coordinate with the Lathrop Manteca Fire Protection District (LMFD) in the provision of fire protection services to serve the city's current and future population and development.
- PS-2.6 Water Supply. Ensure that new development is served with adequate water volumes and water pressure to support fire protection, including minimum required fire flow standards for commercial, industrial and residential areas.
- PS-2.10 Interagency Support. Participate in the mutual aid system and automatic aid agreements to back up and supplement capabilities to respond to emergencies, including plans for emergency backup power sources for critical facilities due to electricity outages.

PUBLIC FACILITIES AND SERVICES ACTIONS

- PFS-1a Regularly coordinate with outside service providers and other agencies regarding their public facility plans and provide local input on goals, objectives, and projects.
- PFS-1b Maintain records regarding the quality and status of public facilities and critical infrastructure and use this information to inform the capital improvement planning process.
- PFS-1c After conducting a comprehensive needs assessment, establish priorities and funding mechanisms for projects and improvements to public and community facilities and buildings. The priority setting process should include a public outreach and participation component, and should assess needs and opportunities associated with community buildings and specific needs identified by the public and the City Council.
- PFS-1d Periodically review the fee schedules for water and sewer connections, city facilities and major equipment, and development impact fees and revise fees as necessary to maintain acceptable service levels.
- PFS-1e Require new development to pay its fair share of the cost of on and offsite community services and facilities that are necessary to serve the new development project.
- PFS-7b The LMFD and the Public Works Department will review proposed development projects and street networks to evaluate the accessibility for fire engines and other emergency response functions.
- PFS-7c The Lathrop Police Department will review proposed development projects to evaluate the incorporation of crime prevention through environmental design (CPTED) principles. The Department should establish review standards to ensure consistent project review.
- PFS-8a Continue to refer projects to the MUSD and the BUSD during the development review process to obtain the school districts' input on future school site facilities identified in their School Facilities Master Plan, that may be necessary to meet the project's demand.
- PFS-8c Pursue joint-use agreements with schools, social service agencies, cultural institutions, and other community organizations to extend library and other public services to populations that may otherwise not be served.

3.13 PUBLIC SERVICES AND RECREATION

PUBLIC SAFETY ELEMENT ACTIONS

PS-2d As part of the City's development review process for new projects:

A. The City will continue to refer applications to the LMFD for determination of the projects' potential impacts on fire protection services. Requirements will be added as conditions of project approval, if appropriate.

B. The Planning Commission, the LMFD, and the City Engineer will review proposed street patterns to evaluate the accessibility for fire and emergency response.

PS-2e Participate in Mutual Aid Agreements with Manteca, other agencies within San Joaquin County, and the State of California, as required by the LMFD.

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, as required to maintain the City adopted standard for park space acreage at 5.0 acres for every 1,000 residents (as required by General Plan Policy RR-1.3). 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/Quasi-Public, Park, and Open Space Land use designations.

Because the entire City of Lathrop is designated as a disadvantaged community under the SB 1000 guidelines, the current distribution of park acreage per 1,000 residents for the entire City of Lathrop is an appropriate indicator of adequate park space and access. The California Statewide Park Program (Public Resources Code §5642) defines underserved communities as having a ratio of less than three acres of parkland per 1,000 residents. This measure identifies areas where

surrounding population density may overwhelm limited park space. The city has approximately 105.7 acres of parkland. Therefore, with a 2020 population of approximately 28,701 the current distribution of park acreage per 1,000 residents is 3.68, which is above the Statewide Park Program standard.

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 66,562. 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 332 acres of 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.

Potential environmental impacts associated with the future construction of park facilities within the Planning Area are addressed throughout this EIR. This EIR analyzes the physical environmental effects that may occur as a result of development and introduction of new urban land uses within the Plan Area. Each future park, if constructed, would fall within the range of environmental impacts disclosed in this EIR, and would be subject to relevant mitigation measures included in this EIR.

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 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 3.12, 3.14 through 3.16, and 4.0) of this Draft EIR. As discussed in Chapters 3.1 through 3.12 and 3.14 through 3.16 and 4.0, the proposed General Plan includes policies and actions that are specifically designed to minimize or avoid environmental impacts from construction and development, which includes parks and recreational facilities. There are no additional 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 and mitigation measures as appropriate.

Therefore, impacts related to the provisions and need for park and recreational facilities are considered *less than significant*.

GENERAL PLAN POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

RECREATION AND RESOURCES ELEMENT POLICIES

RR-1.3 Acreage Requirements. Maintain the City adopted standard for park space acreage at 5.0 acres for every 1,000 residents, including:

- A. 2.0 acres for every 1,000 residents for neighborhood parks; and
- B. 3.0 acres for every 1,000 residents for community parks.

RR-1.9 Surplus Public Agency Lands. Utilize the City's Naylor Act rights and other funding mechanisms to acquire and/or lease surplus school land and other appropriately located surplus public agency lands for open space, parks, and recreation facilities as they become available.

RR-1.12 Funding. Continue to pursue funding from established sources and explore non-traditional funding options and innovative partnerships to bolster and support the development, improvement, and maintenance of City parks and recreational amenities.

RECREATION AND RESOURCES ELEMENT ACTIONS

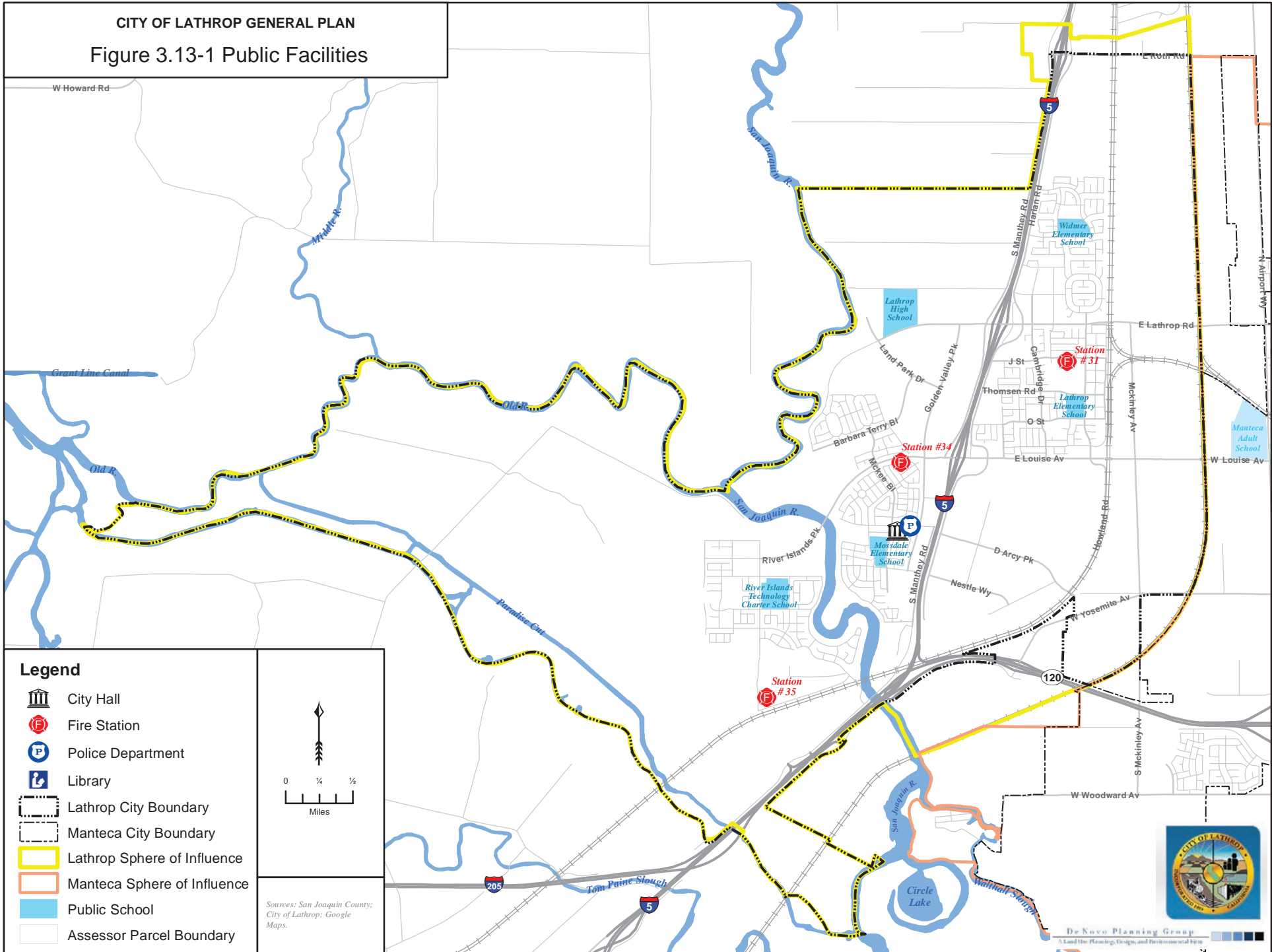
RR-1a Implement and update as necessary the City of Lathrop Parks and Recreation Master Plan and the River Islands Parks and Recreation Master Plan.

RR-1b Pursue available resources to fund facilities and parkland maintenance, acquisition, and/or development such as General Fund, private donations, gifts and endowments, special districts, and federal and state grants.











RR-1f Periodically review and update the park in-lieu fee ordinance as-necessary to better reflect current costs and needs to address park demand generated by infill development.

RR-1g Periodically review and update the fees charged for facility rentals, recreation programs, and other activities to ensure that they are appropriate, equitable, and meet the City's cost recovery goals.

CITY OF LATHROP GENERAL PLAN
Figure 3.13-1 Public Facilities



Legend

-  City Hall
-  Fire Station
-  Police Department
-  Library
-  Lathrop City Boundary
-  Manteca City Boundary
-  Lathrop Sphere of Influence
-  Manteca Sphere of Influence
-  Public School
-  Assessor Parcel Boundary



Sources: San Joaquin County;
 City of Lathrop; Google
 Maps.



De Novo Planning Group
 A Land Use Planning, Design, and Environmental Firm

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This chapter describes the potential impacts to the multi-modal transportation system associated with the proposed General Plan. The impact analysis examines the vehicular, transit, bicycle, and pedestrian components of the City’s transportation system. To provide context for the impact analysis, an overview of the circulation network’s setting, with descriptions of each transportation mode, is presented first. Following the environmental setting, an overview of the regulatory framework, influencing the transportation system and providing the basis for impact significance thresholds used in the impact analysis, is presented. The chapter concludes with the impact analysis findings and recommended mitigation measures.

With the implementation of Senate Bill (SB) 743, local agencies may no longer rely on vehicular delay or capacity-based analyses for California Environmental Quality Act (CEQA) impact determination. Instead, agencies must analyze transportation impacts utilizing vehicle miles traveled (VMT), a measure of the total distance traveled by vehicles for trips beginning or ending in Lathrop on a typical weekday. VMT impacts are calculated and assessed using an efficiency metric (for example, VMT per household for residential projects or per employee for commercial projects). This is a change from the prior method of analyzing transportation impacts, which measured level of service (LOS) at intersections and roadway segments, using grades from LOS A to LOS F. While SB 743 does not allow LOS to be used to measure transportation impacts under CEQA, it may still be included in goals and policies in a local agency’s general plan.

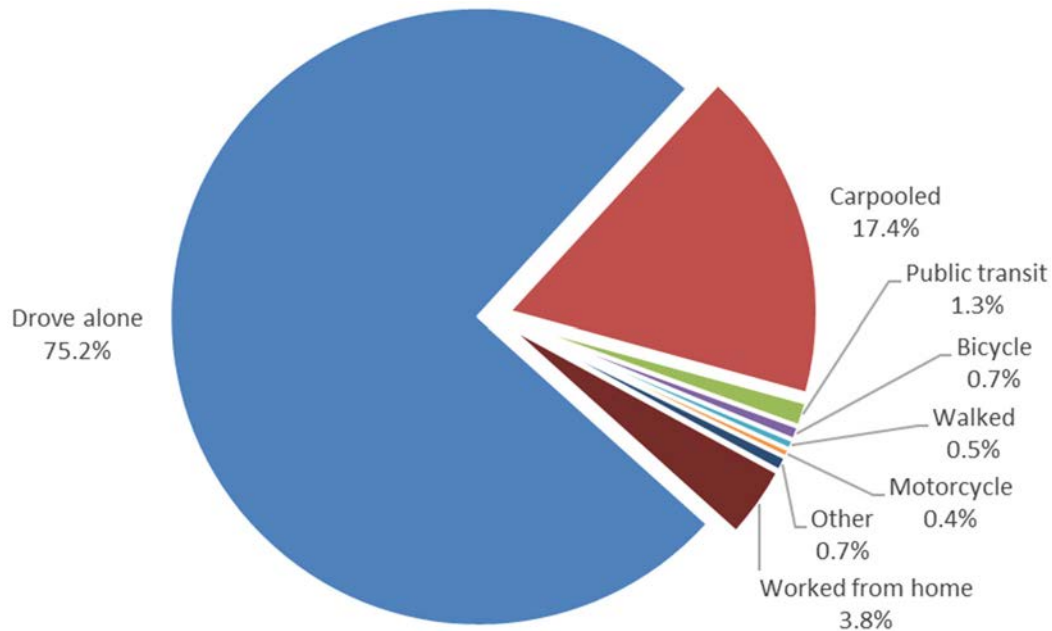
Transportation-related comments were received during the public review period for the Notice of Preparation from the San Joaquin Valley Air Pollution Control District, including comments about strategies to reduce VMT. The proposed General Plan Circulation Element policies support these strategies. Comments were also received about truck routes and truck traffic. The proposed General Plan Land Use, Circulation, and Noise elements address these issues. Full comments received are included in Appendix A.

3.14.1 ENVIRONMENTAL SETTING

This section provides a contextual background to the City’s existing transportation system, representing conditions prior to the onset of the COVID-19 pandemic, which has had enormous impacts on travel behavior. The General Plan addresses the overall planning and development of the circulation system for residents and visitors in a multi-modal framework. Transportation system components include the roadway network, public transportation system, bicycle and pedestrian system, and goods movement.

The City of Lathrop is located within California’s Central Valley in the southern portion of San Joaquin County. Interstate 5 (I-5) connects Lathrop to Stockton and Sacramento to the north and Los Angeles to the south. I-205 connects Lathrop to Tracy and the Bay Area to the west. State Route (SR) 120 connects Lathrop to Manteca, SR 99, foothill communities, and Yosemite National Park to the east. SR 99 also connects to Modesto and Fresno to the south.

3.14 CIRCULATION



Data from the 2021 California Department of Finance (DOF) Population and Housing Estimate Report and 2019 American Community Survey (ACS) Five-Year Estimates were utilized to illustrate journey to work (JTW) statistics for Lathrop. According to the DOF, Lathrop's population was estimated to be 26,806 people in 2020. The ACS estimates Lathrop had 9,480 employed residents 16 years of age or older. The ACS also reports that the majority of workers living in Lathrop, 75.2 percent, drove to work alone, whereas other modes of transportation accounted for approximately 21 percent of commute trips, with 17.4 percent of workers in carpools, 1.3 percent using public transit systems, 0.5 percent of commuters walking to work, 0.7 percent bicycling to work, and 3.8 percent of workers working at home. Approximately 92.6 percent of Lathrop's employed residents commute by automobile (including taxicabs) or motorcycle. It should be noted that these only represent home-based work trips, which represents approximately 12% of all trips made per household, according to the California Household Travel Survey.

Table 3.14-1 provides an overview of Lathrop's JTW mode split data compared to countywide statistics for San Joaquin County and the State of California.

TABLE 3.14-1: DEMOGRAPHIC AND JOURNEY TO WORK DATA

MEASURE	LATHROP		SAN JOAQUIN COUNTY		CALIFORNIA	
Population ¹	26,806		773,505		39,648,938	
Employed persons ²	9,480		303,147		18,191,555	
MODE SPLIT	NUMBER	PERCENTAGE	NUMBER	PERCENTAGE	NUMBER	PERCENTAGE
Drove alone	7,126	75.2%	238,729	78.8%	13,411,041	73.7%
Carpooled	1,652	17.4%	39,088	12.9%	1,841,632	10.1%
Public transit	120	1.3%	5,055	1.7%	923,834	5.1%
Bicycle	67	0.7%	1,228	0.4%	173,081	1.0%
Walked	48	0.5%	4,164	1.4%	476,291	2.6%
Motorcycle	40	0.4%	565	0.2%	58,407	0.3%
Other	71	0.7%	1,890	0.6%	233,303	1.3%
Worked from home	356	3.8%	12,428	4.1%	1,073,966	5.9%

¹POPULATION DATA FOR 2020 OBTAINED FROM 2021 CALIFORNIA DEPARTMENT OF FINANCE POPULATION AND HOUSING ESTIMATE REPORT.

²EMPLOYMENT AND MODAL CHOICE DATA OBTAINED FROM 2019 AMERICAN COMMUNITY SURVEY 5-YEAR ESTIMATES.

SOURCE: FEHR & PEERS, 2021.

Based on 2019 estimates, the ACS also reports characteristics of Lathrop's employed residents 16 years of age or older. Of these workers, 14.6 percent or 1,384 work within Lathrop, 41.6 percent or 3,944 work within San Joaquin County but outside of Lathrop, and 43.7 percent or 4,143 work in other California counties. The mean travel time to work is 44.1 minutes, and 33.9 percent of residents have a travel time of 60 minutes or longer.

The US Census OnTheMap reported 10,526 jobs within Lathrop in 2019. According to OnTheMap, about 576 of these jobs were staffed by people living within Lathrop (lower than the ACS estimate above), and 9,950 were staffed by people living outside of Lathrop.

Additionally, Lathrop had 6,898 occupied households with an average of 3.88 persons per household as of January 1, 2020, according to the 2021 California DOF Population and Housing Estimate Report.

ROADWAY SYSTEM

This section describes the physical characteristics of Lathrop's roadway network. Figure 3.14-1 shows the roadway classification system in Lathrop. Figure 3.14-2 shows the number of lanes on arterials and collectors.

State Highways

Three highways operated and maintained by Caltrans pass through Lathrop: I-5, I-205, and SR 120.

I-5 is a six-lane freeway running through the center of the City. I-5 is a primary route connecting the City of Lathrop with Stockton and Sacramento to the north and Los Angeles to the south. I-5 has interchanges with I-205 and SR 120 in the southern portion of the City. I-5 has interchanges at the following City streets:

- Roth Road
- Lathrop Road
- Louise Avenue

- Mossdale Road (northbound access only)
- Manthey Road (southbound access only)

I-205 is a six-lane freeway that has an interchange with I-5 at its east terminus in the southern portion of the City. To the west, I-205 connects to Tracy and the Bay Area.

SR 120 is a four-lane freeway that has an interchange with I-5 at its west terminus in the southern portion of the City. It continues through Manteca and has an interchange at Yosemite Avenue, serving eastern sections of Lathrop. A new interchange is planned at McKinley Avenue within the City limits of Manteca. SR 120 connects with SR 99 about six miles east of I-5, where it continues as an arterial east of SR 99 and as an expressway east of the Manteca City Limit. To the east, SR 120 connects to Yosemite National Park and the Sierra.

Arterials

Arterial streets are designed to serve through traffic and major local traffic generators such as residential, commercial, industrial, and institutional uses. (Traffic volumes provided for each segment below are based on counts collected by National Data and Surveying Services on April 3-4 or 17-18, 2018.)

Lathrop's north-south arterials are described below:

Manthey Road is a two-lane road within the City. North of the City, Manthey Road operates as a two-lane rural highway, passing primarily through agricultural and industrial uses before connecting to Stockton. Manthey Road continues south and terminates at Spartan Way/Lathrop Road, then resumes again just north of Louise Avenue as a dead-end road serving local access. Manthey Road resumes once again at Town Centre Drive until it terminates in a rural agricultural area just south of the City Limit. Between Town Centre Drive and Stewart Road, Manthey Road carries approximately 2,700 vehicles per day.

Harlan Road is a two-lane road, with a three-lane section between Slate Street and Shilling Avenue, that begins north of the City at French Camp Road, passes through rural agricultural, residential, and industrial uses before entering the City just north of Roth Road. Harlan Road ends just north of SR 120. South of Lathrop Road, Harlan Road carries approximately 11,400 vehicles per day.

McKinley Avenue is a two-lane road that begins at Lathrop Road and continues through the City until it ends at Woodward Avenue south of the City Limit. South of Louise Avenue, McKinley Avenue carries approximately 4,800 vehicles per day.

Golden Valley Parkway is a primarily six-lane road that currently begins at Lathrop Road/Spartan Way and ends at Brookhurst Boulevard. South of River Islands Parkway, Golden Valley Parkway carries approximately 6,500 vehicles per day.

Somerston Parkway is a road that begins as two lanes at Riverfront Drive, becomes four lanes at River Islands Parkway and ends just south of Mariners Drive. North of Mariners Drive, Somerston Parkway carries approximately 1,100 vehicles per day.

Lathrop's east-west arterials are described below:

Roth Road is a two-lane road that begins at Manthey Road and ends at Airport Way east of the City Limit. Between I-5 and Harlan Road, Roth Road carries approximately 17,200 vehicles per day.

Spartan Way/Lathrop Road begins as a two-lane road at Barbara Terry Boulevard and becomes a four-lane road at Crespi Street and ends as Spartan Road at Golden Valley Parkway (GVP). Lathrop Road continues east of GVP as a four-lane road over the two Union Pacific Railroad overcrossings, and continues into Manteca primarily as a two-lane road. Between I-5 and Harlan Road, Lathrop Road carries approximately 24,300 vehicles per day.

River Islands Parkway currently begins at Norbeck as a four-lane road. From Somerston Parkway to McKee Boulevard, it is two lanes. East of McKee Boulevard, the road widens to six lanes. At I-5, the road becomes Louise Avenue. West of Golden Valley Parkway, River Islands Parkway carries approximately 12,000 vehicles per day.

Louise Avenue is a four-lane road that begins at I-5 and continues to the eastern City Limit where it narrows to two lanes and continues into Manteca. Between I-5 and Harlan Road, Louise Avenue carries approximately 29,700 vehicles per day.

Lakeside Drive currently begins as a four-lane road at Dell'Osso Drive and becomes two lanes and a collector at Somerston Parkway. It continues until it becomes Stewart Road, which continues to Manthey Road. East of Parkside Drive, Lakeside Drive carries approximately 2,600 vehicles per day.

Yosemite Avenue begins as a four-lane road at Jefferson Way. It becomes primarily a two-lane road at SR 120 with a four-lane section near D'Arcy Parkway. It continues through the eastern City Limit into Manteca as two lanes. East of McKinley Avenue, Yosemite Avenue carries approximately 10,700 vehicles per day.

Traffic Volumes

Count data was collected for 44 study segments identified as those most critical to Lathrop's local circulation system and its connectivity to the regional transportation network. Data was collected on April 3-4 and 17-18, 2018, while schools were in session. No unusual traffic conditions were observed, and weather conditions were generally dry.

Figure 3.14-3 shows the existing average daily traffic (ADT) volumes for roadways within the City. ADT represents the total volume passing a point or along a segment of roadway, in both directions, on an average weekday.

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 and projected for a typical weekday when schools are in session. VMT values in this analysis represent the full length of a given trip and are not truncated at jurisdiction boundaries. Additionally, these VMT values are

3.14 CIRCULATION

for trips beginning or ending in the City (i.e., are associated with Lathrop land uses). Trips passing through the City without stopping are not included in these VMT estimates, as the City has little or no control over such trips.

VMT is used to measure performance of the existing transportation network and to evaluate potential transportation impacts. Although the absolute amount of VMT is typically reported, impact analysis is typically based on VMT expressed as an efficiency metric. VMT efficiency metrics, such as VMT per resident, VMT per employee, or VMT per dwelling unit, allow the VMT performance of different-sized projects to be compared. Such metrics provide a measure of travel efficiency and help depict whether people are traveling by vehicle more or less over time, across different areas, or across different planning scenarios. A per-dwelling-unit or per-employee decline in VMT compared to a baseline condition indicates that the transportation network is operating more efficiently.

The City of Lathrop Travel Demand Model, a trip-based model, was used to estimate VMT in the General Plan planning area. Table 3.14-2 shows the major land uses in the model for the 2020 baseline, which reflects modeling to incorporate development into 2020.

TABLE 3.14-2: EXISTING CONDITIONS MODEL MAJOR LAND USE

LAND USE	UNITS	2020 BASELINE
Single family	Dwelling Units	6,201
Multi family	Dwelling Units	217
Age restricted	Dwelling Units	249
Restaurant	Employees	344
Industrial	Employees	6,384
Office	Employees	1,023
Retail	Employees	659

SOURCE: FEHR & PEERS, 2021

It is noted that inherent potential limitations exist when using a future year travel demand model as changes in travel behavior and transportation systems are expected to occur in response to emerging trends, new technologies, and evolving user preferences. Some of these new travel options and technologies are discussed below. Additionally, information about how technology is affecting travel is accumulating over time. Some of these emergent changes that could influence future travel forecasts include:

- Substitution of internet shopping and home delivery for some shopping or meal-related travel.
- Substitution of telework for commute travel.
- New travel modes and choices. Transportation networking companies (TNCs), such as Uber and Lyft), have increased the travel options available to travelers and have contributed to changes in traditional travel demand relationships. Additional options such as car share, bike share, scooter share, and on-demand micro transit are also emerging.
- Automated and connected vehicles.
- Long-term effects of the COVID-19 pandemic.

Like most models, the Lathrop travel demand model does not explicitly capture the above-mentioned new modes of travel and emerging trends in travel behavior. Significant uncertainties exist at the present time that prevent explicit modeling of these new modes and emerging trends for the analysis of the General Plan. However, since VMT is a “relative efficiency” metric, to the extent that these trends could cause systematic changes across the City and beyond, uncertainties in these effects effectively cancel each other out when comparing VMT efficiency for a given horizon period.

Two measures of VMT are used in this analysis:

- **VMT per dwelling unit, for residential land uses.** Includes VMT for trips produced by a dwelling unit’s residents, such as to work, school, or shop, and with one end of the trip at the home, on a typical weekday.
- **VMT per employee, for non-residential land uses.** Includes all trips with one end at the land use, including employees, customers, and deliveries, on a typical weekday. (Note that this ratio is different than the VMT generated by each employee, as the latter only includes trips made by employees).

VMT per dwelling unit is used because the model uses dwelling units as an input. VMT per resident estimates can be made based on estimates of residents per household.

VMT estimates for the 2020 baseline conditions are shown in Table 3.14-3. In addition to the two metrics presented above, additional metrics are reported for information.

With respect to the residential uses, it is reasonable to expect that multi-family dwelling units would generate about three-quarters of the VMT of single-family dwelling units, as the ratio of their daily trip generation rates is in that range. Additionally, socioeconomic characteristics likely play a role, with single-family units having a propensity for longer distance commute trips.

Regarding the non-residential uses, the most common use types are shown including retail, office, industrial, and restaurants. Although schools, churches, parks, etc. are also present within Lathrop, proposals for new construction are relatively rare and should be evaluated on a case-by-case basis. Additionally, the VMT per employee reported here does not only reflect the actual amount of travel by each employee but is a ratio of that land use’s total amount of travel (by all users including employees, customers, visitors, and deliveries) divided by employees. The VMT reported here represents all vehicle trips, from origin to destination, associated with the land use, including portions of the trip outside of the study area, in accordance with OPR Technical Advisory guidance (described in the Regulatory Framework section). Air quality, GHG, and energy analysis are based on a different measure of VMT, only including travel within the study area, to determine the impact of the city’s mobile emissions, as described in those resource sections. Readers should refer to those resource sections for more information about how the plan’s travel characteristics affect those specific topics. Because each section is focused on a specific environmental effect with its own specific metrics, thresholds, or significance criteria, it is possible to have a different conclusion for transportation impacts than other resource topics that also reference plan-related travel.

3.14 CIRCULATION

TABLE 3.14-3: VMT, BASELINE CONDITIONS

<i>LAND USE</i>	<i>UNITS</i>	<i>2020 BASELINE CONDITIONS</i>
Single family residential	VMT per dwelling unit	111.5
Multi-family residential	VMT per dwelling unit	86.0
Age restricted residential	VMT per dwelling unit	47.5
Restaurant	VMT per employee ¹	215.2
Industrial	VMT per employee	77.8
Office	VMT per employee	36.5
Retail	VMT per employee	135.3
All residential	VMT per dwelling unit	108.3
All residential	VMT per resident ²	27.9
All employment	VMT per employee	85.8
All land uses	VMT per service population ^{2,3}	42.9
Total VMT	VMT	1,497,700

NOTES: ¹VMT PER EMPLOYEE RATIOS INCLUDE ALL TRIPS BY EMPLOYEES, CUSTOMERS, VISITORS, AND DELIVERIES

²BASED ON 3.88 RESIDENTS/DWELLING UNIT (CALIFORNIA DEPARTMENT OF FINANCE, E-5 CITY/COUNTY POPULATION AND HOUSING ESTIMATES, 1/1/2021)

³SERVICE POPULATION INCLUDES RESIDENTS AND EMPLOYEES

⁴VMT INCLUDES FULL LENGTH OF ALL TRIPS WITH EITHER AN ORIGIN OR DESTINATION WITHIN THE PLANNING AREA.

SOURCE: FEHR & PEERS, 2021

Safety

Collision history data for injury collisions in the Lathrop planning area, excluding freeways, was retrieved for the years 2016-2020 inclusive. Table 3.14-4 displays this data by year for all injury collisions and those involving pedestrians, bicyclists, or trucks. History of collisions involving killed or seriously injured (KSI) victims is presented in Table 3.14-5. Collision heatmaps for all collisions and KSI collisions both within and outside of the sphere of influence are shown in Figures 3.14-4 and 3.14-5. Maps of collisions involving pedestrians, bicyclists, or trucks are shown in Figures 3.14-6 to 3.14-8. As shown, most collisions occur on arterials.

Over the period shown, an average of 39 injury collisions and 4.4 KSI collisions per year within the Lathrop sphere of influence (within the red planning area boundary in Figures 3.14-4 to 3.14-8) (excluding freeways) were reported. Of the baseline weekday VMT presented in Table 3.14-3, about 323,663 occurred within the planning area. These collisions equate to approximately 0.00000047 annual injury collision and 0.00000040 KSI collision per mile of driving. In other words, one injury collision could be expected for every 2.3 million miles of driving. This ratio emphasizes that injury collisions are relatively infrequent when viewed in the context of total driving in the city.

About 8 percent of all pedestrian collisions and no bicyclist collisions resulted in severe injuries or fatalities. For comparison purposes, within all of San Joaquin County (excluding State highways), KSI collisions comprised about 24 percent of pedestrian collisions and 16 percent of bicyclist collisions. Thus, the severity of collisions involving bicyclists and pedestrians in the city is lower than in the county, perhaps due to slower travel speeds and more frequent use of bicycle and pedestrian facilities within the city.

TABLE 3.14-4: INJURY COLLISIONS, 2016-2020

YEAR	ALL	PEDESTRIAN	BICYCLIST	TRUCK
2016	35	3	1	0
2017	51	2	4	3
2018	43	4	0	3
2019	45	4	3	4
2020	23	0	0	0
<i>Total</i>	197	13	8	10

SOURCE: UC BERKELEY TRAFFIC INJURY AND MANAGEMENT SYSTEM, 2022

NOTE: 2020 DATA PRELIMINARY

TABLE 3.14-5: KILLED OR SERIOUS INJURY COLLISIONS, 2016-2020

YEAR	ALL	PEDESTRIAN	BICYCLIST	TRUCK
2016	3	0	0	0
2017	2	0	0	1
2018	2	0	0	1
2019	6	1	0	0
2020	4	0	0	0
<i>Total</i>	17	1	0	2

SOURCE: UC BERKELEY TRAFFIC INJURY AND MANAGEMENT SYSTEM, 2022

NOTE: 2020 DATA PRELIMINARY

Table 3.14-6 displays the primary collision factors associated with this history. Unsafe speed was the top factor.

TABLE 3.14-6: PRIMARY COLLISION FACTOR, 2016-2020

PRIMARY COLLISION FACTOR	ALL INJURY COLLISIONS		KILLED OR SERIOUS INJURY COLLISIONS	
	NUMBER	SHARE	NUMBER	SHARE
Unsafe Speed	61	31.0%	5	29.4%
Automobile Right of Way	31	15.7%	2	11.8%
Traffic Signals and Signs	27	13.7%	2	11.8%
Improper Turning	26	13.2%	2	11.8%
Driving or Bicycling Under the Influence of Alcohol or Drug	15	7.6%	2	11.8%
Wrong Side of Road	10	5.1%	2	11.8%
Pedestrian Violation	9	4.6%	1	5.9%
Other Improper Driving	5	2.5%	0	0.0%
Other	13	6.6%	1	5.9%
<i>Total</i>	197	100.0%	17	100.0%

SOURCE: UC BERKELEY TRAFFIC INJURY AND MANAGEMENT SYSTEM, 2022

NOTE: 2020 DATA PRELIMINARY

PUBLIC TRANSPORTATION SYSTEM

Bus Transit Operations

The San Joaquin Regional Transit District provides connections from Lathrop to Stockton, and Dublin/Pleasanton, and other destinations in San Joaquin County.

SAN JOAQUIN REGIONAL TRANSIT DISTRICT

Route 90 connects Lathrop to Stockton and Tracy with service weekdays, once in the morning and once in the afternoon both northbound and southbound. A stop is provided on Louise Avenue at Harlan Road and 5th Street at the Lathrop Community Center.

Route 150 provides commuter service from Lathrop to the Dublin/Pleasanton BART station with seven departures every day. One stop is provided at the Lathrop Crossing Shopping Center on Harlan Road south of Lathrop Road.

The San Joaquin Regional Transit District has mounted exterior bicycle racks or cargo area bicycle storage on all fixed route interregional buses.

Van Go! on-demand rideshare service provides travel anywhere within the county with a 48-hour reservation from 8 AM to 5 PM seven days a week.

PARATRANSIT

San Joaquin Regional Transit provides paratransit, also known as dial-a-ride or door-to-door service, for people who are unable to independently use the transit system due to a physical or mental disability. Individuals must be registered and certified as ADA eligible before using the service. Paratransit operators are required by the ADA to service areas within three-quarters of a mile of their respective, public fixed-route service. Service hours are Monday through Friday from 5:40 AM to 9:55 PM and weekends and holidays from 8:00 AM to 7:04 PM. Ride reservations must be made one to two days in advance.

Route 90 is a Hopper service route, which replaces paratransit service during Hopper service hours. These routes will deviate up to three-quarters of a mile for certified passengers not able to reach their fixed route stops. Ride reservations must be made one to two days in advance.

Taxi Services

Taxi service in Lathrop is provided by private operators that serve the city and the greater San Joaquin County area. Taxi service is available 24 hours a day, seven days a week by calling in a service request.

Transportation Networking Companies

Lyft and Uber provide connections to local and regional destinations. Availability varies depending on driver availability, and service may not be available at all times. Service is requested by smartphone applications for each provider.

Altamont Corridor Express Rail Transit

The Altamont Corridor Express (ACE) rail service connects Lathrop to San Jose and the Bay Area and also connects Stockton to Lathrop. During weekdays, four westbound trains serve Lathrop between 4:29 AM and 7:51 AM and four eastbound trains serve Lathrop between 5:23 PM and 8:26 PM. The Lathrop/Manteca station is located on Shideler Parkway at Yosemite Avenue (just east of McKinley Avenue). ACE trains allow bicycles on designated passenger train cars.

The Amtrak Thruway Bus service also provides connections weekdays from the ACE station to the Stockton Amtrak station. Most buses require storing the bicycle in the baggage storage compartment underneath the bus.

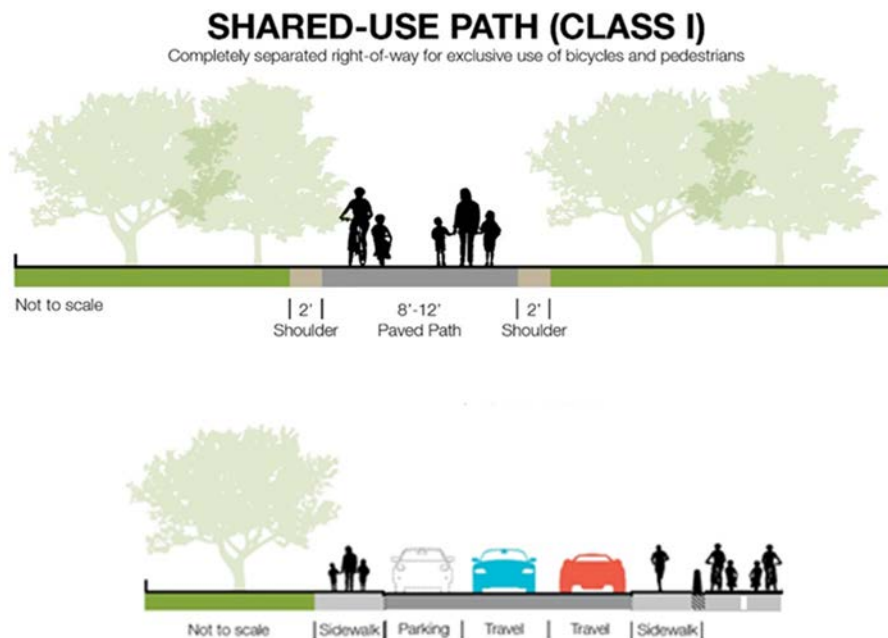
BICYCLE AND PEDESTRIAN SYSTEM

The following section describes the bicycle and pedestrian network in Lathrop.

Bicycle Facilities

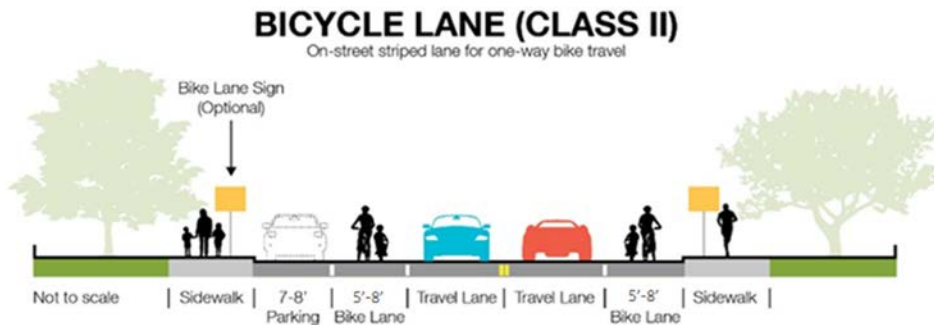
Bicycle facilities in Lathrop are categorized into three types as described and depicted in illustrations below. Note that while the graphics include typical widths for the various facilities, the exact configuration of a bike facility may vary depending on its location.

- Class I Bikeway (Bike Path):** Also known as a shared-use path or multi-use path, a bike path is a paved right-of-way for bicycle travel that is completely separate from any street or highway.



3.14 CIRCULATION

- **Class II Bikeway (Bike Lane):** A striped and stenciled lane for one-way bicycle travel on a street or highway. This facility could include a buffered space between the bike lane and vehicle lane and the bike lane could be adjacent to on-street parking.



- **Class III Bikeway (Bike Route):** A signed route along a street where the bicyclist shares the right-of-way with motor vehicles. This facility can also be designated using a shared lane marking (sharrow).



Bicycle facilities in Lathrop include the following:

- Class I shared-use bike paths:
 - Some sections of Golden Valley Parkway, Spartan Way, River Islands Parkway, Lakeside Drive, and Somerston Parkway
 - North side of Lathrop Road between Harlan Road and 5th Street
- Class II bike lanes:
 - Eastbound Thomsen Road from Derby Lane to just west of Halmar Lane
 - 5th Street from Lathrop Road to H Street and from J Street to Louise Avenue
 - Lathrop Road from 5th Street to eastern City Limit
 - Somerston Parkway south of River Islands Parkway
 - River Islands Parkway west of McKee Boulevard (eastbound only between McKee Boulevard and Somerston Parkway)

- Spartan Way from Golden Valley Parkway to north of Hidden Cove Drive
- McKee Boulevard from Town Centre Drive to Brookhurst Boulevard
- Lakeside Drive east of Somerston Parkway is currently signed for bike lanes but bike lanes are not striped. Lakeside Drive west of Stewart Road is partially signed as a Class III bike route.

In general, most Lathrop schools, parks, and public buildings are equipped with bike racks for short-term bicycle parking. Section 17.76.120 of the Lathrop Municipal Code specifies bicycle parking requirements, including number of spaces and locations.

Pedestrian Facilities

Pedestrian facilities include sidewalks, crosswalks, pedestrian signal infrastructure, curb ramps, and streetscape amenities. Most developed arterial streets in Lathrop provide sidewalk coverage, accessible curb ramps, and marked crosswalks. Sidewalks are also provided in most of Lathrop's single-family residential neighborhoods, in multi-family residential developments, and in commercial developments.

While the pedestrian network is generally well developed in Lathrop, there are some locations where gaps in the sidewalk network can be found. In general, facilities along developing arterials vary depending on the level of development along the street. In some locations where adjacent parcels have not been developed, the street is not fully built-out and hence sidewalks have not been constructed.

GOODS MOVEMENT

Goods movement in Lathrop is accomplished by truck and rail.

Truck Routes

Several local Surface Transportation Assistance Act (STAA) truck routes exist within Lathrop. STAA routes have specific signage and are designed with street widths, curb return radii, and other features to accommodate STAA trucks, which have longer wheelbases than other trucks. According to the City of Lathrop Truck Route Map, the following streets are STAA truck routes within Lathrop:

- Harlan Road
- Howland Road
- Roth Road
- Lathrop Road between Manthey Road and Harlan Road
- Louise Avenue approximately 700 feet west of the Union Pacific Railroad
- D'Arcy Parkway
- McKinley Avenue from Louise Avenue about 1,000 feet north
- Shideler Parkway
- Yosemite Avenue from Jefferson Way to Shideler Parkway
- Jefferson Way
- Glacier Way

Several other roads are designated as City truck routes:

- Manthey Road north of Lathrop Road and south of Towne Centre Drive

- Golden Valley Parkway
- Lathrop Road east of McKinley Avenue
- McKinley Avenue between Lathrop Road and Yosemite Avenue
- Murphy Parkway
- Tesla Drive
- Christopher Way
- Yosemite Avenue east of Shideler Parkway
- Louise Avenue west of Manthey Road approximately 700 feet east to the Union Pacific Railroad

Railroad Network

Additionally, goods movement in Lathrop and the region is supported by the Union Pacific Railroad which passes through the City and has an intermodal facility between Roth Road and Lathrop Road just east of the City limit. The BNSF Railway also passes through the City.

At-grade railroad crossings with advanced signage, flashing signals, and crossing arms exist on the following streets:

- Roth Road west of McKinley Avenue
- Roth Road at east city limit
- Louise Avenue west of McKinley Avenue
- Louise Avenue at east city limit
- D'Arcy Parkway east of Howland Road
- Yosemite Avenue at east city limit
- Tesla Drive west of Christopher Way
- McKinley Avenue south of Lathrop Road
- McKinley Avenue at south city limit
- Stewart Road west of Manthey Road

The crossings on Louise Avenue west of McKinley Avenue and on Stewart Road also include hardened centerlines up to the railroad tracks, and the crossing on D'Arcy Parkway includes center medians up to the railroad tracks, to physically restrict vehicles from crossing the tracks when arms are down.

Two at-grade railroad crossings of local railroad spurs serving industrial sites also exist on Howland Road. These crossings have signage only.

Safety

Collision history for injury collisions involving trucks is presented in the Roadway System section. As shown in Table 3.14-4, an average of two collisions per year involving trucks were reported from 2016 through 2020, inclusive. Of those collisions, an average of about 0.4 per year was serious in nature. One collision over that five-year period resulted in a fatality.

Collision history data for at-grade railroad crossings in the study area was retrieved from the Federal Railroad Administration Office of Safety Analysis for the years 2016-2020, inclusive. One collision was

reported. This collision, occurring in 2016, was due to a truck being stuck on the crossing on Roth Road west of McKinley Avenue. The driver was not in the vehicle at the time of the collision and no injuries were reported.

When considering the substantial volume of traffic traveling across these 10 crossing each year, and given that only one collision over the five-year period was reported, the rate of collisions at railroad crossings is extremely low.

3.14.2 REGULATORY SETTING

The City of Lathrop General Plan, along with regional, state, and federal plans, legislation, and policy directives, provide guidelines for the safe operation of streets and transportation facilities in Lathrop. While the City of Lathrop has primary responsibility for the maintenance and operation of transportation facilities within the City, Lathrop staff works on a continual basis with responsible regional, state, and federal agencies including the County of San Joaquin, the San Joaquin Council of Governments (SJCOG), the California Department of Transportation (Caltrans), the Federal Highway Administration (FHWA), and others, to maintain, improve, and balance the multi-modal transportation needs of the community and the region.

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

OPR General Plan Guidelines

The Governor's Office of Planning and Research (OPR) publishes General Plan Guidelines as for cities and counties developing their general plans. OPR released its updated guidelines in 2017, which includes legislative changes, new guidance, policy recommendations, external links to resource documents, and additional resources. For each general plan element, the guidelines discuss statutory requirements in detail, provide recommended policy language, and include examples of city and county general plans that have adopted similar policies.

Assembly Bill 32, Senate Bill 32, and Senate Bill 375

Assembly Bill (AB) 32, also known as the Global Warming Solutions Act of 2006, committed California to reducing greenhouse gas (GHG) emissions to 1990 levels by 2020. In 2016, Senate Bill (SB) 32 added a new target: reducing statewide emissions to 40 percent below 1990 levels by 2030.

SB 375 provides guidance for curbing emissions from cars and light trucks to help California comply with AB 32. There are five major components to SB 375:

- ARB will guide the adoption of GHG emission targets to be met by each Metropolitan Planning Organization (MPO) in the state. The MPO for Lathrop is SJCOG.
- MPOs are required to create a Sustainable Communities Strategy (SCS) that provides a plan for meeting these regional targets. The SCS must be consistent with the Regional Transportation Plan (RTP).
- Regional housing elements and transportation plans must be synchronized on eight-year schedules. Also, the SCS and Regional Housing Needs Assessment (RHNA) must be consistent with each other.
- CEQA is streamlined for preferred development types such as mixed-use projects and transit-oriented developments (TODs) if they meet specific requirements.
- MPOs must use transportation and air emission modeling methodologies consistent with California Transportation Commission (CTC) guidelines.

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 on December 28, 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 that as of July 1, 2020, this requirement shall apply statewide, but that until that date, lead agencies may elect to rely on VMT rather than LOS to analyze transportation impacts.

The OPR "Technical Advisory on Evaluating Transportation Impacts in CEQA" (December 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.

Screening criteria include:

- **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.
- **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.
- **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.

- **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.
- **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 local serving. In May 2020, OPR staff indicated during online webinars that any retail building that is 50,000 square feet or less may be considered local serving.

Other key guidance includes:

- VMT is the most appropriate metric to evaluate a project’s transportation impact.
- OPR recommends tour- and trip-based travel models to estimate VMT, but ultimately defers to local agencies to determine the appropriate tools.
- OPR recommends measuring VMT for residential and office projects on a “per rate” basis. Specifically, OPR recommends VMT per capita for residential projects and VMT per employee for office projects.
- OPR recommends that a per capita or per employee VMT that is fifteen percent below that of existing development may be a reasonable threshold (page 10). In other words, an office project that generates VMT per employee that is more than 85 percent of the regional VMT per employee could result in a significant impact. OPR notes that this threshold is supported by evidence that connects this level of reduction to the State’s emissions goals (pages 10-11).
- For retail projects, OPR recommends measuring the net decrease or increase in VMT in the planning area with and without the project. The recommended impact threshold is any increase in total VMT.
- Lead agencies ultimately have the discretion to set or apply their own significance thresholds, provided they are based on significant evidence.
- Cities and counties still have the ability to 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 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals

ARB has specific guidance for VMT thresholds in the ARB 2017 “Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals” (January 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-percent reduction in total VMT per capita and a 16.8 percent reduction in light-duty VMT per capita (over current conditions; 2015-2018) was needed to meet these goals. The Lathrop travel forecasting model is trip-based and includes all vehicle trips, thus the total VMT per capita metric is applicable.

Additionally, the OPR “Technical Advisory” cites this document as support for the 15-percent reduction threshold.

California Air Resources Board Improved Program Measurement

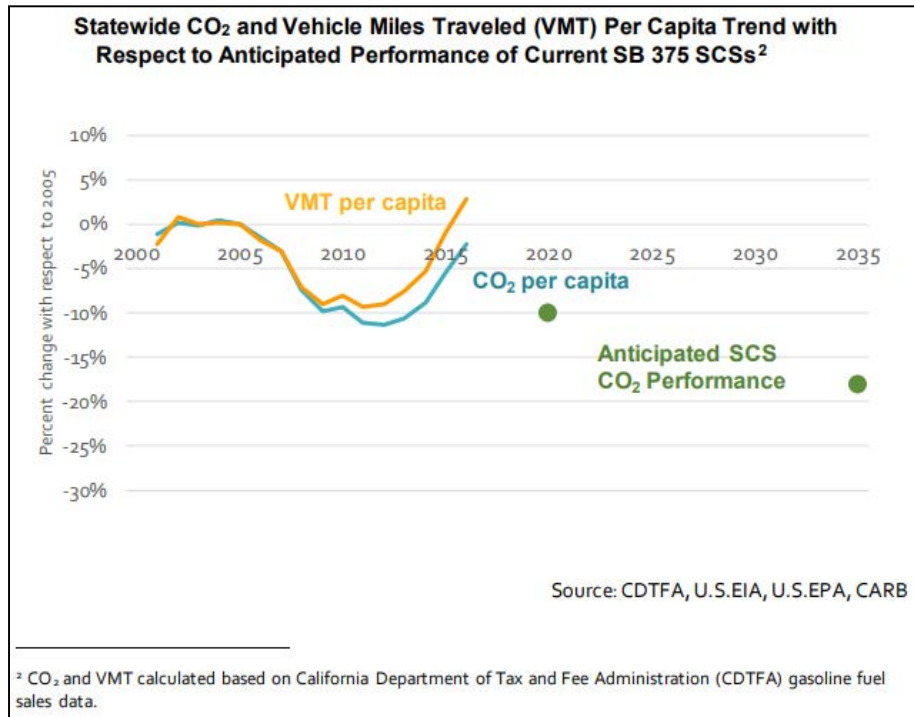
The Improved Program Measurement would help California work more strategically to meet its climate change goals, auditor of the State of California, February 2021.

Recommendations:

1. Measure the Actual GHG Benefits of CARB’s Transportation Programs
 - With limited time and resources available to meet the State’s GHG goals, CARB must do more to identify the actual emissions reductions its transportation programs achieve.
 - Currently, lack of data collection and measurement lead CARB to overstate the reductions from its incentive programs, which receive hundreds of millions of dollars each year from the State’s cap-and-trade fund.
2. Ensure That Programs Provide the Non-GHG Benefits CARB Claims
 - Consistent with state law and its own guidelines, CARB operates transportation programs that focus primarily on providing socioeconomic benefits to participants.
 - However, even though these programs may cost more, CARB has not taken sufficient steps to determine whether they provide the intended benefits—such as improving participants’ financial stability.
3. Provide Better Information to the Legislature to Guide California’s Strategy
 - For the above reasons, CARB’s current reporting to the Legislature is not adequate.
 - The State needs better tools to balance its climate change priorities and guide its investments.

California Air Resources Board Mandatory GHG Reporting 2019 Emissions Year FAQs

In the “2018 Progress Report, California’s Sustainable Communities and Climate Protection Act” (November 2018), ARB charts recent VMT per capita trends and shows VMT per capita increasing in recent years. This trend is inconsistent with RTP/SCS projections across the state forecasting declines.



Source: 2018 Progress Report California's Sustainable Communities and Climate Protection Act, California Air Resources Board, 2018

The Audit Report is a more recent assessment of ARB's GHG reduction programs, which also found that VMT and its associated GHG emissions are trending in the wrong direction. Per the Audit Report, the state is not on track to achieve 2030 GHG reduction goals and emissions from transportation have not been declining. Transportation-related GHG emissions increased between 2013 and 2018. Additionally, ARB's Mandatory GHG Reporting 2019 Emissions Year FAQs, November 4, 2020, indicated that though transportation-related emissions declined in 2017, 2018, and 2019, they were still above 2013 levels.

Assembly Bill 417

In October 2013, AB 417 created a statutory CEQA exemption for bicycle plans in urbanized areas. Before the passage of this bill, cities and counties that prepared bicycle plans were required to carry out a CEQA review. AB 417 exempts the following types of bicycle projects in an urbanized area:

- Restriping of streets and highways
- Bicycle parking and storage
- Signal timing to improve intersection operations
- Signage for bicycles, pedestrians, and vehicles

However, not all bicycle plans are exempt if certain conditions are met (for example, a new Class I bicycle trail through a sensitive natural area).

Caltrans Vehicle Miles Traveled-Focused Transportation Impact Study Guide

The Caltrans “Vehicle Miles Traveled-Focused Transportation Impact Study Guide” (TISG), dated May 20, 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 TISG 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 TISG generally endorses the OPR “Technical Advisory,” including the thresholds in that document. Caltrans may review VMT thresholds, methodology, and mitigations.

Caltrans Interim Land Development and Intergovernmental Review (LDIGR) Safety Review Practitioners Guidance

The Interim LDIGR Safety Review Practitioners Guidance (July 2020) was developed to provide immediate direction about the safety review 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.

Assembly Bill 1358: State of California Complete Streets Act

On September 30, 2008, Governor Schwarzenegger signed Assembly Bill (AB) 1358, the California Complete Streets Act of 2008, into law. AB 1358 requires any substantive revision of the circulation element of a city or county’s general plan to identify how they will safely accommodate the circulation of all users of the roadway including pedestrians, bicyclists, children, seniors, individuals with disabilities, and transit riders, as well as motorists.

Caltrans Deputy Directive 64-R1: Complete Streets – Integrating the Transportation System

In 2001, Caltrans adopted Deputy Directive (DD) 64, a policy directive related to non-motorized travel throughout the state. In October 2008, DD 64 was strengthened to reflect changing priorities and challenges. DD 64-R1 states:

The Department views all transportation improvements as opportunities to improve safety, access, and mobility for all travelers in California and recognizes bicycle, pedestrian, and transit modes as integral elements of the transportation system.

The Department develops integrated multimodal projects in balance with community goals, plans, and values. Addressing the safety and mobility needs of bicyclists, pedestrians, and transit users in all projects,

regardless of funding, is implicit in these objectives. Bicycle, pedestrian, and transit travel is facilitated by creating “complete streets” beginning early in system planning and continuing through project delivery and maintenance and operations. Developing a network of “complete streets” requires collaboration among all Department functional units and stakeholders to establish effective partnerships.

Providing safe mobility for all users, including motorists, bicyclists, pedestrians and transit riders, contributes to the Department's vision: "Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability."

Successful long-term implementation of this policy is intended to result in more options for people to go from one place to another, less traffic congestion and greenhouse gas emissions, more walkable communities (with healthier, more active people), and fewer barriers for older adults, children, and people with disabilities.

Economically, complete streets can help revitalize communities, and they can give families the option to lower transportation costs by using transit, walking or bicycling rather than driving to reach their destinations. The Department is actively engaged in implementing its complete streets policy in all planning, programming, design, construction, operations, and maintenance activities and products on the State Highway System.

Caltrans Director's Policy 22 (DP-22): Director's Policy on Context Sensitive Solutions

Director's Policy 22, a policy regarding the use of “Context Sensitive Solutions” on all state highways, was adopted by Caltrans in November of 2001. The policy reads:

The Department uses “Context Sensitive Solutions” as an approach to plan, design, construct, maintain, and operate its transportation system. These solutions use innovative and inclusive approaches that integrate and balance community, aesthetic, historic, and environmental values with transportation safety, maintenance, and performance goals. Context sensitive solutions are reached through a collaborative, interdisciplinary approach involving all stakeholders.

The context of all projects and activities is a key factor in reaching decisions. It is considered for all State transportation and support facilities when defining, developing, and evaluating options. When considering the context, issues such as funding feasibility, maintenance feasibility, traffic demand, impact on alternate routes, impact on safety, and relevant laws, rules, and regulations must be addressed.

The policy recognizes that “in towns and cities across California, the State highway may be the only through street or may function as a local street,” that “these communities desire that their main street be an economic, social, and cultural asset as well as provide for the safe and efficient movement of people and goods,” and that “communities want transportation projects to provide opportunities for enhanced non-motorized travel and visual quality.” The policy acknowledges that addressing these needs will assure that transportation solutions meet more than just traffic and operational objectives.

Assembly Bill 43

In October 2021, AB 43 created greater freedom for local authorities to reduce speed limits to improve safety. Previously, speed limits were generally required to be based on 85th percentile observed speeds. Caltrans is now developing guidance for the implementation of the bill.

REGIONAL

SJCOG Regional Transportation Plan and Sustainable Community Strategy

The current Regional Transportation Plan and Sustainable Community Strategy (RTP/SCS) produced by SJCOG was adopted in 2018. The RTP/SCS sets forth regional transportation policy and provides capital program planning for all regional, state, and federally funded projects. The RTP/SCS also demonstrates how land use development and transportation can work together to meet greenhouse gas emission reduction targets for cars and light trucks. The RTP can be considered the San Joaquin region's "statement of priorities" for the future transportation system. The RTP/SCS states that it "recognizes the significant impact the transportation network has on the region's public health, mobility, and economic vitality" and "serves as a guide for achieving public policy decisions that will result in balanced investments for a wide range of multimodal transportation improvements."

Measure K: San Joaquin County Local Transportation Improvement Plan

Measure K, the San Joaquin County Local Transportation Improvement Plan, was passed by San Joaquin County voters in November 1990 and renewed in November 2006. Measure K assesses a half-cent sales tax on purchases made throughout the County to provide direct funding for local transportation projects. The funds are dedicated to the specific programs and projects specified in the Measure K expenditure plan, including improved highways and local streets, new passenger rail service, regional and interregional bus routes, park-and-ride lots, new bicycle facilities, and railroad crossings. The renewal of Measure K is estimated to generate \$2.552 billion for these transportation programs in the region through the year 2041. Funding from Measure K has been used to construct the Lathrop Road overcrossing of the Union Pacific railroad, among other projects.

SJCOG San Joaquin County Regional Congestion Management Program

As the designated Congestion Management Agency (CMA) for San Joaquin County, the San Joaquin Council of Governments (SJCOG) is responsible for updating County's Regional Congestion Management Program (RCMP) and monitoring its implementation. The 2021 proposed RCMP network includes the following corridors in Lathrop:

- I-5
- SR 120
- Roth Road
- Lathrop Road
- Louise Avenue
- Golden Valley Parkway

None of these proposed corridors are identified in the program as deficient.

San Joaquin Valley Air Pollution Control District (SJVAPCD)

SJVAPCD has implemented Rule 9410, Employer Based Trip Reduction. The purpose of this rule is to reduce VMT from private vehicles used by employees to commute to and from their worksites to reduce emissions of NO_x, ROG, and particulate matter (PM₁₀ and PM_{2.5}). The rule applies to employers with at least 100 employees. Employers are required to implement an Employer Trip Reduction Implementation Plan (ETRIP) for each worksite with 100 or more eligible employees to meet applicable targets specified in the rule. Employers are required to facilitate the participation of the development of ETRIPs by providing information to its employees explaining the requirements and applicability of this rule. Employers are required to prepare and submit an ETRIP for each worksite to the District. The ETRIP must be updated annually. Under this rule, employers shall collect information on the modes of transportation used for each eligible employee's commutes both to and from work for every day of the commute verification period, as defined in using either the mandatory commute verification method or a representative survey method. Annual reporting includes the results of the commute verification for the previous calendar year along with the measures implemented as outlined in the ETRIP and, if necessary, any updates to the ETRIP.

LOCAL

City of Lathrop Specific Plans

Lathrop has developed several Specific Plans that serve as the primary instruments of the City of Lathrop in carrying out policies and proposals of the Lathrop General Plan. As noted in the General Plan, the Specific Plans have several related functions:

1. The interpretive function of the Specific Plan indicates the degree of flexibility which is to be permitted; it provides development standards to be applied to the actions of the City and the private sector; and it provides guidance to the phasing and coordination of development activity.
2. The illustrative function describes and illustrates the ways in which private and public developments may be designed in a manner consistent with the General Plan.
3. The regulatory function sets forth the process of development regulation and even the regulations to be applied to private and public development actions.

The following Specific Plans have been adopted by the City:

- Central Lathrop
- Crossroads Industrial Park
- Lathrop Gateway
- West Lathrop
 - West Lathrop - Mossdale Village
 - West Lathrop - River Islands
- South Lathrop

City of Lathrop VMT Screening Criteria and Thresholds of Significance

Resolution No. 20-4784, adopted by the City Council on September 14, 2020, enacted the following levels of significance for land use projects in the City:

- **Residential projects:** 15 percent below existing (baseline) citywide VMT per household or per resident
- **Office projects:** 15 percent below existing (baseline) citywide VMT per employee
- **Retail projects:** A net increase in existing (baseline) citywide VMT per employee
- **Mixed-use projects:** Evaluate each land use separately

Baseline VMT is defined as the average VMT per project type for the City of Lathrop under Baseline Year 2020 conditions using the City of Lathrop Travel Demand Model.

The resolution also adopted the following screening criteria to quickly identify when a project should be expected to cause a less than significant VMT impact without conducting a detailed VMT analysis:

- **Small projects:** Generation of less than 110 daily trips
- **Projects located in low-VMT areas:** Projects in areas with low VMT (to be identified as part of the General Plan update), with similar features (i.e., density, mix of uses, and transit accessibility) to the nearby developments
- **Projects in proximity to a major transit stop:** Projects located within a half-mile of an existing or planned high-quality transit corridor or major transit station. In Lathrop, this includes the existing Lathrop ACE station, the future Valley Link stations, and at stops for bus routes with headways of 15 minutes or less. This criterion does not apply if a project
 - Has a floor area ratio (FAR) of less than 0.75;
 - Includes more parking than required by the City of Lathrop;
 - Is inconsistent with the SJCOG RTP/SCS; or
 - Replaces affordable residential units with a smaller number of moderate- or high-income residential units.
- **Affordable housing:** Residential projects containing a particular amount of affordable housing (based on local circumstances and substantial evidence as determined by the City).
- **Local-serving retail:** Local-serving retail projects of less than 50,000 square feet. Staff shall evaluate both the project characteristics and the context of the project location to decide as to whether a given retail project is local serving.
- **Transportation projects that do not result in an increase in VMT:** Transit projects, bicycle and pedestrian projects, and roadway projects that do not result in an increase in vehicle capacity or VMT

City of Lathrop Bicycle Transportation Plan

The 1995 Lathrop Bicycle Transportation Plan, last updated in 2004, was developed to improve and expand bicycling opportunities in Lathrop. The Bicycle Transportation Plan provides an additional level of refinement to the General Plan's Transportation and Circulation Element by providing a detailed set of policies and programs for bicycle circulation improvement. The Plan establishes bicycle goals, objectives,

and policies; identifies future bicycle infrastructure projects; and promotes support facilities and educational programs. The following goal and objectives were established by the Plan:

Goal A: To create a bikeway system that provides for convenient and safe bicycle circulation throughout Lathrop and maximizes the number of bicycle commuters.

Objective A.1: Provide a comprehensive network of bikeways that provides access to destination points throughout the community.

Objective A.2: Assure bikeways are fully integrated into all future development occurring within the City's General Plan Sphere.

Objective A.3: Provide route linkages to regional bikeways.

Objective A.4: Provide for a high level of rider safety along all bikeways.

City of Lathrop Truck Route Map

The City of Lathrop Truck Route Map identifies existing and future truck routes within the City. The map includes both STAA truck routes and other City truck routes. In October 2021, the City Council removed truck route designation for Lathrop Road between Harlan Road and McKinley Avenue.

City of Lathrop Transportation Monitoring Program

As part of local development agreements and CEQA mitigation requirements developments within the city require participation in an annual Traffic Monitoring Plan TMP that forecasts street and circulation improvement needs.

The TMP monitors roadway conditions, projects roadway congestion two and four years into the future, and schedules when planned roadway improvements should be constructed to keep congestion at acceptable levels. The TMP is important because it establishes performance standards and details how the operations of the roadway system are to be monitored, as well as how improvements are to be scheduled for construction to avoid the roadway system falling below acceptable standards of operation. Developers are required to fund the TMP on a continuing basis until all required traffic improvements have been completed.

City of Lathrop Design and Construction Standards

The City's design and construction standards and standard details provide for coordinated and standardized development of City facilities, including roadways. The standards apply to, regulate, and guide the design and preparation of plans, and the construction of streets, highways, alleys, drainage, traffic signals, site access, and related public improvements. All public roadway infrastructure improvements must be designed and constructed in accordance with the city standards and Caltrans' Standard Specifications (Caltrans 2018).

3.14.3 IMPACTS AND MITIGATION MEASURES

METHODS OF ANALYSIS

The transportation impact analysis assesses how the planning area’s transportation system would operate with the implementation of the proposed General Plan. The potential impacts were identified based on a set of significance criteria based on the CEQA Guidelines. 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, which were discussed in the Environmental Setting section.

Analysis Scenarios

The following scenarios were analyzed using the Lathrop travel demand model. Table 3.14-7 summarizes the major land use in each scenario. Buildout of the existing General Plan was also analyzed in a separate scenario, as discussed in Chapters 2.0 (Project Description) and 5.0 (Alternatives).

- **2020 Baseline.** The baseline land use described earlier in this chapter.
- **Proposed General Plan Buildout.** Buildout of the land use development in the proposed General Plan.

TABLE 3.14-7: SCENARIO MAJOR LAND USE

LAND USE	UNITS	2020 BASELINE	PROPOSED GENERAL PLAN BUILDOUT	INCREASE (PROPOSED GENERAL PLAN VS. 2020 BASELINE)
Single family	Dwelling units	6,201	14,110	7,909 (128%)
Multi family	Dwelling units	217	10,374	10,157 (4,681%)
Age restricted	Dwelling units	249	1,125	876 (352%)
Restaurant	Employees	344	1,759	1,415 (411%)
Industrial	Employees	6,384	24,216	17,832 (279%)
Office	Employees	1,023	19,621	18,598 (1,818%)
Retail	Employees	659	11,534	10,875 (1,650%)
All residential	Dwelling units	6,667	25,609	18,942 (284%)
All employment	Employees	9,038	58,996	49,958 (553%)

SOURCE: FEHR & PEERS, 2021

The City is expected to grow substantially from 2020 to buildout. Additional growth during this period could comprise approximately 2.5 million square feet of commercial, 20 million square feet of industrial development, and 5 million square feet of office development, and 2 million square feet of office/commercial mixed use areas as described in Chapter 2.0, Project Description. The growth results in a change in the balance between employment and housing in Lathrop. In the future, a smaller share of residents is expected to leave the City and adjacent areas (such as the City of Lathrop) for employment, but more employees and customers are expected to travel to employment centers in the City. The ratio of employment (all land uses, including major land uses above) to dwelling units is expected to increase from 1.36 in the 2020 baseline scenario to 2.30 in the proposed General Plan buildout, a 70 percent increase. The ratio of commercial (retail and restaurant) employment to dwelling units is expected to

increase from 0.15 to 0.52, a 245 percent increase. This is more commercial development than likely needed by local residents. Thus, to match trip productions to attractions, the model assumes a significant percentage of trips come into the City from external origins to visit these retail uses.

Reasonably foreseeable development surrounding the planning area was also assumed for general plan scenarios modeled as part of this effort.

The proposed General Plan Circulation Element's circulation diagram is shown in Figure 3.14-9. It includes roadways serving new development and financially constrained roadway projects from the 2018 SJCOG RTP/SCS. Key additions include:

- New roadways and widened roadways supporting the growth of the City
- New interchange at McKinley Avenue
- New freeway general purpose lanes on SR 120 and HOV lanes on I-5 and SR 99
- Various widenings of existing roadways and new roadways resulting in an approximately 36 percent increase in total lane miles on planning area roadways, based on the travel demand model

Vehicle Miles Traveled

The Lathrop travel demand model was used to estimate VMT for the City. Two measures of VMT are used in this analysis:

- **VMT per dwelling unit, for residential land uses.** Includes VMT for trips produced by a dwelling unit's residents, such as to work, school, or shop, and with one end of the trip at the home, on a typical weekday.
- **VMT per employee, for non-residential land uses.** Includes all trips with one end at the land use, including trips by both employees, customers, and deliveries, on a typical weekday.

Additional VMT-related measures are also provided for informational purposes:

- **Total VMT.** Includes all trips with at least one end in the planning area on a typical weekday.
- **VMT per resident.** Calculated based on the VMT per dwelling unit described above and the January 1, 2020, California Department of Finance estimate of residents per household.
- **VMT per service population.** Includes all trips with at least one end in the planning area. The service population consists of residents (based on the number of households and the January 1, 2020, California Department of Finance estimate of residents per household) and employees.

Note that the number of residents per household will likely vary in the future due to changes in the demographics of City residents and the mix of housing types. Thus, these estimates are provided for informational purposes only.

Estimates of current VMT and forecasts of future VMT are inherently dependent on the methodology used and are based on a presumption that future travel behavior will be consistent with recent travel behavior. Travel models, including the model used for this analysis, base their forecasts of future behavior on past behavior. Any subsequent changes including changes in usage of transportation network companies (TNCs) such as Uber and Lyft, large changes in fuel prices, public availability of autonomous

vehicles (AVs), and long-term COVID-19 pandemic effects (such as increases in telecommuting) may change future travel behaviors, resulting in future VMT differing from current forecasts. The future effect of these changes is unknown, and thus difficult to model.

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)(1), which states for land use projects, “Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact.” CEQA Guidelines § 15064.3, subdivision (b)(4) states, “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. A lead agency may use models to estimate a project’s vehicle miles traveled and may revise those estimates to reflect professional judgment based on substantial evidence.”

The City has selected to measure VMT by land use type:

- VMT per single-family dwelling unit
- VMT per multi-family dwelling unit
- VMT per age-restricted dwelling unit
- VMT per office employee
- VMT per industrial employee
- VMT per retail employee
- VMT per restaurant employee

The 14.3 percent reduction in total VMT per capita identified as necessary to meet State goals in the ARB 2017 “Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals” is supported by substantial evidence. Additionally, this document updated data used to develop the OPR “Technical Advisory.” The “Technical Advisory” supports “per rate” reductions of 15 percent compared to existing conditions (page 10). The “Technical Advisory” has been endorsed by Caltrans in their TISG. The City of Lathrop VMT Screening Criteria and Thresholds of Significance adopted by Resolution No. 20-4784 also uses a reduction of 15 percent below baseline conditions.

With these considerations, the City has selected a threshold of 15 percent below citywide baseline VMT per dwelling unit (for residential land uses) or employee (employment-related land uses) by land use type. Therefore, if any of the VMT metrics above under General Plan conditions exceeded 85 percent of the same value under 2020 Baseline Conditions, VMT impacts on transportation may be considered significant. VMT thresholds by land use type are shown in Table 3.14-8.

TABLE 3.14-8: VMT THRESHOLD DEVELOPMENT

<i>LAND USE</i>	<i>UNITS</i>	<i>2020 BASELINE</i>	<i>85 PERCENT OF BASELINE</i>
Single family	VMT per dwelling unit	111.5	94.8
Multi family	VMT per dwelling unit	86.0	73.1
Age restricted	VMT per dwelling unit	47.5	40.4
Restaurant	VMT per employee	215.2	182.9
Industrial	VMT per employee	77.8	66.2
Office	VMT per employee	36.5	31.0
Retail	VMT per employee	135.3	115.0

NOTE: VMT PER EMPLOYEE RATIOS INCLUDE ALL TRIPS BY EMPLOYEES, CUSTOMERS, AND DELIVERIES.

SOURCE: FEHR & PEERS, 2021

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 would conflict with adopted policies, plans, or programs regarding these systems, or create or exacerbate disruptions to the performance or safety of these systems.

Hazards and Emergency Access

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). Impacts may also be significant if a project results in inadequate emergency access. The proposed General Plan would have a significant impact on the transportation system if it would increase hazards due to a design feature, incompatible uses, or inadequate emergency access.

IMPACTS AND MITIGATION MEASURES

Impact 3.14-1: General Plan implementation may result in VMT per employee that are greater than 85 percent of Baseline conditions (Significant and Unavoidable)

Table 3.14-9 shows the VMT measures per dwelling unit, per employee, per resident, and per service population for General Plan buildout conditions, as well as for the baseline condition. As shown in the table, the proposed General Plan would result in increased VMT for employment-generating land uses and would also result in an increase in total VMT in comparison to the existing condition as well as in comparison to the baseline scenario.

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TABLE 3.14-9: VMT PER DWELLING UNIT AND PER EMPLOYEE FOR EXISTING CONDITION AND PROPOSED GENERAL PLAN

LAND USE	UNITS	EXISTING CONDITION (2020 BASELINE)	THRESHOLD (85 PERCENT OF BASELINE)	PROPOSED GENERAL PLAN ⁶	PROPOSED GENERAL PLAN VS. EXISTING CONDITION
Single family	VMT per dwelling unit	111.5	94.8	64.5	-42.1%
Multi family	VMT per dwelling unit	86.0	73.1	54.6	-36.5%
Age restricted	VMT per dwelling unit	47.5	40.4	27.3	-42.5%
Restaurant	VMT per employee ¹	215.2	182.9	248.9	15.6%
Industrial	VMT per employee	77.8	66.2	79.1	1.7%
Office	VMT per employee	36.5	31.0	47.3	29.5%
Retail	VMT per employee	135.3	115.0	211.5	56.3%
All residential	VMT per dwelling unit	108.3	NA ⁵	58.9	-45.7%
All residential	VMT per resident ²	27.9	NA	15.2	-45.7%
All employment	VMT per employee	85.8	NA	101.6	18.4%
All land uses	VMT per service population ^{2,3}	42.9	NA	47.4	10.4%
Total VMT	VMT	1,497,700	NA	7,503,700	401.0%

NOTES: ¹VMT PER EMPLOYEE RATIOS INCLUDE ALL TRIPS BY EMPLOYEES, CUSTOMERS, AND DELIVERIES

²BASED ON 3.88 RESIDENTS/DWELLING UNIT (CALIFORNIA DEPARTMENT OF FINANCE, E-5 CITY/COUNTY POPULATION AND HOUSING ESTIMATES, 1/1/2020)

³SERVICE POPULATION INCLUDES RESIDENTS AND EMPLOYEES

⁴VMT INCLUDES FULL LENGTH OF ALL TRIPS WITH EITHER AN ORIGIN OR DESTINATION WITHIN THE PLANNING AREA

⁵NA = NOT APPLICABLE, METRIC FOR INFORMATIONAL PURPOSES ONLY

⁶**BOLD** = EXCEEDS THRESHOLD

SOURCE: FEHR & PEERS, 2021

Although not part of the formal impact significance criterion, Table 3.14-9 shows the total VMT generation under existing conditions and with buildout of the proposed General Plan. As indicated by footnote 4 in this table, this total VMT calculation considers the full length of travel generated by all land uses in the planning area. It shows an expected 401 percent increase in total VMT generation. The reasonableness of this increase can be evaluated by comparing increases in land use. As shown in Table 3.14-7, residential is expected to increase by 284 percent, restaurant/retail is expected to increase by 1,225 percent, industrial is expected to increase by 279 percent, and office is expected to increase by 1,818 percent. The 401 percent increase in VMT, which includes travel both inside and outside the planning area consistent with the “Technical Advisory”, falls within that range. VMT within the study area will increase 491 percent, also within this range. It is also noted that the proposed roadway improvements within the planning area would result in a 36 percent increase in lane-miles.

Table 3.14-10 compares the VMT per dwelling unit and VMT per employee associated with proposed General Plan implementation with the threshold. As shown in the table, the proposed General Plan would exceed VMT thresholds. While the proposed General Plan is not expected to result in VMT per dwelling unit exceeding 85 percent of baseline for residential-related land uses, the proposed General Plan is expected to result in VMT per employee exceeding 85 percent of baseline for employment-related land uses.

TABLE 3.14-10: VMT ANALYSIS

<i>LAND USE</i>	<i>UNITS</i>	<i>THRESHOLD</i>	<i>PROPOSED GENERAL PLAN¹</i>	<i>REDUCTION NEEDED TO ACHIEVE THRESHOLD</i>
Single family	VMT per dwelling unit	94.8	64.5	-
Multi family	VMT per dwelling unit	73.1	54.6	-
Age restricted	VMT per dwelling unit	40.4	27.3	-
Restaurant	VMT per employee	182.9	248.9	27%
Industrial	VMT per employee	66.2	79.1	16%
Office	VMT per employee	31.0	47.3	34%
Retail	VMT per employee	115.0	211.5	46%

NOTES: ¹**BOLD** = EXCEEDS THRESHOLD

²VMT PER EMPLOYEE RATIOS INCLUDE ALL TRIPS BY EMPLOYEES, CUSTOMERS, AND DELIVERIES.

SOURCE: FEHR & PEERS, 2021

This result is due to the change in the balance between jobs and housing in Lathrop, which is based upon the large increases in employment shown in Table 3.14-7. In the future, a smaller share of residents are expected to leave the City for employment, reducing VMT per dwelling unit, but a greater share of employees and customers are expected to travel from outside the City to employment centers within the City, increasing VMT per employee. If such employment growth does not occur, actual VMT per dwelling unit could be higher and VMT per employee could be lower than estimated for General Plan buildout conditions.

As shown in Table 3.14-10, the proposed General Plan would result in VMT increases that exceeding the threshold for employment-related land uses. Therefore, this impact is **significant**. As previously described, this result is due to the change in the balance between jobs and housing in Lathrop, which is based upon the large increases in employment shown in Table 3.14-7. In the future, more employees and customers are expected to travel to employment centers, increasing VMT per employee.

The updated General Plan includes policies designed to reduce vehicle travel and vehicle miles traveled. The Circulation Element addresses providing adequate pedestrian, bicycle, and transit facilities and opportunities, promoting non-vehicle travel modes, requiring employers with 100 or more employees to implement TDM programs, and ensuring regional coordination on trip and VMT reduction efforts. General Plan policies and actions that contribute to VMT reductions are identified below. These policies and actions would help to reduce the severity of these significant impacts to the greatest extent feasible.

The VMT generated by buildout of the proposed General Plan would exceed the VMT threshold of 85 percent of baseline. Implementing the proposed General Plan policies and actions will help to reduce VMT through encouraging non-vehicle transportation modes, expanded transit services, and developing TDM program requirements including measures to reduce VMT associated with new development. The City will also use this EIR and CEQA Section 15183 to streamline VMT analysis for projects consistent with the updated General Plan. However, reductions in VMT per employee from 16 to 46 percent would be required to achieve thresholds as shown in Table 3.14-10. Additionally, the feasibility and effectiveness of a local or regional VMT impact bank or exchange is unknown at this time. The City cannot demonstrate

definitively at this time that implementation of these policies would achieve VMT reductions to meet the VMT per employee thresholds. This impact is **significant**.

The General Plan goals, policies, and implementation measures listed below will achieve meaningful reductions in VMT generated by land uses within the City. However, reductions in VMT per employee from 16 to 46 percent would be required to achieve thresholds as shown in Table 3.14-10. The City at this time cannot demonstrate that VMT will be reduced to the degree that it meets these thresholds. Although large changes in the proposed General Plan land use could potentially reduce VMT of the City 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 well as transit provided by agencies other than the City. The feasibility and effectiveness of a local or regional VMT impact bank or exchange is unknown at this time. Therefore, this impact is considered **significant and unavoidable**.

GENERAL PLAN GOALS POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

GOAL LU- 1

LU- 1: Accommodate a mix of land uses that meet the needs of residents, businesses, and visitors with places to live, work, shop, be entertained and culturally engaged.

LU-1 POLICIES

LU-1.1 Support a full spectrum of conveniently located residential, commercial, industrial, public, and quasi-public uses that support business development, regional transportation objectives and the livability of residential neighborhoods.

LU-1.9 Promote equitable land use patterns to provide all residents in all neighborhoods access to community amenities and transportation choices, and increase safety for walking and biking.

GOAL LU-3

LU-3 Participate in coordinated local and regional land use planning activities.

LU-3 POLICIES

LU-3.1 Support regional efforts that promote higher densities and intensities near major transit and travel facilities, and reduce regional vehicle miles traveled by supporting active modes of transportation including walking, biking, and public transit.

LU-3.2 Utilize planning tools and objectives that promote transit-oriented and mixed-use development objectives near future ACE and Valley Link Transit Facilities. Land use plans for these areas should complement transit facilities to accommodate transit oriented development (TOD) developments and/or park-and-ride facilities near ACE stations and future Valley Link station.

LU-3 IMPLEMENTATION ACTIONS

- LU-3.b Work with adjacent jurisdictions to facilitate increased compatibility and access across barriers to travel such as discontinuous streets, bike lanes, sidewalks, and paths.
- LU-3.c Work with developers, reclamation districts and utility providers to create or expand linear parks, trails, and publicly-accessible greenways along levees, drainage and utility rights-of-way that provide opportunities for greenway connections and passive recreational opportunities.
- LU-3.e Promote interdepartmental collaboration to ensure Capital Facilities Fee (CFF) projects support local and regional multi-modal transportation network and infrastructure goals.

GOAL LU-4

- LU-4 Coordinate and integrate land use planning and transportation objectives.

LU-4 POLICIES

- LU-4.2 Emphasize efforts to reduce regional vehicle miles traveled (VMT) by supporting land use patterns and site designs that promote active modes of transportation, and public transit.
- LU-4.4 As the city grows, encourage and support the development of a transit system with regular service connecting destinations within the city, to ACE and Valley Link stations, and to adjacent jurisdictions.

LU-4 IMPLEMENTATION ACTIONS

- LU-4.a Implement the policies and actions in the Circulation Element that reinforce and implement land use objectives included within this element.

GOAL CIR-1

- CIR-1 Develop and maintain a roadway system that accommodates all users.

CIR-1 POLICIES

- CIR-1.2 Complete Streets. Consider all modes of travel in planning, design, and construction of all transportation projects to create safer, more livable, and more inviting environments for pedestrians, bicyclists, motorists and public transit users of all ages and capabilities.
- CIR-1.3 Facility Service Levels. Strive for intersection level of service (LOS) D or better within the City, except where maintaining such levels of service are infeasible:
 - a. Where maintaining the standard would be a disincentive to walking, bicycling, or transit.
 - b. Where maintaining the standard would be incompatible with adjacent land uses.
 - c. Where constructing facilities would prevent the City from achieving goals for vehicle miles traveled (VMT) or other priorities.

d. Where constructing facilities with sufficient capacity would be unreasonably expensive.

CIR-1 IMPLEMENTATION ACTIONS

CIR-1b Require development projects to arrange streets in an interconnected pattern, so that pedestrians, bicyclists, and drivers are not forced onto arterial streets for inter- or intra-neighborhood travel. This approach will also increase the safety and efficiency of movement of emergency responders and reduce vehicle miles traveled within the community.

CIR-1c Apply signals, roundabouts, traffic circles and other traffic management techniques appropriately at residential and collector street intersections with collector and arterial streets in order to allow bicyclists and pedestrians to travel more conveniently and more safely from one neighborhood to another.

CIR-1d Use traffic calming tools to assist in implementing complete street principles; possible tools include roundabouts, raised intersections, curb extensions, reduced roadway width, and high visibility crosswalks.

CIR-1g Evaluate intersection improvements, including signal coordination, leading pedestrian intervals, and crossing times, bike lane signal detection or other innovations to serve all travel modes.

CIR-1i Work with the San Joaquin Council of Governments and other jurisdictions to revise the Regional Congestion Management Program (RCMP) to be consistent with City LOS and VMT policies and statewide VMT goals. The RCMP network in Lathrop consists of Roth Road, Lathrop Road, Golden Valley Parkway, and the I-5 freeway ramp intersections at Roth Road, Lathrop Road, and Louise Avenue.

CIR-1m Require new development to pay a fair share of the costs of street and other transportation improvements in conformance with the goals and policies established in this Circulation Element and the CFF program.

GOAL CIR-2

CIR-2 Create a system of pedestrian, bicycle, and transit facilities that enables non-automotive accessibility and increases the health and livability of the community.

CIR-2 POLICIES

CIR-2.1 Bicycle and Pedestrian Networks. Establish a network of identified bicycle and pedestrian routes connecting residential areas with schools, recreation, shopping, and employment areas within the City.

CIR-2.2 Safety. Improve safety conditions, efficiency, and comfort for bicyclists and pedestrians by providing shade trees and controlling traffic speeds by implementing narrow lanes or other traffic calming measures.

- CIR-2.3 Safe Routes to School. Consider walking and bicycling school access as a priority over vehicular movements when any such conflicts occur.
- CIR-2.4 Transit Access. Provide safer, more convenient access to transit service including rail, bus, and paratransit.
- CIR-2.5 Amenities. To support bicycle, pedestrian, and transit usage, provide amenities including pedestrian-scale lighting, bicycle parking, shade trees and landscaping, and bus shelters and benches.

CIR-2 IMPLEMENTATION ACTIONS

- CIR-2a Create an active transportation plan supporting the development of bicycle and pedestrian networks across the City and funding applications for bicycle and pedestrian improvements.
- CIR-2b Add planned bicycle and pedestrian facilities in conjunction with road rehabilitation, reconstruction, or re-striping projects whenever feasible.
- CIR-2c Enhance sidewalks to create a high-quality pedestrian environment, including wider sidewalks and improved pedestrian crossings, landscaping, buffers between sidewalks and vehicle travel lanes, enhanced pedestrian lighting, wayfinding signage, shade trees, and canopies, increased availability of benches, and other features.
- CIR-2d Improve bicycle facilities to include attractive and secure bicycle parking, bicycle lanes, bike paths, and wayfinding signage along appropriate roadways.
- CIR-2e Encourage and support the enhancement of transit stops with high quality, well-maintained shelters, and provision of wayfinding signage and transit timetables.
- CIR-2f Provide access for bicycles and pedestrians at the ends of cul-de-sacs and through walls and berms, where right-of-way is available, to provide convenient access within and between neighborhoods and to encourage walking and bicycling to neighborhood destinations.
- CIR-2g Ensure that development and infrastructure projects are designed to provide pedestrian and bicycle access and leave no gaps in the bicycle and pedestrian networks.
- CIR-2h Require new development to provide bicycle parking and shower and locker facilities at commercial, business/professional and light industrial uses in accordance with the California Green Building Standards Code. Encourage existing uses to provide such facilities.
- CIR-2i Require new multifamily developments to provide bicycle parking facilities in accordance with the California Green Building Standards Code. Encourage existing multifamily developments to provide such facilities.
- CIR-2j Create an off-street shared-use path system for use by pedestrians and bicyclists for transportation and recreation.

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- CIR-2k Create bicycle and pedestrian connections to adjacent jurisdictions via shared use paths, bikeways, and sidewalks.
- CIR-2l Create bicycle and pedestrian connections to the ACE station, planned Valley Link stations, and other transit stops.
- CIR-2m Encourage transit providers to improve passenger pick-up and drop-off areas at the ACE and planned Valley Link stations to provide more convenient access.
- CIR-2n Partner with neighboring jurisdictions and regional transit providers (including San Joaquin Regional Transit District, Manteca Transit, and Tracy TRACER Bus Services) to expand transit service between Lathrop and destinations in other jurisdictions.
- CIR-2o Coordinate with transit providers and encourage them to enhance transit amenities for safer and more comfortable access to transit including waiting areas, seating, landscaping, lighting, shade and rain cover, trash receptacles, and passenger loading zones.

GOAL CIR-4

- CIR-4 Plan for the future of transportation to ensure accessibility for all, reduce the environmental impacts of transportation, and improve the quality of life.

CIR-4 POLICIES

- CIR-4.1 Land Use Supporting Reduced VMT. Support land use with increased land use densities and mixed uses, consistent with the Land Use Element, to reduce vehicle miles traveled and promote the use of walking, biking, and transit.
- CIR-4.2 Demand Management. Encourage employers to provide programs for carpooling/transit/biking/walking, transit ridership subsidies, bicycle facilities, alternative work schedules, ridesharing, telecommuting, working at home, employee education, and preferential parking for carpools/vanpools.
- CIR-4.3 New Technologies. Monitor 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.

CIR-4 IMPLEMENTATION ACTIONS

- CIR-4a Refine and update the City of Lathrop interim VMT thresholds and screening criteria to reflect the updated VMT analysis completed for the General Plan update, if such updates are deemed necessary or warranted.
- CIR-4b Evaluate the feasibility of a local or regional VMT impact fee program, bank, or exchange. Such an offset program, if determined feasible, would be administered by the City or a City-approved agency, and would offer demonstrated VMT reduction strategies through transportation demand management programs, impact fee programs, mitigation banks or exchange programs, in-lieu fee

programs, or other land use project conditions that reduce VMT in a manner consistent with state guidance on VMT reduction. If, through on-site changes, a subject project cannot eliminate VMT impacts, the project could contribute on a pro-rata basis to a local or regional VMT reduction bank or exchange, as necessary, to reduce net VMT impacts.

- CIR-4c 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-4d Require development projects that employ 100 or more full-time equivalent employees to establish transportation demand management (TDM) programs consistent with San Joaquin Valley Air Pollution Control District requirements.
- CIR-4e Partner with SJCOG on the Dibs program, which is the regional smart travel program, including rideshare, transit, walking, and biking.
- CIR-4f As new transportation technologies and mobility services, including autonomous vehicles, electric vehicles, electric bicycles and scooters, and transportation network companies (e.g., Uber and Lyft) are implemented and used by the public, review and update City policies and plans to maximize the benefit to the public of such technologies and services without adversely affecting the City's transportation network. Updates to the City's policies and plans may cover topics such as electric vehicle charging stations, curb space management, changes in parking supply requirements, policies regarding electric scooter use, etc.

GOAL ED-3

ED-3 Provide diverse workforce housing options

ED-3 POLICIES

- ED-3.1 Encourage Diversity of Housing Types. Complement the City's inventory of single-family homes with additional housing in other configurations, such as apartments and townhouses, to ensure that there are housing opportunities for diverse workforce households, including young entry-level workers, middle-aged workers who live alone and in families, and empty-nesters.
- ED-3.2 Support Efforts for Housing at a Range of Price Points. Recognizing that a workforce that supports a diverse local economy will have a broad range of income levels, work to ensure that in the City's housing inventory includes below-market rate options, market rate options that are more affordable (e.g., "missing middle" housing) and market rate housing that meets needs for entry-level housing, move-up housing, and executive housing.

ED-3 IMPLEMENTATION ACTIONS

- ED-3.a Consistent with the Housing and Land Use Elements, ensure that the City provides sufficient land zoned for a range of residential densities that will accommodate low-density single-family

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detached family housing to higher-density units suitable for singles, couples, and smaller households, at a range of income levels.

ED-3.b Consistent with the Housing Element, ensure that the City removes un-necessary governmental constraints to preservation, maintenance, and development of housing for all income levels.

GOAL PS-6

PS-6 Prepare the community to adapt to climate change, including extreme weather events, in order to minimize risks to life, property, the economy, and the environment.

PS-6 POLICIES

PS-6.10 Vehicle Travel Reducing Development. Encourage and support infill, mixed use, and higher density development, where appropriate, in order to reduce GHG emissions associated with vehicle travel.

PS-6 IMPLEMENTATION ACTIONS

PS-6a Assess and monitor performance of greenhouse gas emissions reduction efforts.

PS-6b Consider adopting a Climate Action Plan to establish a formal strategy for reducing GHG emissions, including strategies to reduce vehicle travel.

GOAL RR-1

RR-1 Provide the community with high-quality parks and recreational amenities.

RR-1 POLICIES

RR-1.1 Recreation Types. Provide residents a wide variety of parks, recreational facilities, open space, and trails to foster a comprehensive system that accommodates the uses and recreational needs of a diverse community.

RR-1.2 Public Park and Trail System. Maintain a public park, open space, and trail system that is accessible to all parts of the city.

RR-1.7 Innovative Design. Maintain and update design standards for public parks, recreational facilities, open space, and trails based on proven best practices and innovations in public safety, active transportation, and recreation planning.

RR-1.11 Trail System. Promote park and open space connectivity by expanding the integrated system of trails within Lathrop to connect local bikeways, equestrian trails, and hiking trails to regional trails, open space areas, residential neighborhoods, employment centers, and mixed-use activity centers.

RR-1.12 Funding. Continue to pursue funding from established sources and explore non-traditional funding options and innovative partnerships to bolster and support the development, improvement, and maintenance of City parks, trails, and recreational amenities.

RR-1 IMPLEMENTATION ACTIONS

- RR-1b Pursue available resources to fund facilities and parkland and trails maintenance, acquisition, and/or development such as General Fund, private donations, gifts and endowments, special districts, and federal and state grants.
- RR-1d Enter into facilities improvement, maintenance and use agreements with San Joaquin County, the South San Joaquin County Water Irrigation District, local school districts, and neighboring cities to improve, maintain and increase access to these open space, park lands and facilities.
- RR-1f Periodically review and update the park in-lieu fee ordinance as-necessary to better reflect current costs and needs to address park demand and trails connectivity generated by infill development.

GOAL RR-6

RR-6 Provide the community with optimal air quality.

RR-6 POLICIES

- RR-6.9 GHG Reduction. Consider and implement as feasible, new policies and programs that will help to provide energy efficient alternatives to fossil fuel use and reduce consumption in order to reduce greenhouse gas emissions.

RR-6 IMPLEMENTATION ACTIONS

- RR-6e Monitor GHG emissions generated by the community over time for consistency with the established GHG reduction targets, and update the City's community GHG Inventory every five years. In the event that the City determines that ongoing efforts to reduce GHG emissions are not on track to meet the City's adopted GHG reduction targets, the City shall establish and adopt new and/or revised GHG reductions measures that will effectively meet the established GHG reduction targets.
- RR-6g Evaluate and consider multi-modal transportation benefits to all City employees, such as free or low-cost monthly transit passes. Encourage employer participation in similar programs. Encourage new transit/shuttle services and use.
- RR-6h Encourage community car-sharing and carpooling.

GOAL EJ-1

- EJ-1 Promote land use and development patterns that reduce greenhouse gas emissions, enhance air quality, and reduce climate change impacts in environmental justice communities.

EJ-1 POLICIES

- EJ-1.1 Land Use Patterns. Create land use patterns that are transit, bicycle, and pedestrian-oriented and have a mix of uses, especially neighborhood serving businesses, within walking distance of homes and workplaces.

3.14 CIRCULATION

EJ-1 IMPLEMENTATION ACTIONS

EJ-1.a Implement Actions RR-6a through RR-6l in the Recreation and Resources Element as part of the City's comprehensive approach to reducing GHG emissions and improving local air quality.

GOAL EJ-3

EJ-3 Ensure that public facilities and services are equitably distributed throughout the city of Lathrop and are available to residents of environmental justice communities.

EJ-3 POLICIES

EJ-3.3 Support Transit. Encourage local transit providers to establish and maintain routes and services that provide the community with convenient access to regional public facilities, especially health service facilities, where feasible.

EJ-3.4 Healthy Mobility. Develop a transportation system that supports safe, healthy, and active lifestyles by providing improved public transit and multimodal connectivity between parks, schools, neighborhoods, and other public facilities and community amenities.

GOAL EJ-6

EJ-6 Promote land use and development patterns that encourage physical activity and improve multimodal access and connectivity to employment, shopping, services, schools, parks, and other destinations.

EJ-6 POLICIES

EJ-6.2 Active Transportation. Support walking and bicycling by requiring complete streets (i.e. bike lanes, sidewalks separated from the roadway with trees and planted landscaping) in transit priority areas, in environmental justice communities, and in new communities and developments, wherever practicable.

EJ-6.3 Pedestrian Amenities. Provide more safe, interesting, and convenient environments for pedestrians and bicyclists, including inviting and adequately lit streetscapes, networks of trails, paths, parks, and open spaces that connect residences with key destinations, and encourage regular exercise and the reduction of automobile use.

EJ-6 IMPLEMENTATION ACTIONS

EJ-6.a Update the Municipal Code to eliminate any barriers to facilitating the development of neighborhoods with access to retail and recreation resources within walking distance of homes.

GOAL EJ-7

EJ-7 Improve the physical fitness of the city's residents, particularly those who live in environmental justice communities.

EJ-7 POLICIES

EJ-7.2 Active Mobility. Promote walking, biking, and other modes of active transportation as easy, healthy, and fun alternatives for all residents to complete local errands and short trips.

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 (Significant and Unavoidable)

Implementation of the General Plan could lead to increases in the city's population and employment that would increase the demand for pedestrian and bicycle facilities and transit facilities and services.

The City adopted a Bicycle Transportation Plan that establishes the City's goals and objectives for bicycle travel. The Bicycle Transportation Plan establishes standards for bicycle facilities and identifies planned bicycle network facilities to address the City's bicycle needs. The Circulation Element developed as part of the proposed General Plan contains Policy CIR-2.1 and Implementation Actions CIR-2a and CIR-2g, which support bicycle and pedestrian routes and facilities and creating an active transportation plan supporting the development and funding of bicycle and pedestrian networks. Furthermore, the proposed General Plan contains additional policies and implementing actions that support access to and the performance of transit, bicycle, and pedestrian facilities. These applicable policies and implementing actions are identified below. Further, the Plan includes mixed-use development that is supportive of active transportation and transit.

General Plan Update includes policies and actions that help make the circulation system, including transit, bicycle, and pedestrian facilities, consistent with applicable programs, plans, policies, and ordinances and address the needs of growth accommodated by the proposed General Plan.

Although the General Plan Update policies and actions help make the circulation system, including transit, bicycle, and pedestrian facilities, consistent with applicable programs, plans, policies, and ordinances and address the needs of growth accommodated by the proposed General Plan, increasing vehicle traffic may increase the number of collisions on Lathrop roadways, including collisions involving transit users, bicyclists, and pedestrians. The City cannot demonstrate definitively at this time that implementation of these policies would maintain the number of collisions for vehicles, pedestrians, and bicyclists at current or lower levels. Therefore, the plan may conflict with policies for safe travel, including by transit users, bicyclists, and pedestrians. These policies include CIR-2.1 and Implementation Actions CIR-2.a and CIR-2g. This impact is *significant*.

The General Plan goals, policies, and implementation measures may achieve meaningful reductions in collisions within the City. The City at this time cannot demonstrate that collisions will be reduced to the degree that it meets these thresholds. Collision reduction also depends on factors such as user behavior, demographic change, household preferences for travel, the cost of fuel, and the competitiveness of other transportation modes relative to driving. Therefore, this impact is considered *significant and unavoidable*.

GENERAL PLAN GOALS POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

General Plan goals, policies, and implementation actions described in Impact 3.14-1 and Impact 3.14-3 also reduce the potential impact of 3.14-2.

Impact 3.14-3: General Plan implementation may increase hazards due to a design feature, incompatible uses, or inadequate emergency access (Significant and Unavoidable)

Implementation of the proposed General Plan would result in increased development, which would result in new roadways and would increase the number of users on the city's transportation system. There will be a need to ensure that hazards are not increased and that adequate emergency access provisions are made to accommodate increased population and growth. As roadways are widened to accommodate increased ADT, accommodations will need to be made for all modes of travel, as part of and with adherence to the Lathrop Design and Construction Standards, Bicycle Transportation Plan Standards, Specific Plan Standards, and other programs.

It is noted that the Plan is a programmatic-level document, and hazards are typically assessed at the project-level. Potential hazards associated with future development projects would be analyzed and evaluated in detail through the environmental review process. Additionally, the City's approach to safety includes:

- Compliance with design standards – all modifications of the city's transportation network whether by City or developer action are required to comply with applicable design standards. The City's design and construction standards and specifications provide for coordinated and standardized development of City facilities, including roadways, to minimize conflicts and the potential for collisions. The standards apply to, regulate, and guide the design and preparation of plans, and the construction of streets, highways, alleys, drainage, traffic signals, site access, and related public improvements.
- Traffic investigations – the City regularly conducts investigation to address traffic safety concerns raised in the community.
- Traffic calming – the City's Neighborhood Traffic Calming Program is used to reduce speeds and create conditions more conducive to walking and bicycling. The program includes speed hump installation when conditions warrant.

Additionally, the Highway Safety Manual (American Association of State Highway and Transportation Officials, 2010) shows that fatal and injury crash frequencies generally decrease with decreasing speed. Thus, as congestion increases and vehicle speed decreases, collision rates may decrease. However, there will be periods when the roads are not congested. Additionally, this relationship cannot be shown to hold true under all conditions, and total collisions may increase. Similarly, collisions involving pedestrians and bicyclists may increase. Thus, new development will increase the number of vehicles on the roadway network, and the number of collisions in the City may increase for all modes.

Collisions involving trucks may also increase. Industrial employment is estimated to increase 279 percent under general plan buildout conditions as compared to the existing conditions. With the increase in industrial growth, about 24,700 daily truck trips are expected to be generated.

Approximately 0.31 annual injury collision and 0.061 annual killed or serious injury collision per thousand daily truck trips were estimated to be generated in the City under the 2020 baseline condition as described in the Environmental Setting section. Using a constant collision rate per trip, approximately 7.4 annual injury collisions and 1.5 annual killed or serious injury collisions are estimated to be generated in the City under general plan buildout conditions.

The increased level of traffic and delays may increase emergency response times. New development will also result in more people living and working at greater distance from existing fire and police facilities, with potentially longer response times. Additionally, new development will increase traffic at at-grade rail crossings, potentially increasing collisions.

The proposed General Plan contains policies and actions in support of safe circulation by all modes and adequate emergency access. The Circulation Element includes policies to pursue funding for grade separation. It also includes policies to create a Local Roadway Safety plan and to update the Capital Facilities Fee (CFF) program to include safety improvements for all modes and funding for grade-separated crossings at existing roadways. These applicable policies are listed below.

Although the General Plan policies and actions related to circulation, hazards, and emergency access would reduce the impacts to emergency circulation and access associated with implementation of the General Plan Update, increasing vehicle traffic may increase the number of collisions on Lathrop roadways, and therefore result in an increase in hazards. The City cannot demonstrate definitively at this time that implementation of these policies would maintain the number of collisions for vehicles, pedestrians, and bicyclists at current or lower levels. This impact is **significant**.

The General Plan goals, policies, and implementation measures listed above may achieve meaningful reductions in collisions within the City. The City at this time cannot demonstrate that collisions will be reduced to the degree that it meets this threshold. Collision reduction also depends on factors such as user behavior, demographic change, household preferences for travel, the cost of fuel, and the competitiveness of other transportation modes relative to driving. Therefore, this impact is considered **significant and unavoidable**.

GENERAL PLAN GOALS POLICIES AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

GOAL CIR-1

CIR-1 Develop and maintain a roadway system that accommodates all users.

CIR-1 POLICIES

CIR-1.2 Complete Streets. Consider all modes of travel in planning, design, and construction of all transportation projects to create safer, more livable, and more inviting environments for pedestrians, bicyclists, motorists and public transit users of all ages and capabilities.

3.14 CIRCULATION

CIR-1 IMPLEMENTATION ACTIONS

- CIR-1b Require development projects to arrange streets in an interconnected pattern, so that pedestrians, bicyclists, and drivers are not forced onto arterial streets for inter- or intra-neighborhood travel. This approach will also increase the safety and efficiency of movement of emergency responders and reduce vehicle miles traveled within the community.
- CIR-1c Apply signals, roundabouts, traffic circles and other traffic management techniques appropriately at residential and collector street intersections with collector and arterial streets in order to allow bicyclists and pedestrians to travel more conveniently and more safely from one neighborhood to another.
- CIR-1d Use traffic calming tools to assist in implementing complete street principles; possible tools include roundabouts, raised intersections, curb extensions, reduced roadway width, and high visibility crosswalks.
- CIR-1j Create a Local Roadway Safety Plan with the goal of reducing traffic fatalities and serious injuries on public roads and to support funding safety improvements. The plan may consider collision history; vehicle, bicycle, and pedestrian volumes; vehicle speeds; and other improvements. Complete this plan within four years of adoption of this General Plan.

GOAL CIR-2

- CIR-2 Create a system of pedestrian, bicycle, and transit facilities that enables non-automotive accessibility and increases the health and livability of the community.

CIR-2 POLICIES

- CIR-2.1 Bicycle and Pedestrian Networks. Establish a network of identified bicycle and pedestrian routes connecting residential areas with schools, recreation, shopping, and employment areas within the City.
- CIR-2.2 Safety. Improve safety conditions, efficiency, and comfort for bicyclists and pedestrians by providing shade trees and controlling traffic speeds by implementing narrow lanes or other traffic calming measures.
- CIR-2.3 Safe Routes to School. Consider walking and bicycling school access as a priority over vehicular movements when any such conflicts occur.
- CIR-2.4 Transit Access. Provide safer, more convenient access to transit service including rail, bus, and paratransit.

CIR-2 IMPLEMENTATION ACTIONS

- CIR-2o Coordinate with transit providers and encourage them to enhance transit amenities for safer and more comfortable access to transit including waiting areas, seating, landscaping, lighting, shade and rain cover, trash receptacles, and passenger loading zones.

GOAL CIR-3

CIR-3 Support the movement of goods through trucking, rail, and other forms of freight service while maintaining quality of life for city residents.

CIR-3 POLICIES

CIR-3.3 Railroad Crossings. Support safety improvements at current at-grade rail crossings.

CIR-3 IMPLEMENTATION ACTIONS

CIR-3a Support regional efforts that would lead to funding for grade separation and improved at-grade crossing gates at current at-grade rail crossings.

GOAL CIR-4

CIR-4 Plan for the future of transportation to ensure accessibility for all, reduce the environmental impacts of transportation, and improve the quality of life.

GOAL CIR-4 POLICIES

CIR-4.3 New Technologies. Monitor 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.

CIR-4 IMPLEMENTATION ACTIONS

CIR-4i As part of the development of or participation in any ridesharing program, including for shared automated vehicle fleets, ensure that the program considers the safety needs of vulnerable populations and loading needs of seniors, families with children, and individuals with mobility impairments.

GOAL PFS-7

PFS-7 Provide the community with high-quality public safety services, facilities, and technology that protects against illicit activities and crime.

PFS-7 POLICIES

PFS-7.1 Fire and Police Facilities. Encourage the Lathrop Manteca Fire Protection District (LMFD) to maintain adequate staff and equipment to provide efficient, high quality, and responsive fire protection, and emergency medical services to existing and future growth in the city.

PFS-7.2 Emergency Response Times. Work cooperatively with the LMFD and providers of emergency medical services to ensure acceptable response times in accordance with provider standards.

PFS-7.4 Roadway Design and Maintenance. Design and maintain roadways to maintain acceptable emergency vehicle response times.

3.14 CIRCULATION

PFS-7 IMPLEMENTATION ACTIONS

- PFS-7a Continuously monitor response times and provide the City Council with a periodic report on the results of the monitoring.
- PFS-7b The LMFD and the Public Works Department will review proposed development projects and street networks to evaluate the accessibility for fire engines and other emergency response functions.

GOAL PS-2

- PS-2 Protect the safety of life and property and prepare for urban and wildfire emergencies.

PS-2 POLICIES

- PS-2.4 Fire Emergency Response Time. Encourage and work cooperatively with the LMFD District to achieve adequate response times to ensure public safety for all emergency response calls within the city.
- PS-2.5 Roadway Design and Maintenance. Design and maintain roadways to maintain acceptable emergency vehicle response times and turning movements.

PS-2 IMPLEMENTATION ACTIONS

- PS-2c Monitor response times and provide the City Council with a periodic report on the results.
- PS-2d As part of the City's development review process for new projects:
- A. The City will continue to refer applications to the LMFD for determination of the projects' potential impacts on fire protection services. Requirements will be added as conditions of project approval, if appropriate.
 - B. The Planning Commission, the LMFD, and the City Engineer will review proposed street patterns to evaluate the accessibility for fire and emergency response.

GOAL PS-5

- PS-5 Prepare and equip the community to handle emergency situations, in order to minimize loss of life, injury, property damage, and disruption of vital services.

PS-5 POLICIES

- PS-5.5 Emergency Evacuation Routes and Access. Work with the LMFD and the Lathrop Police Department to maintain, update, and regularly exercise emergency access, protocols, and evacuation routes to assess their effectiveness.









PS-5 IMPLEMENTATION ACTIONS

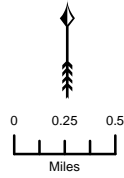
- PS-5e Periodically review, maintain, and repair City roadways and emergency access routes, and provide signage, where necessary, to clearly identify emergency access routes.

CITY OF LATHROP GENERAL PLAN

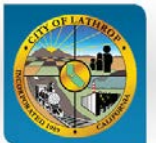
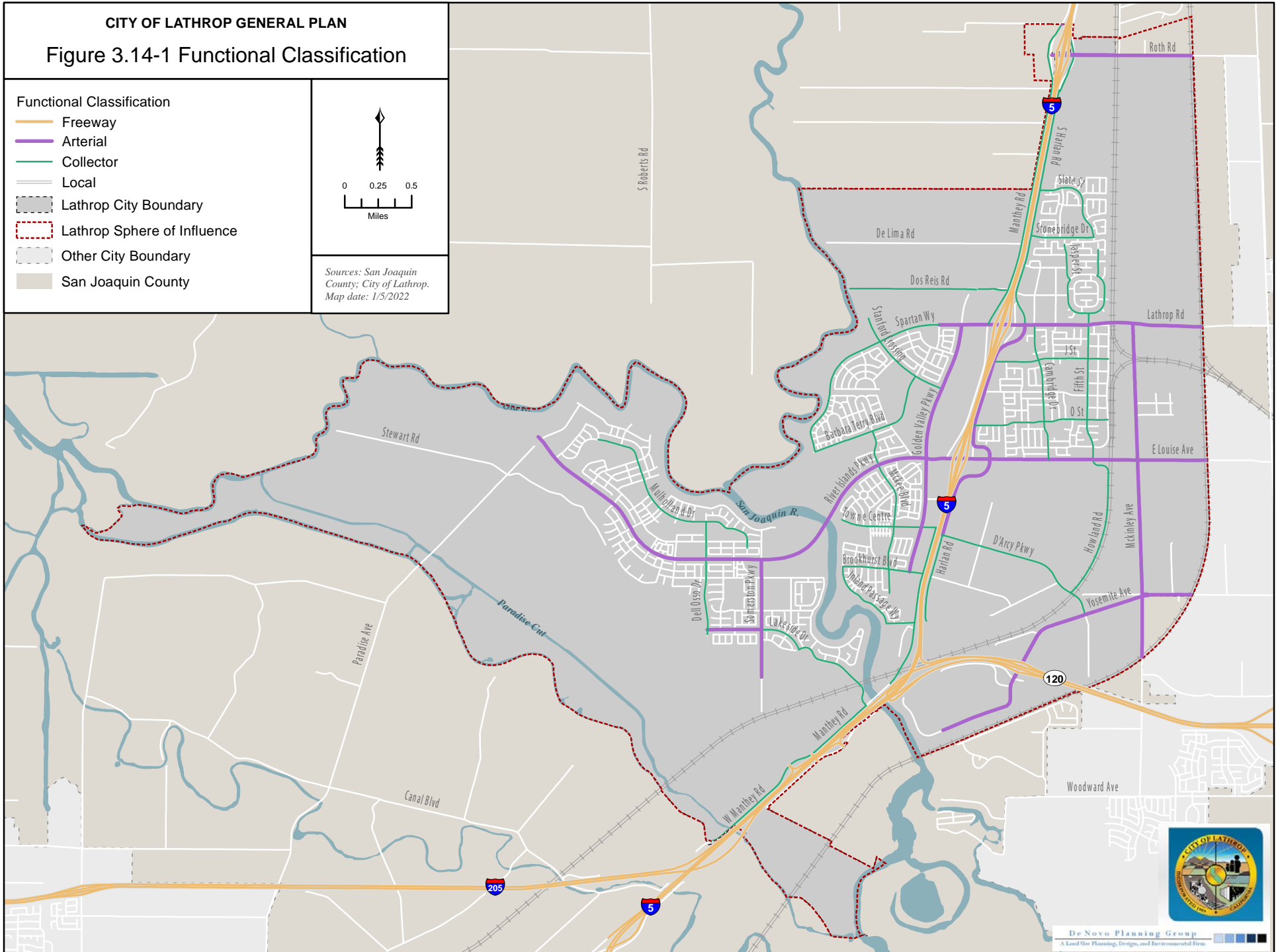
Figure 3.14-1 Functional Classification

Functional Classification

-  Freeway
-  Arterial
-  Collector
-  Local
-  Lathrop City Boundary
-  Lathrop Sphere of Influence
-  Other City Boundary
-  San Joaquin County



Sources: San Joaquin County; City of Lathrop.
Map date: 1/5/2022



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CITY OF LATHROP GENERAL PLAN

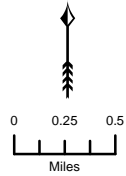
Figure 3.14-2 Number of Lanes

Number of Lanes

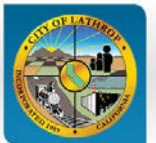
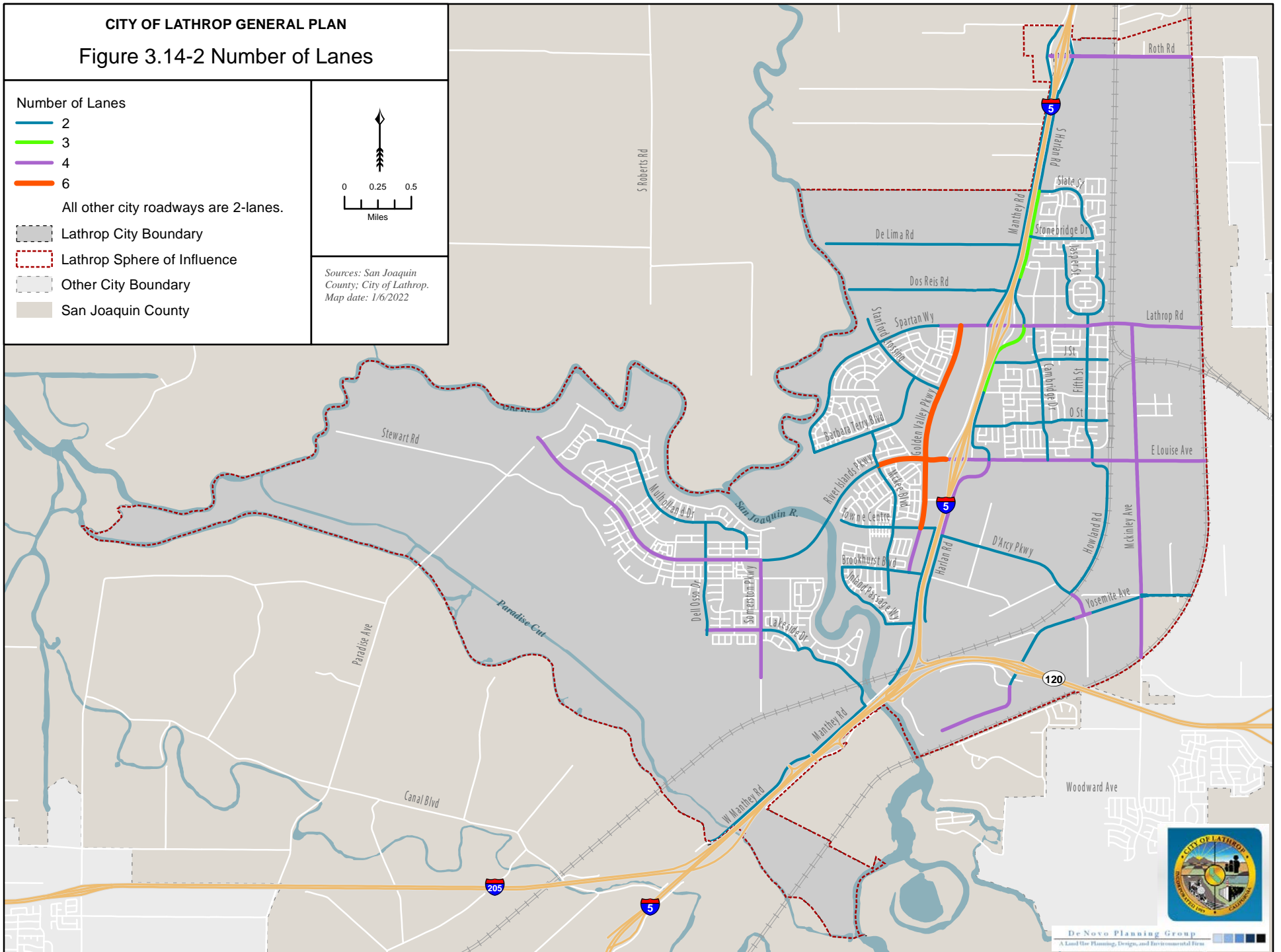
- 2
- 3
- 4
- 6

All other city roadways are 2-lanes.

- Lathrop City Boundary
- Lathrop Sphere of Influence
- Other City Boundary
- San Joaquin County



Sources: San Joaquin County; City of Lathrop.
Map date: 1/6/2022











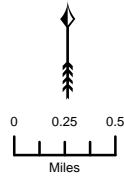
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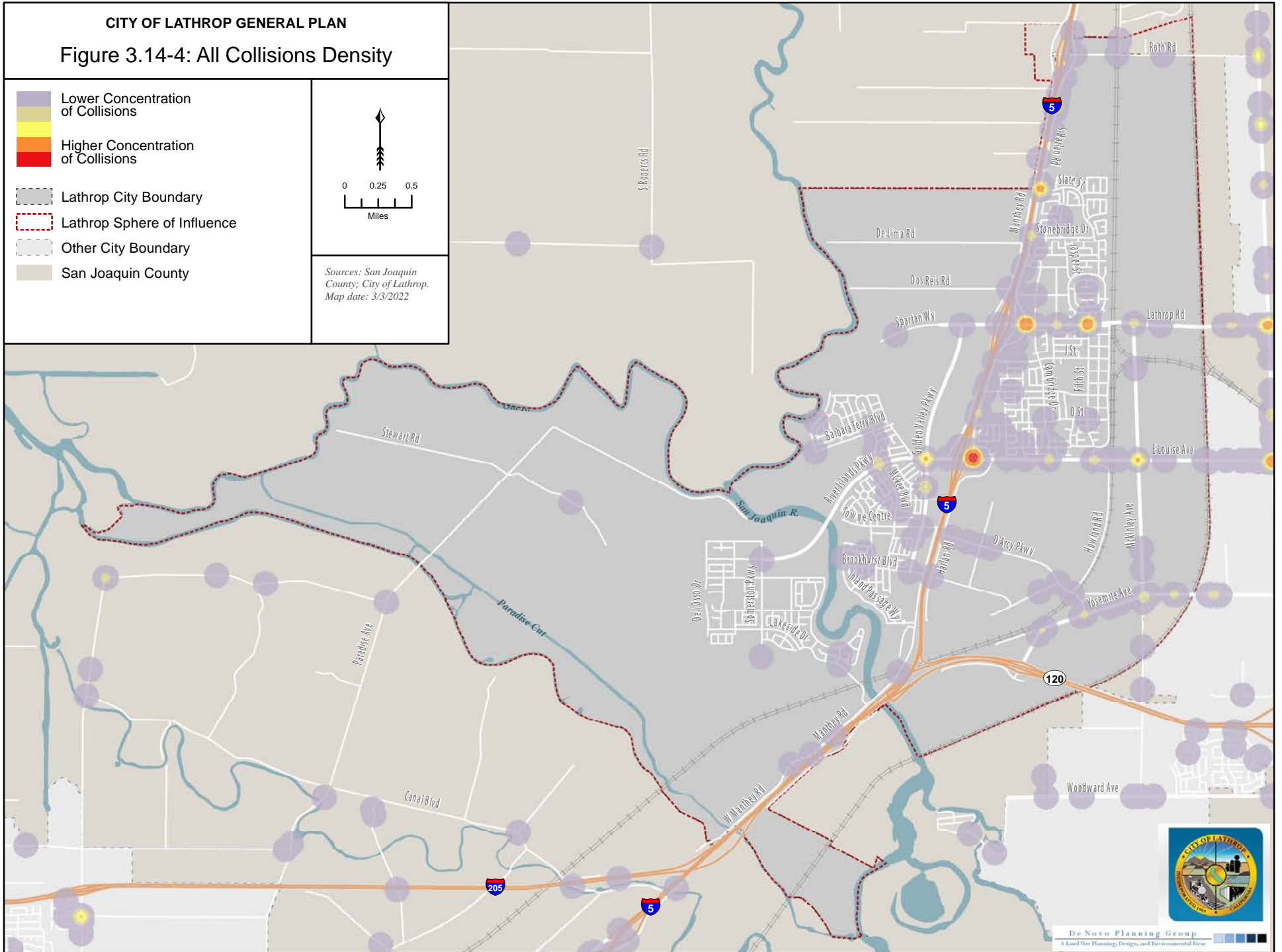
CITY OF LATHROP GENERAL PLAN

Figure 3.14-4: All Collisions Density

-  Lower Concentration of Collisions
-  Higher Concentration of Collisions
-  Higher Concentration of Collisions
-  Higher Concentration of Collisions
-  Lathrop City Boundary
-  Lathrop Sphere of Influence
-  Other City Boundary
-  San Joaquin County



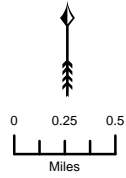
Sources: San Joaquin County; City of Lathrop.
Map date: 3/3/2022



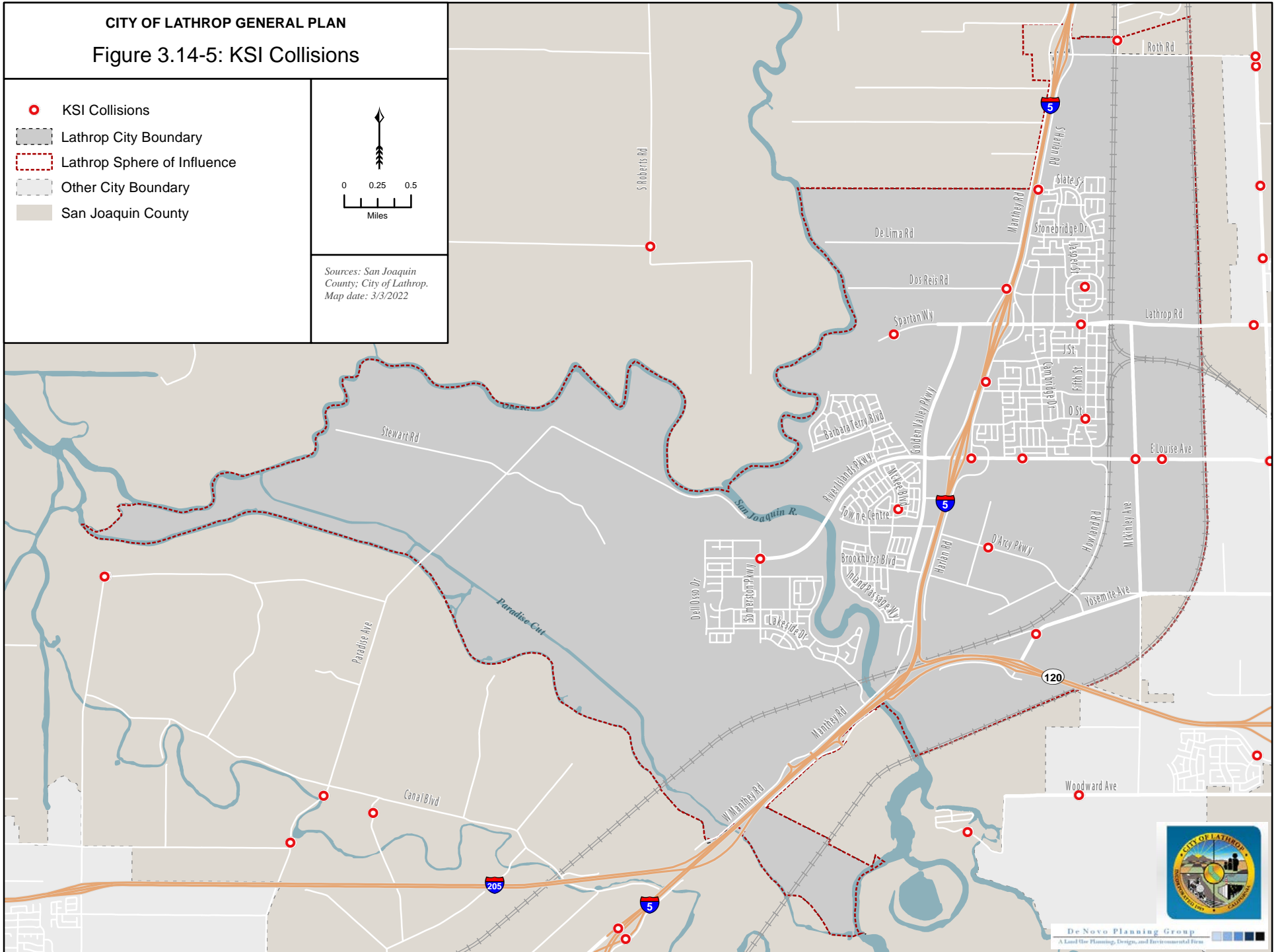
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CITY OF LATHROP GENERAL PLAN
Figure 3.14-5: KSI Collisions

- KSI Collisions
- Lathrop City Boundary
- Lathrop Sphere of Influence
- Other City Boundary
- San Joaquin County



Sources: San Joaquin County; City of Lathrop.
 Map date: 3/3/2022

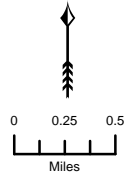


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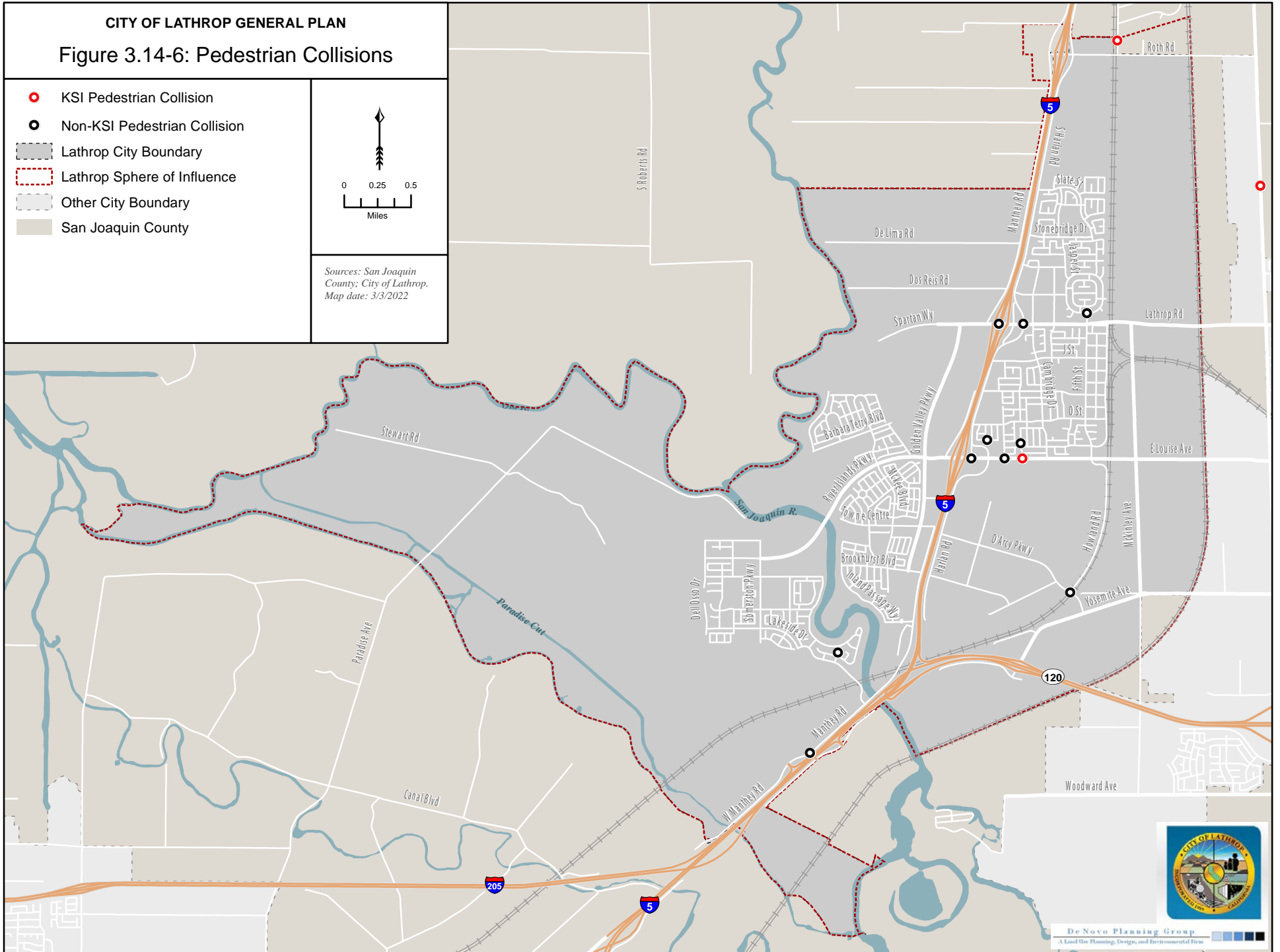
CITY OF LATHROP GENERAL PLAN

Figure 3.14-6: Pedestrian Collisions

- KSI Pedestrian Collision
- Non-KSI Pedestrian Collision
- Lathrop City Boundary
- Lathrop Sphere of Influence
- Other City Boundary
- San Joaquin County



Sources: San Joaquin County; City of Lathrop.
Map date: 3/3/2022

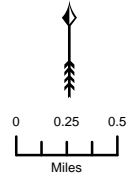


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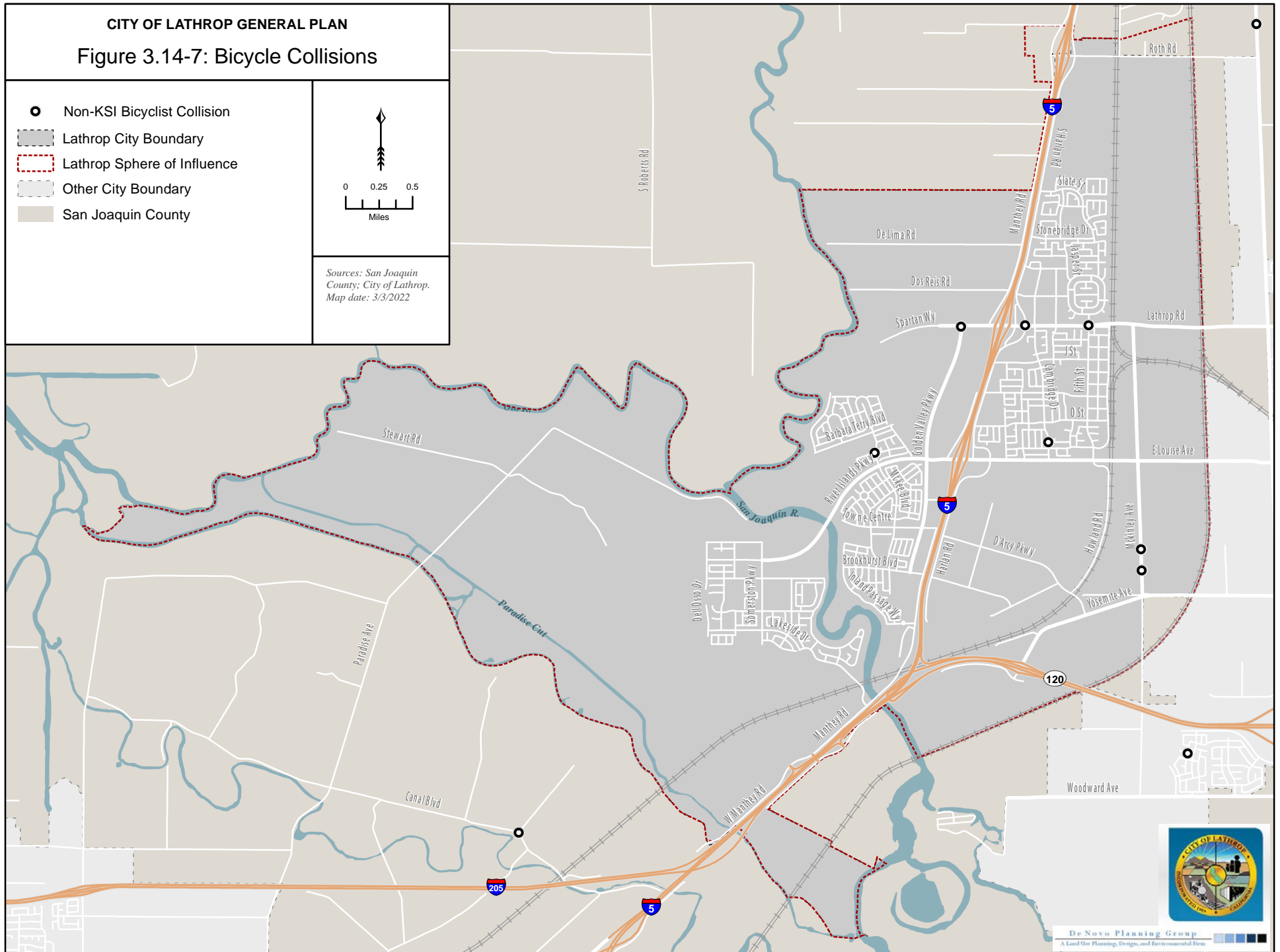
CITY OF LATHROP GENERAL PLAN

Figure 3.14-7: Bicycle Collisions

-  Non-KSI Bicyclist Collision
-  Lathrop City Boundary
-  Lathrop Sphere of Influence
-  Other City Boundary
-  San Joaquin County



Sources: San Joaquin County; City of Lathrop.
Map date: 3/3/2022

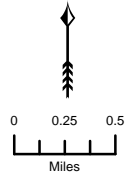


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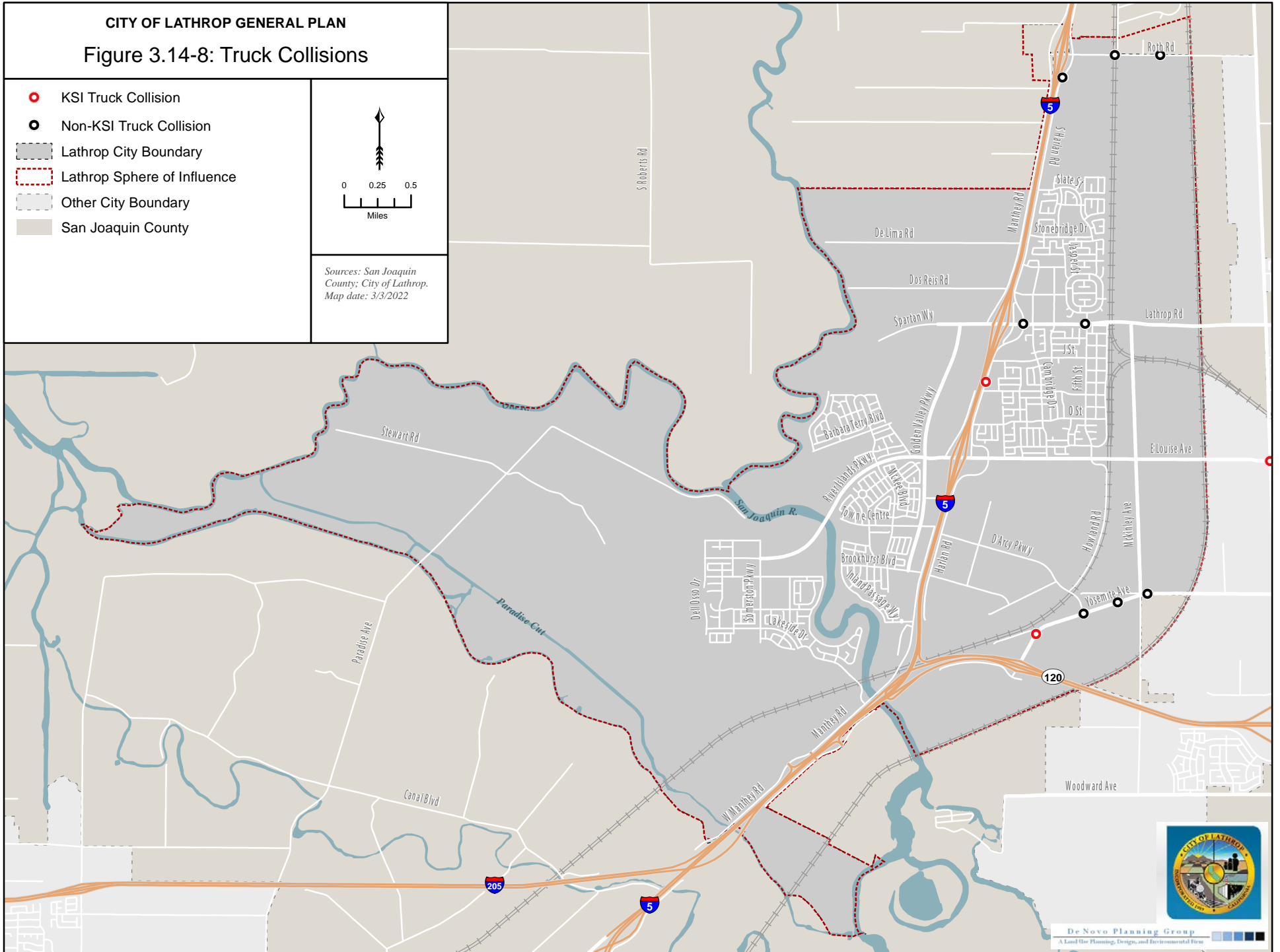
CITY OF LATHROP GENERAL PLAN

Figure 3.14-8: Truck Collisions

- KSI Truck Collision
- Non-KSI Truck Collision
- Lathrop City Boundary
- Lathrop Sphere of Influence
- Other City Boundary
- San Joaquin County



Sources: San Joaquin County; City of Lathrop.
Map date: 3/3/2022

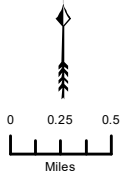


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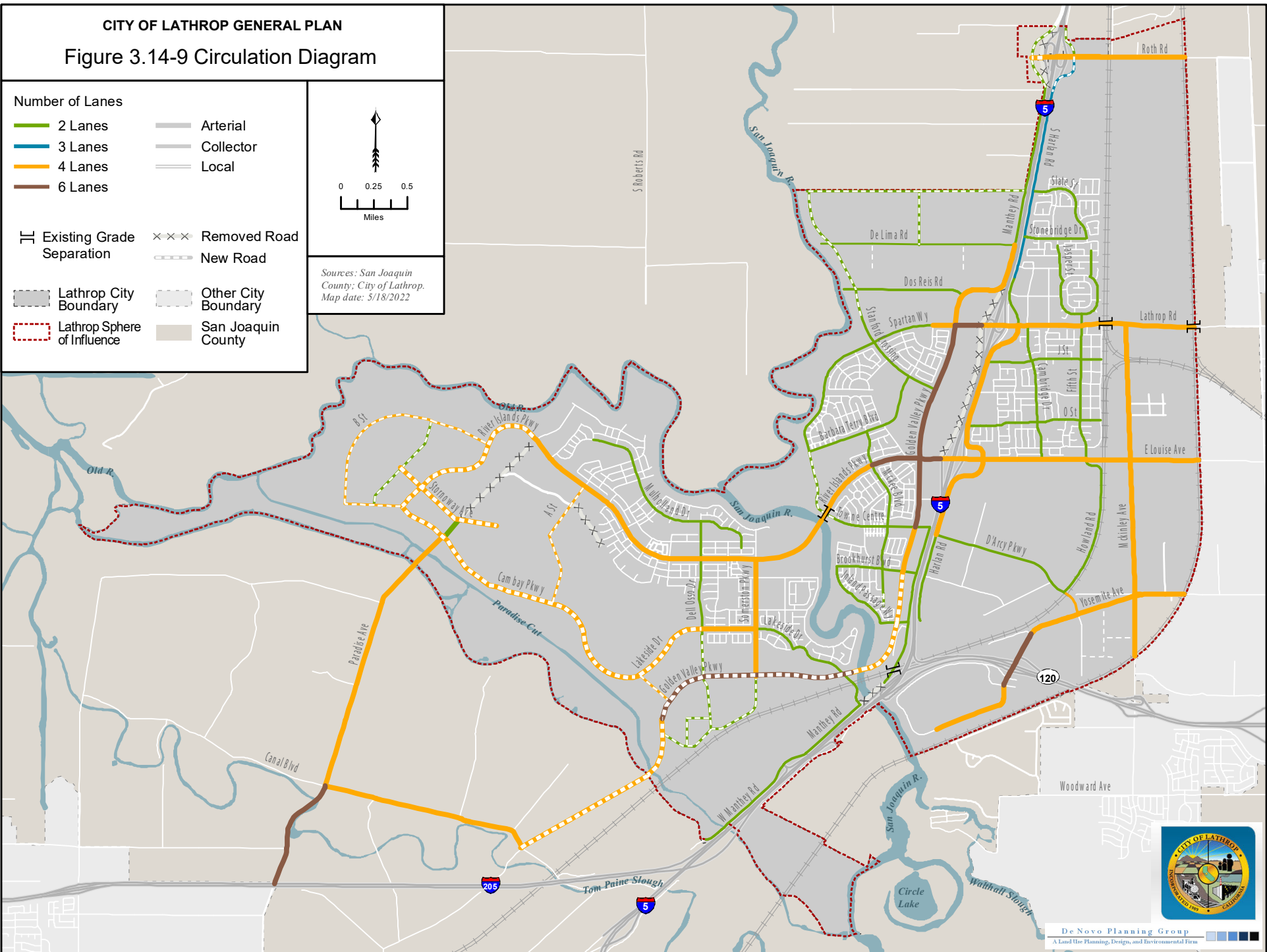
CITY OF LATHROP GENERAL PLAN

Figure 3.14-9 Circulation Diagram

Number of Lanes	
	2 Lanes
	3 Lanes
	4 Lanes
	6 Lanes
	Arterial
	Collector
	Local
	Existing Grade Separation
	Removed Road
	New Road
	Lathrop City Boundary
	Other City Boundary
	Lathrop Sphere of Influence
	San Joaquin County



Sources: San Joaquin County; City of Lathrop.
Map date: 5/18/2022



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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 Lathrop including water supplies, wastewater, storm drainage, and solid waste. This section is organized with an existing setting, regulatory setting, and impact analysis.

Comments were received during the Notice of Preparation comment period regarding this environmental topic from the Central Valley Regional Water Quality Control Board (CVRWQCB) (November 8, 2021). The CVRWQCB highlighted that any future development under the General Plan must adhere to the Basin Plan, which identifies water quality objectives, and Antidegradation regulations, which requires any discharged water to apply the best practicable treatment to prevent pollution or a nuisance from occurring. The CVRWQCB went on to emphasize the potential permitting requirements related to water quality which are as follows:

- Construction Storm Water General Permit
- Phase I and II Municipal Separate Storm Sewer System (MS4) Permits
- Industrial Storm Water General Permit
- Clean Water Act Section 404 Permit
- Clean Water Act Section 401 Permit
- Waste Discharge Requirements
- Dewatering Permit
- Limited Threat General NPDES Permit
- NPDES Permit

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

Water System

The City of Lathrop provides water service to 6,308 residential, commercial, agricultural and industrial service connections from surface and groundwater supplies. In addition, private wells are utilized by two major industrial facilities within the City. The City's surface water supply is delivered fully treated from the Stanislaus River by the South County Water Supply Project (SCWSP). The SCWSP is owned and operated by the South San Joaquin Irrigation District (SSJID).

In addition to surface water, five groundwater wells supply water to City residents, with a sixth that is currently not in operation. Groundwater from Wells 6, 7, 8, 9 and 10 are treated to state and federal drinking water standards at the Louise Avenue Water Treatment Facility (LAWTF).

The City's potable water system service area reflects the City limits with the inclusion of select industrial areas, as shown in Figure 3.15-1.

Groundwater Facilities

In 2018 a jurisdictional groundwater basin boundary modification request was approved by DWR to modify the boundaries of the Eastern San Joaquin (ESJ) Subbasin and the Tracy Subbasin to align with the City of Lathrop's (City's) City Limit to be fully encompassed within the Tracy Subbasin. The former basin boundaries split the City's service area between two groundwater basins (roughly bisecting the city along the San Joaquin River), requiring two Groundwater Sustainability Agencies (GSAs) (i.e., the City of Lathrop GSA and the Stewart Tract GSA) to cover the City, and the development and implementation of two Groundwater Sustainability Plans (GSPs). This boundary modification demonstrates that the modification promotes continued sustainable groundwater management. This commitment is articulated in the Memorandum of Understanding (MOU) between the City and Reclamation District (RD) 2062 (i.e., the Stewart Tract GSA) that formalizes their intent to form a joint GSA covering the entire City and to coordinate GSP development within the Tracy Subbasin.

The City owns and operates groundwater wells that pump from the Tracy Groundwater Sub-basin of the San Joaquin Valley Groundwater Basin. Currently, five groundwater wells supply potable water to City connections including Wells 6, 7, 8, 9 and 10. Well 21 and the Well 21 water treatment facility have remained inactive from elevated uranium and arsenic since November

2003. The City plans to both upgrade the Well 21 treatment facility and dilute the well water to meet state and federal drinking water standards (West Yost Associates, 2018). The Well 21 water treatment facility Phase I pipeline is scheduled to be completed as early as 2023 and the Phase II tank by 2025. Groundwater from Wells 6, 7, 8, 9, and 10 is conveyed via 12-inch and 16-inch diameter water mains along the eastern border of the City along the railroad tracks to the LAWTF, where the groundwater is treated to remove arsenic.

Brought online in 2012, the Louise Avenue Water Treatment Facility (LAWTF) treats all groundwater for arsenic through a ferric chloride coagulation and filtration process. Removed compounds are disposed of in an approved landfill. The City recently installed solids handling improvements at the LAWTF, including concrete drying beds to better facilitate sludge de-watering and disposal.

Surface Water Facilities

In 2005, SSJID began providing treated surface water from the Stanislaus River to the Cities of Lathrop, Manteca, and Tracy, as part of the SCWSP. SSJID's supply is the Stanislaus River and is based on pre-1914 water rights and post-1914 appropriative water rights for direct diversion to storage. SSJID's surface water rights are subject to a 1988 Agreement and Stipulation with the United States Bureau of Reclamation regarding the New Melones Reservoir operation.

The SCWSP provides treated surface water from the Stanislaus River via Woodward Reservoir under a 300,000 acre-foot per year (AFY) entitlement. The supply is treated at SSJID's Nick C. DeGroot Water Treatment Plant which includes air floatation clarification and a submerged membrane filtration system. There are three large storage tanks and four pump stations that deliver the water over 20 miles to the City via SSJID's Drinking Water Pipeline.

Recycled Non-Potable Water Facilities

The Central Valley Regional Water Quality Control Board (CV-RWQCB) regulates the Lathrop Consolidated Treatment Facility (LCTF) and the use of recycled water. The City currently uses recycled water for irrigation of agricultural lands, irrigation of public landscape areas, and percolation basins. The City is in the process of expanding its use of recycled water in the future to offset potable water demands. For example, the City has expanded its recycled water distribution system to meet disposal requirements for the Phase II expansion of the LCTF. Phase II increased the treatment capacity of the LCTF to 2.5 million gallons per day (mgd), which equates to 2,800 AFY. Additionally, new developments such as Mossdale Landing, River Islands and Central Lathrop, are being constructed with purple pipes to encourage the future use of reclaimed water for urban landscapes.

Distribution System Facilities

The City's water distribution system consists of a single pressure zone and approximately 142 miles of distribution pipelines ranging from 2 inches to 30 inches in diameter. The following list describes the major components of the City's water distribution system facilities; these facilities include

3.15 UTILITIES AND SERVICE SYSTEMS

City-owned or City-operated infrastructure required to serve groundwater, surface water, and recycled water supplies, and are shown on Figure 3.15-1:

- The City of Lathrop has an emergency intertie with the City of Stockton for potable supply.
- The City receives SSJID treated surface water at SSJID Turnout 1, which includes a 1.0 MG tank and 7.5 mgd peak capacity. Turnout 1 is not owned by the City, and is therefore not included in the City's water storage. A second SSJID turnout is near completion in the River Islands area with a 1.0 MG treated storage tank.
- The City has 4.6 MG of storage divided between five ground-level storage tanks. Each tank has an associated booster pump station, and all but Booster Pump Station (BPS)-1 have variable frequency drive pumps. The City's tanks are used to help meet system demands during peak hours, provide emergency storage, and provide fire flow storage. In total, the City has approximately 37.4 mgd of domestic supply pump capacity, and an additional 13.8 mgd of fire pump capacity.

Water Demands and Supplies (Water System Master Plan)

According to the Water System Master Plan, total potable water use was 3,646 acre-feet (AF) in 2016, with a per capita water use of 147 gallons per capita per day (GPCD). Given future water use projections provided in the WSMP, the City is expected to have a net surplus of 416 AFY of water in 2035, as shown in Table 3.15-1. As part of the SCWSP, the City signed a Water Supply Development Agreement in 1995 with SSJID for potable water lasting through to December 2029. The Water Supply Development Agreement allots the City a maximum total of 8,007 AFY in Phase I and 11,791 AFY of treated potable water during Phase II of the project. In August of 2013, the City Council agreed to sell 1,120 AFY of SSJID Phase I allocation to the City of Tracy, reducing the maximum Phase I allocation for Lathrop to 6,887 AFY. After Phase II is implemented, the City's allocation after sale will be 10,671 AFY, as shown in Table 3.15-1. The SSJID has experienced increased demand in recent years and is exploring options to expand their distribution system, although the schedule for these expansions are uncertain.

Although the City is projected to experience a 5 percent shortfall in normal years after 2040, further additional supply from planned improvements to Well 21, LCTF and construction of the Phase II SCWSP, increased non-potable water supply generated from the LCTF, and future unaccounted-for conservation measures are expected to provide the City with adequate supplies through 2040 during normal water years (West Yost Associates, 2018).

LAWTF has a current treatment capacity of 9 mgd, equating to 5,040 AFY. Currently, the capacity of all groundwater wells totals 5,850 AFY, but the potable supply is limited by the LAWTF treatment capacity. The City is currently installing solids handling improvements at the LAWTF to better facilitate sludge de-watering and disposal that will increase future capacity.

Reclaimed water usage has increase from 485 AFY in 2011 to 609 AFY in 2016 as shown in Table 3.15-1, and is projected to increase significantly with completion of new developments, including River Islands, where new infrastructure is already in place to utilize this future supply. It is important to note that the City's projection of future recycled water availability assumes increases

to the treatment capacity of the LCTF that will keep pace with production. During 2020, the City recycled 934 AF of tertiary effluent from the LCTF.

The State of California's SBx7-7 Water Conservation Act of 2009 requires water retailers to establish and meet a water use reduction target of 20 percent by the year 2020 from a calculated baseline water use. The target is measured in total GPCD, rather than the residential water use divided by the population. The City adopted its 2020 SBx7-7 target of 188 GPCD in 2012, but exceeded the goal through voluntary water conservation measures and increases in non-potable water use.

TABLE 3.15-1: PAST AND FUTURE WATER SUPPLY CAPACITY AND DEMAND DURING NORMAL YEARS, AFY

	ACTUAL					PROJECTED					
ANNUAL WATER DEMAND	2011	2012	2013	2014	2015	2016	2025	2030	2035	2040	BUILDOUT
Potable Water Demand	3,798	4,332	4,686	4,008	3,445	3,646	9,711	11,965	13,531	15,185	18,616
Recycled Non-Potable Demand	485	437	465	519	546	609	2,439	3,398	4,112	4,815	6,284
Total Demand	4,283	4,769	5,151	4,527	3,991	4,255	12,150	15,363	17,643	20,000	24,900
Available Surface Water Capacity	8,007	8,007	8,007	6,887	6,887	6,887	6,887	6,887	6,887	10,671	10,671
Groundwater Pumping Capacity	5,850	5,850	5,850	5,850	5,850	5,850	7,060	7,060	7,060	7,060	7,060
Total Potable Capacity	13,857	13,857	13,857	12,737	12,737	12,737	13,947	13,947	13,947	17,731	17,731
Recycled Non-Potable Supply	485	437	465	519	546	609	2,439	3,398	4,112	4,815	6,284
Total Water Supply	14,342	14,294	14,322	13,256	13,283	13,346	16,386	17,345	18,059	22,546	24,015
Surplus or Deficit	10,059	9,525	9,171	8,729	9,292	9,091	4,236	1,982	416	2,546	(885)

SOURCE: WEST YOST ASSOCIATES, 2018. NOTES:

1. POTABLE WATER DEMANDS FROM 2011-2016 FROM WSMP, 2018, TABLE 4-1.; 2. POTABLE WATER DEMANDS FROM 2020-BUILDOUT FROM WSMP, 2018, TABLE 5-11.; 3. RECYCLED WATER DEMAND ASSUMES ALL WASTEWATER GENERATED WILL CONTINUE TO BE USED.; 4. AVAILABLE SURFACE WATER CAPACITY FROM WSMP, 2018, TABLE 5-4.; 5. THE CITY'S TOTAL PHASE I ALLOTMENT OF SCWSP WATER, FOLLOWING THE 2013 SALE TO THE CITY OF TRACY OF 1,120 AFY, IS 6,887 AFY.; 6. GROUNDWATER CAPACITY FROM 2011-2016 IS BASED ON ANNUAL YIELD OF WELLS 6-10 NOT LIMITED BY LAWTF CAPACITY (WSMP, TABLE 5-3).; 7. GROUNDWATER CAPACITY FROM 2020-2040 IS FROM WSMP, 2018, TABLE 5-7.; 8. RECYCLED NON-POTABLE PRODUCTION FROM 2011-2015 IS BASED ON THE HISTORICAL LCTF AVERAGE ANNUAL FLOW (DRAFT 2018 WWMP), TABLE 4-1.; 9. RECYCLED NON-POTABLE PRODUCTION FROM 2016-BUILDOUT IS BASED ON RWMP, 2018, TABLE 4-1, CONVERTED TO AFY AND ASSUMES FUTURE TREATMENT CAPACITY AT LCTF

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Water Demands and Supplies (Proposed Project Water Supply Analysis)

In November 2021, West Yost developed a Water Supply Analysis (WSA) for the City of Lathrop General Plan Update. In the WSA, West Yost summarized the land uses in the General Plan Update, projected future demand at Buildout (in 2040) and compared the projected water demand to the water supply documented in the City’s 2020 UWMP, and the SSJID 2020 UWMP.

PROJECTED WATER DEMAND

The projected water demands were calculated by West Yost based on a sum of existing 2020 water demands, planned General Plan growth demand (excluding River Islands) and planned River Island Phase 2 demand. The demand for the future land use areas for the proposed General Plan Growth (excluding River Islands) was calculated by multiplying the proposed Project projected land uses by the applicable land use-based water demand factors shown in Table 3.15-2, below.

TABLE 3.15-2. WATER USE FACTORS BY LAND USE TYPE

Land Use Designation	Water Use Factor		Units
	2021 Urban Water Management Plan(a)		
	City Wide	River Islands	
Low Density Residential (LDR)	330	315	gpd/du
Medium Density Residential (MDR)	250	235	gpd/du
High Density Residential (HDR)	135	--	gpd/du
General Commercial	860	--	gpd/ac
Industrial	1200	--	gpd/ac
Parks	2,450	--	gpd/ac
Public/Institutional	1500	--	gpd/ac

(a) Based on unit water demand factors used in the 2020 Urban Water Management Plan (EKI, June 2021). These factors were developed using unit water factors presented in the 2019 Water System Master Plan but updated based on additional water use data for 2017 to 2019.

The resulting water demand projection is shown in Table 3.15-3, below.

TABLE 3.15-3. PROJECTED WATER DEMAND OF FUTURE LAND USES AT BUILDOUT OF THE GENERAL PLAN

Proposed Land Use	Future Land Use at Buildout,	Water Demand Factor	Water Demand, acre-feet
	DU, acres(a)	gpd per DU, gpd per acre(b)	
Future Water Demand			
Low Density Residential	7,454	330	2,755
Medium Density Residential	1,589	250	445
High Density Residential	573	135	87
General Commercial(c)	136	860	131
Industrial(c)	360	1,200	484
Public/Institutional	324	2,450	890
Landscape	234	2,450	644
River Islands Phase 2 Development	--	--	3,798

Proposed Land Use	Future Land Use at Buildout,	Water Demand Factor	Water Demand, acre-feet
	DU, acres(a)	gpd per DU, gpd per acre(b)	
Future Water Demand			
Subtotal	10,111	--	9,233
Unaccounted-for Water(d)	--	--	369
Existing Water Demands(e)	--	--	4,487
Total	--	--	14,089

Based on the analysis above, the projected potable and raw water demand at buildout of the General Plan is 14,089 AFY. It should be noted that City potable demand in 2020 was significantly higher than in previous years which may have been caused by a higher daytime population in Lathrop than normal due to stay-at-home orders and mandated closure of non-essential businesses in response to the COVID-19 pandemic.

WATER SUPPLY SUMMARY

The City’s water supplies are documented in the 2020 UWMP and the SSJID 2020 UWMP and are summarized below. However, reliability projections presented in the SSJID 2020 UWMP do not take into consideration the impacts of the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (“Bay-Delta Plan”). If implemented, the Bay-Delta Plan would have significant impacts on the minimum projected supply amounts available for SSJID to distribute. The Bay-Delta Plan remains uncertain due to pending litigation and based on these uncertainties SSJID has opted to make no near-term planning assumptions and should conditions change, a revision to the 2020 SSJID UWMP would impact this water supply analysis.

The City’s total potable and raw water supply is shown in Table 3.15-4, below.

TABLE 3.15-4. SUMMARY OF POTABLE AND RAW WATER SUPPLY DURING HYDROLOGIC NORMAL, SINGLE-DRY AND MULTIPLE-DRY YEARS^(a)

Hydrologic Condition	Potable and Raw Water Supply at Buildout of the General Plan Area, AFY
Normal Year	15,391
Single Dry Year	13,759
Multiple Dry Year 1	15,391
Multiple Dry Year 2	15,391
Multiple Dry Year 3	13,759
Multiple Dry Year 4	13,759
Multiple Dry Year 5	15,391

The City of Lathrop currently uses disinfected tertiary recycled water to irrigate fodder crops, landscape areas, and for percolation into the ground. However, there is no infrastructure in place to deliver tertiary treated recycled water to retail customers to offset potable demand. Therefore, recycled water supplies are not assumed to be an available water supply for this analysis.

3.15 UTILITIES AND SERVICE SYSTEMS

COMPARISON OF WATER SUPPLY AND DEMAND AT BUILDOUT

A comparison of the available water supply and projected demands at buildout of the General Plan is shown in Table 3.15-5 (West Yost, 2021).

TABLE 3.15-5. COMPARISON OF POTABLE AND RAW WATER DEMAND VERSUS SUPPLY DURING HYDROLOGIC NORMAL, SINGLE DRY, AND MULTIPLE DRY YEARS

Hydrologic Condition		Supply and Demand Comparison, AFY
		Buildout of General Plan Area
Normal Year		
Available Potable and Raw Water Supply(a)		15,391
Total Water Demand(b)		14,089
Potential Surplus (Deficit)(c)		1,302
Supply Surplus/Shortfall, Percent of Demand		9%
Single Dry Year		
Available Potable and Raw Water Supply(a)		13,759
Total Water Demand(b)		14,089
Potential Surplus (Deficit)(c)		(330)
Supply Surplus/Shortfall, Percent of Demand		-2%
Multiple Dry Year		
Multiple Dry Year 1	Available Potable and Raw Water Supply(a)	15,391
	Total Water Demand(b)	14,089
	Potential Surplus (Deficit)(c)	1,302
	Supply Surplus/Shortfall, Percent of Demand	9%
Multiple Dry Year 2	Available Potable and Raw Water Supply(a)	15,391
	Total Water Demand(b)	14,089
	Potential Surplus (Deficit)(c)	1,302
	Supply Surplus/Shortfall, Percent of Demand	9%
Multiple Dry Year 3	Available Potable and Raw Water Supply(a)	13,759
	Total Water Demand(b)	14,089
	Potential Surplus (Deficit)(c)	(330)
	Supply Surplus/Shortfall, Percent of Demand	-2%
Multiple Dry Year 4	Available Potable and Raw Water Supply(a)	13,759
	Total Water Demand(b)	14,089
	Potential Surplus (Deficit)(c)	(330)
	Supply Surplus/Shortfall, Percent of Demand	-2%
Multiple Dry Year 5	Available Potable and Raw Water Supply(a)	15,391
	Total Water Demand(b)	14,089
	Potential Surplus (Deficit)(c)	1,302
	Supply Surplus/Shortfall, Percent of Demand	9%

As indicated in Table 3.15-5, above, based on the assumptions presented in this report, the City would have a 2 percent deficiency in water supplies to serve development of the proposed Project land uses during some dry years (i.e during dry year 3 and dry year 4).

REGULATORY SETTING – WATER SUPPLIES

State

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.

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.

3.15 UTILITIES AND SERVICE SYSTEMS

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 LATHROP URBAN WATER MANAGEMENT PLAN

The City's 2020 Urban Water Management Plan (UWMP) is an individual UWMP that describes how the current and future water resources and demands within the City's service area will be managed to provide an adequate and reliable water supply. Additionally, the City's UWMP reflects the following significant revisions to the UWMP ACT that have been made since 2015. The UWMP has been prepared in general accordance with the format suggested in DWR's 2020 *Urban Water Management Plans Guidebook for Urban Water Suppliers*.

CITY OF LATHROP WATER SYSTEM MASTER PLAN

Updates to the City's Water, Wastewater and Recycled Water Master Plans are needed for compliance with legislation, to condition development and ensure public health and safety through effective planning and management of the City's water, wastewater and recycled water systems. Collectively, these documents are referred to as the Integrated Water Resources Master Plan (IWRMP). The IWRMP is used to plan future capital improvement projects and serves as the basis for regulatory compliance documents. The IWRMP serves as the planning document used to provide water infrastructure needed for the City to develop to its General Plan, and for the environmental determination to meet California Environmental Quality Act Requirements.

CITY OF LATHROP MUNICIPAL CODE

The Lathrop Municipal Code contains ordinances regulating potable and non-potable water within the City of Lathrop. Chapter 3.20 provides for the City's Impact Fee Ordinance, which requires development impact fees to be charged to fund improvements to the City's infrastructure. Chapter 12.22 provides for rules and restrictions on water play areas in city parks. Chapter 13.08 describes the City's water conservation and rationing provisions. Chapter 13.09 describes the City's water recycling policy. Chapter 13.12 describes the cross-connection controls of the City's water system. Chapter 13.16 provides restrictions on the location of the City's sewer and water pipes. Chapter 16.28 provides that developers of subdivisions shall provide adequate water supply and fire suppression improvements to the City's water system. Chapter 17.92 provides the City's Water Efficient Landscape Ordinance.

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 not 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.

In November 2021, West Yost developed a WSA for the City of Lathrop General Plan Update. In the WSA, West Yost summarized the land uses in the General Plan Update, projected future demand at Buildout (projected in 2040) and compared the projected water demand to the water supply documented in the City's 2020 Urban Water Management Plan UWMP, and the SSJID 2020 UWMP. A comparison of the available water supply and projected demands at buildout of the General Plan is shown in Table 3.15-5.

As indicated in Table 3.15-5, above, based on the assumptions presented in the WSA, the City would have a 2 percent deficiency in water supplies to serve development of the proposed Project land uses during some dry years (i.e during dry year 3 and dry year 4).

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 and/or allocation of land use are updated based on the current General Plan update, then the ability to serve new growth may need to be re-evaluated. The proposed General Plan includes a range of policies and actions (listed below) to ensure that the City's water supply plans are updated to address development and land use changes in order to ensure that future supply levels meet demands. For example, Policy PFS-2.1 requires the City to manage the water system to ensure that the water supply is adequate to meet the needs of existing and future development and is utilized in a sustainable manner. Nevertheless, based the available data, the City is anticipated to have a slight deficit of water supplies during dry years 3 and 4 if the levels of potential new growth analyzed in this EIR occur by 2040.

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. Projected water demands associated with General Plan buildout would not exceed the projected available water supplies during normal years, and the proposed General Plan includes a comprehensive set of goals, policies, and actions to ensure an adequate and reliable source of clean potable water. Nevertheless, as described in the WSA, it is anticipated that the City, with implementation of the General Plan Update, would have a slight deficiency in water supplies during multiple dry years 3 and 4. Therefore, impacts associated with sufficient water supplies are considered to be **significant and unavoidable**.

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

PFS-2 Provide existing and projected development with reliable, adequate access to clean, safe, and potable water.

POLICIES

PFS-2.1 Water System and Supply. Manage the water system to ensure that the water supply is adequate to meet the needs of existing and future development and is utilized in a sustainable manner.

PFS-2.2 Integrated Water Resources Master Plan. Continue to update and implement the Integrated Water Resources Master Plan (IWRMP).

PFS-2.3 Coordination with the South San Joaquin Irrigation District. Coordinate with South San Joaquin Irrigation District (SSJID) when considering land use changes in order to assist the District in planning for adequate capacity to accommodate future growth.

PFS-2.4 SSJID Water Supply Agreement. Renew and update the water supply agreement with SSJID as needed to supplement the City's existing system in order to meet projected demand and to reduce the City's reliance on groundwater resources.

PFS-2.5 Development Review. Consider the effect of incremental increases in the demands on groundwater supply and water quality when reviewing development applications.

PFS-2.6 Fair Share Cost. Ensure that all new development provides for and funds a fair share of the costs for adequate water source, distribution, including line extensions, easements, and water treatment plant expansions.

PFS-2.7 Drinking Water. Ensure safe drinking water, consistent with federal and state standards, is available throughout the community.

PFS-2.8 Water Conservation. Support water conservation measures that comply with state and federal legislation and that are consistent with measures adopted in the City's Integrated Water Resources Master Plan and Urban Water Management Plan.

PFS-2.9 Emerging Technologies. Encourage service providers to explore the use of new technologies in the acquisition, treatment, distribution, and consumption of water including monitoring technologies, and other best practices.

IMPLEMENTING ACTIONS

PFS-2a Update the IWRMP, regarding water supply and distribution, every five years, or as needed. The update shall reflect the most recent adopted groundwater studies that establish a safe yield for the groundwater basin and/or establish maximum extraction from the basin. The update shall be reviewed periodically for adequacy and consistency with the General Plan.

PFS-2b Continue to rely on existing groundwater and surface water resources, while maintaining and improving the infrastructure, in collaboration with the SSJID, other water districts, and other local jurisdictions where applicable, to provide access to the water supply.

3.15 UTILITIES AND SERVICE SYSTEMS

- PFS-2c Develop new water sources, storage facilities, and major distribution lines as necessary to serve new development.
- PFS-2d Continue to support the conversion of agricultural water rights to urban use, where appropriate, to support new development.
- PFS-2e Continue to require, as part of the development review process, project applicants to demonstrate sufficient access to water resources to service the project area. Require, as a condition of project approval, dedication of land and easements, or payment of appropriate fees and exactions, to help offset municipal costs of expansion of water treatment facilities and delivery systems.
- PFS-2f Regularly review and update the City's water conservation measures to be consistent with current State regulations, best management practices for water conservation, considering measures recommended by the State Department of Water Resources, and the California Urban Water Conservation Council.
- PFS-2g Continue to assess a water development fee on all new commercial, industrial, and residential development sufficient to fund system-wide capacity improvements.
- PFS-2h Continuously monitor water flows through the City's water system to identify areas of potential water loss and instances of under billing for water service, and make improvements to the system and billing assessments as necessary.
- PFS-2i Continue educational outreach designed to increase public participation in water conservation and water quality awareness through printed material and the City's website and social media accounts.
- PFS-2j Continue to implement and update as necessary Chapter 13.08 – Water Conservation and Rationing of the Lathrop Municipal Code.
- PFS-2k Institute a remote monitoring program for the city's water system and replace faulty meters in the system as necessary. The City will continue the practice of identifying and replacing faulty meters at service connections on an ongoing basis.
- PFS-2l Regularly monitor water quality in the water system and wells and take necessary measures to prevent contamination and reduce known contaminants to acceptable levels.

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 (Less than Significant)

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 not projected to be adequate to meet demand that would be generated by buildout of the General Plan, for some multiple dry years. As such, implementation and buildout of the General Plan has the potential to result in the need to construct or expand water treatment facilities that have not already been described and accounted for in the City's relevant water master plans, which include the Water Master Plan and the 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.

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 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. Therefore, this impact is considered **less than significant** and no additional mitigation is necessary.

3.15.2 WASTEWATER

This section describes the City of Lathrop's wastewater infrastructure, wastewater flows, treatment plant permit requirements, and previous infrastructure planning. Figure 3.15-2 provides the existing sewer system within the City of Lathrop. Wastewater service is provided by Lathrop via their network of collection infrastructure and the Manteca Water Quality Control Facility (MWQCF) and the Lathrop Consolidated Treatment Facility (LCTF).

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.

SEWER COLLECTION SYSTEM AND WASTEWATER TREATMENT

Wastewater System Overview

Wastewater from the City of Lathrop is currently treated at the MWQCF and the LCTF. The MWQCF treats most of the City's wastewater generated in areas east of Interstate Highway 5 (I-5), excluding the Crossroads development area. The LCTF treats the wastewater generated west of I-5 and in the Crossroads, Gateway and South Lathrop development areas. Delineation of the sewer sheds can be found in Figure 3.1-2. In 2016, the City generated a total average annual flow of 1.46 mgd with 0.92 mgd treated at the MWQCF and 0.54 mgd treated at the LCTF as documented in the City's IWRMP.

Wastewater Collection System

The City's wastewater collection system consists of approximately 72 miles of gravity mains ranging from 6 to 36 inches, 21 miles of force mains ranging from 4 to 18 inches, and 12 pump stations. Approximately 63 percent of gravity mains are polyvinyl chloride pipes, which is the City's current standard pipe material. The remaining 37 percent of pipes are vitrified clay pipes that are in Historic Lathrop and Crossroad Business Park areas. The City has a supervisory control and data acquisition (SCADA) system for control and monitoring of facilities. The City's wastewater collection system service area is generally contiguous with the city limits.

The City currently provides wastewater service to approximately 6,100 residential, commercial, industrial and institutional/governmental properties. However, there are areas within the city limits that are not served by the wastewater system. Many large facilities (e.g., Simplot, and former Carpenter Company facility) have historically self-managed their wastewater (West Yost Associates, 2018). Some of these areas have been planned to move to City service, as they are re-developed. Some residential homes and businesses in the central portion of Lathrop (e.g. Lathrop Industrial and South Lathrop) are served by a septic system.

LCTF and MWQCF have independent sewer sheds except at the 8-inch Mosssdale Intertie. The Mosssdale Intertie crosses beneath I-5 on River Islands Parkway and Louise Avenue. The Mosssdale intertie is not routinely operated, but could potentially be utilized in the future to reroute a portion of flows from the Mosssdale Pump Station to the MWQCF collection system. A map of wastewater infrastructure is shown in Figure 3.15-2.

Wastewater Treatment Facilities

Wastewater treatment facilities that serve the City include the MWQCF and the LCTF. These facilities are described below.

MANTECA WATER QUALITY CONTROL FACILITY

The City of Lathrop owns 14.7 percent of the MWQCF capacity by contract with the City of Manteca. The City does not participate in the operation of the facility, nor does it receive recycled water from the facility. As discussed in the City's *Municipal Service Review and Sphere of Influence Plan*, and as listed in Table 3.15-6, the City is allocated 1.45 mgd of the total 9.87 mgd facility capacity. The MWQCF is permitted for future expansions of up to 26.97 mgd, of which the City would be allocated a maximum of 14.7 percent capacity or 3.97 mgd. Treatment at the MWQCF consists of primary sedimentation followed by roughing biotowers, conventional activated sludge, secondary clarification, tertiary filtration, and ultraviolet disinfection. Disinfected tertiary effluent is discharged to the San Joaquin River. A portion of the secondary effluent is not disinfected and is used to irrigate medians and agricultural fields.

3.15 UTILITIES AND SERVICE SYSTEMS

TABLE 3.15-6: FUTURE SEWER CAPACITY, MGD

Year	2016	2020	2025	2030	2035	2040	BUILDOUT 2050
DEMAND							
MWQCF Projected ADWF	1.08	1.23	1.36	1.37	1.38	1.39	1.47
LCTF Projected ADWF	0.61	1.33	2.18	3.03	3.67	4.30	5.61
ADWF Total	1.69	2.56	3.54	4.40	5.05	5.69	7.08
TREATMENT CAPACITY							
MWQCF	1.45	1.45	1.45	1.45	1.45	1.45	1.45
MWQCF Improvements	0	0	0	0	0	0	0
LCTF	0.75	0.75	0.75	0.75	0.75	0.75	0.75
LCTF Phase I	0.25 ^(a)	0.25	0.25	0.25	0.25	0.25	0.25
LCTF Phase II	Not Complete ^(b)	1.33 ^(b)	1.0	1.0	1.0	1.0	1.0
LCTF Phase III		Not Complete ^(c)	2.0	2.0	2.0	2.0	2.0
LCTF Phase IV ^(d)					2.0	2.0	2.0
Treatment Total	2.45	3.78	5.45	5.45	7.45	7.45	7.45

SOURCE: WEST YOST ASSOCIATES, 2018. NOTES:

(A) COMPLETED IN 2017

(B) FACILITY IS SUBSTANTIALLY COMPLETED AS OF JUNE, 2018. FULL TREATMENT CAPACITY OF 1.5 MGD WILL BE AVAILABLE WHEN RIVER DISCHARGE BEGINS OPERATION IN LATE 2022, AS STORAGE AND DISPOSAL LIMITS WILL BE ELIMINATED, BUT WILL BE REDUCED TO 1.0 DUE TO HIGH BOD LOADING

(C) FACILITY IS UNDER DESIGN AND WILL BE AVAILABLE BY 2024

(D) LCTF PHASE IV IS EXPECTED TO BE AVAILABLE BY 2035

LATHROP CONSOLIDATED TREATMENT FACILITY

The LCTF is City-owned but operated by a private contractor, Veolia Water NA. The LCTF's treatment capacity was expanded to 2.5 mgd, with the completion of recent recycled water disposal facilities. However, capacity is currently limited to 1.55 mgd by off-site recycled water storage and disposal capacity. The LCTF is planned to be expanded to a future permitted capacity of 6.0 mgd.

Wastewater treatment and disposal at the LCTF is regulated under the California Regional Quality Control Board Central Valley Region Waste Discharge Requirements. LCTF applies the effluent to land rather than discharging to a water body, and is therefore not subject to the NPDES requirements. The wastewater treatment processes at the LCTF includes secondary treatment,

tertiary infiltration, and disinfection prior to storage and disposal. The LCTF produces disinfected tertiary recycled water suitable for irrigation at parks, landscape strips, median islands, pond berms, and agricultural fields.

Wastewater treatment processes at the LCTF include secondary treatment, tertiary filtration, disinfection, and reuse for irrigation of agricultural and landscape use areas. The following major components make up the LCTF:

- Raw wastewater undergoes screening and grit removal prior to entering the influent pump station. A 0.95 MG steel tank provides diurnal flow equalization and short-term emergency storage. Wastewater in the tank is automatically returned to the influent pump station as treatment capacity becomes available.
- From the influent pump station, wastewater is distributed evenly to two Membrane Bioreactor treatment trains for a combined treatment capacity of 1.0 mgd. Each Membrane Bioreactor train includes an anoxic basin, recirculation mixers, an aeration basin, anoxic pumps, aeration and membrane blowers, membrane modules, a membrane tank, mixed liquor recycle pumps, and filtrate pumps.
- Disinfection is accomplished using sodium hypochlorite solution in a chlorine contact tank that provides more than 32 minutes of modal contact time. If disinfection fails, the effluent is rerouted back to the emergency storage basin and retreated.
- Tertiary treated effluent is discharged into Pond S5 for immediate storage, and is then transferred to off-site storage in Ponds S1, S2, S3, S6, S16, and the Crossroads Wastewater Treatment Effluent Storage Ponds A, B, and C.
- Waste activated sludge generated from LCTF is pumped to the solids handling facility located at the adjacent Crossroads Wastewater Treatment Facility. The solids handling facility includes a 0.19 MG aerobic sludge storage tank, two belt filter presses, and a concrete drying bed used for supplemental air drying of dewatered sludge when conditions permit. Air-dried sludge is temporarily stored on the drying bed until transportation to the City of Merced for land application.
- The City's existing recycled water system is governed by State Discharge Requirements outlined in Order R5-2018-0023 and supports the disposal of the effluent produced by the LCTF at eight agricultural land application areas (LAAs): A23, A28, A30, A31, A35, A35b, A35c, and A36. The distribution system consists of nine storage ponds; S1, S2, S3, S5, S6, S16, S-28, A, B, and C, their associated pump stations PMP1, PMP2, PMP3, PMP10, PMP12, and the Crossroads PMP. The City has approximately 30.3 miles of recycled water pipeline, as of 2018.

The RWQCB approved a San Joaquin River Discharge NPDES in 2020 and expires 31 March 2025. The City is constructing the required modifications to the LCTF to add required de-chlorination facilities and have awarded a contract to construct an outfall pipeline from the LCTF to the San Joaquin River. Developer Funding Agreements for the NPDES facilities will, upon operation of the NPDES facilities in late 2022, return storage ponds and spray fields to the developers who funded the NPDES project, except for Ponds S5, S6, A, B and C located at the LCTF plus Pond S16 on Stewart Tract which will all be retained as part of the permanent recycled water system.

Demands

The Central Valley Regional Water Quality Control Board and the IWRMP guide the long-term strategy for meeting future discharge and capacity requirements. From 2009 to 2016, total per capita average dry weather flow (ADWF) varied between 60 and 69 gallons of wastewater per capita per day. It is anticipated that the City's total ADWF in 2040 will be 5.69 mgd, and increase to 7.07 mgd at buildout in 2050. Of this total, the MWQCF is projected to treat ADWFs of 1.39 mgd from Historic Lathrop in 2040 and 1.47 mgd at buildout. Areas served by the LCTF have larger increases in planned development and are projected to treat ADWFs of 4.30 mgd in 2040 and 5.61 mgd at buildout.

Major Wastewater System Issues and Opportunities

The City's collection system is primarily assessed against the capacity criteria, including depth to diameter (d/D) ratio in gravity mains and maximum velocity in force mains. Approximately seven percent of City's existing gravity mains will not meet the capacity criteria by 2040. Approximately 43 percent of the City's existing gravity mains do not meet the minimum velocity and slope criteria which does not trigger an improvement unless capacity criteria are not met beyond 2040 (West Yost Associates, 2018).

The LCTF with Phase II expansion is projected to have sufficient treatment capacity for existing and new development through 2026. The City's current capacity allocation at MWQCF is projected to be sufficient to meet projected flows from Historic Lathrop through 2040 with additional capacity needed by buildout. The gravity collection system in the Mossdale Landing will not be able to accommodate the anticipated peak wastewater flow from River Islands and Central Lathrop areas by 2025. Correspondingly, an upgrade to the Central Lathrop Pump Station will be required before 2025. The River Islands Permanent Pump Station and improvements to the Woodfield Lift Station became operational in 2022. Deficiencies at the Stonebridge Lift Station are noted in multiple buildout scenarios (West Yost Associates, 2018).

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 Lathrop 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

CITY OF LATHROP SEWER SYSTEM MANAGEMENT PLAN

The City of Lathrop Sewer System Management Plan (SSMP) was prepared in compliance with the requirements contained in the SWRCB General Order No. 2006-003-DWQ. An SSMP is a document that describes the activities the City of Lathrop uses to manage its wastewater collection system effectively. Effective management of a wastewater collection system includes: (1) Maintaining or improving the condition of the collection system infrastructure in order to provide reliable service into the future; (2) Cost-effectively minimizing infiltration/inflow (I/I) and providing adequate sewer capacity to accommodate design storm flows; and (3) minimizing the number of sanitary sewer overflows that occur. The Lathrop SSMP was originally adopted in July 2009 and was updated in 2013, 2016, and 2018.

CITY OF LATHROP WATER SYSTEM MASTER PLAN

Updates to the City's Water, Wastewater and Recycled Water Master Plans are needed for compliance with legislation, to condition development and ensure public health and safety through effective planning and management of the City's water, wastewater and recycled water systems. Collectively, these documents are referred to as the IWRMP. The IWRMP is used to plan future capital improvement projects and serves as the basis for regulatory compliance documents. The IWRMP serves as the planning document used to provide water infrastructure needed for the City to develop to its General Plan, and for the environmental determination to meet California Environmental Quality Act Requirements.

CITY OF LATHROP MUNICIPAL CODE

The Lathrop Municipal Code contains ordinances regulating wastewater within the City of Lathrop. Chapter 3.20 provides for the City's Impact Fee Ordinance, which requires development impact fees to be charged to fund improvements to the City's infrastructure. Chapter 13.16 provides restrictions on the location of the City's sewer and water pipes. Chapter 13.26 provides the City's sewer and industrial wastewater regulations. Chapter 3.20 provides for the City's Impact Fee

Ordinance, which requires development impact fees to be charged to fund improvements to the City's infrastructure.

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 (Less than Significant)

The City's wastewater collection system consists of approximately 72 miles of gravity mains ranging from 6 to 36 inches, 21 miles of force mains ranging from 4 to 18 inches, and 12 pump stations. Approximately 63 percent of gravity mains are polyvinyl chloride pipes, which is the City's current standard pipe material. The remaining 37 percent of pipes are vitrified clay pipes that are in Historic Lathrop and Crossroad Business Park areas. The City has a supervisory control and data acquisition (SCADA) system for control and monitoring of facilities. The City's wastewater collection system service area is generally contiguous with the city limits.

The City currently provides wastewater service to approximately 6,100 residential, commercial, industrial and institutional/governmental properties. However, there are areas within the city limits that are not served by the wastewater system. Many large facilities (e.g., Simplot, and former Carpenter Company facility) have historically self-managed their wastewater (West Yost Associates, 2018). Some of these areas have been planned to move to City service, as they are re-developed. Some residential homes and businesses in the central portion of Lathrop (e.g. Lathrop Industrial and South Lathrop) are served by a septic system.

Updates to the City's Water, Wastewater and Recycled Water Master Plans are needed for compliance with legislation, to condition development and ensure public health and safety through effective planning and management of the City's water, wastewater and recycled water systems. Collectively, these documents are referred to as the IWRMP. The IWRMP is used to plan future capital improvement projects and serves as the basis for regulatory compliance documents. The IWRMP serves as the planning document used to provide water infrastructure needed for the City to develop its General Plan, and for the environmental determination to meet California Environmental Quality Act Requirements.

Wastewater treatment facilities that serve the City include the MWQCF and the LCTF. LCTF and MWQCF have independent sewer sheds except at the 8-inch Mossdale Intertie. The Mossdale Intertie crosses beneath I-5 on River Islands Parkway and Louise Avenue. The Mossdale intertie is not routinely operated, but could potentially be utilized in the future to reroute a portion of flows from the Mossdale Pump Station to the MWQCF collection system. A map of wastewater infrastructure is shown in Figure 3.15-2.

As Lathrop 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 City's IWRMP 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.

The Central Valley Regional Water Quality Control Board and the IWRMP guide the long-term strategy for meeting future discharge and capacity requirements. From 2009 to 2016, total per capita ADWF varied between 60 and 69 gallons of wastewater per capita per day. As described in the City's Sewer System Management Plan, based on the City's existing General Plan, the City's total ADWF in 2040 was anticipated be 5.69 mgd, and increase to 7.07 mgd in 2050. Of this total, the MWQCF is projected to treat ADWFs of 1.39 mgd from Historic Lathrop in 2040 and 1.47 mgd at buildout. Areas served by the LCTF have larger increases in planned development and are projected to treat ADWFs of 4.30 mgd in 2040 and 5.61 mgd at buildout.

The proposed General Plan Update would develop fewer residential dwelling units than the existing General Plan, while non-residential square footage would be higher than provided in the existing General Plan. The projected flows of the proposed General Plan for the MWQCF and LCTF are not expected to exceed the treatment capacity available for treatment, under the General Plan Update. Moreover, if full buildout of the proposed General Plan Update increases the existing treatment demand at the City's treatment plants compared with the demand anticipated under the existing General Plan, the proposed General Plan Update includes a range of policies designed to ensure an adequate wastewater treatment capacity for development. For example, Policy PFS-3.5 requires that the City review new development applications in order to ensure that new growth does not exceed the availability of adequate sewage treatment capacity or predate the presence of necessary infrastructure. Additionally, implementing action PFS-3a requires the City to update the IWRMP regarding wastewater collection and treatment every five years, or as needed; the update is also required to be reviewed annually for adequacy and consistency with the General Plan.

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. Given that projected wastewater generation volumes associated with General Plan buildout is not anticipated to exceed the capacity of the wastewater treatment provider to have adequate capacity, this impact would be **less than significant**, and no mitigation is required.

However, 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.

GENERAL PLAN GOALS, POLICIES, AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

GOALS

PFS-3 Provide the community with a wastewater system that is efficient, safe, cost-effective, and able to meet the needs of existing and future development.

POLICIES

PFS-3.1 Wastewater Infrastructure. Ensure adequate wastewater collection and treatment infrastructure to serve existing and future development.

PFS-3.2 Peak Flow. Maintain the ability to handle peak discharge flow as per the State Regional Water Quality Control Board requirements established in the current Waste Discharge Requirements (WDRs) Order for the Lathrop Consolidated Wastewater Treatment Facility.

PFS-3.3 Statewide Requirements. Maintain compliance with the current Statewide General Waste Discharge Requirements concerning the operation and maintenance of sanitary sewer collection systems.

PFS-3.4 Sewer Disposal Best Practices. Identify and implement best practices and feasible technologies for wastewater collection and treatment, including those that reduce the amount of wastewater requiring treatment, prevent contamination, maintain the highest possible energy efficiency, and reduce costs and greenhouse gas (GHG) emissions.

PFS-3.5 Development Review. Review new development applications in order to ensure that new growth does not exceed the availability of adequate sewage treatment capacity or predate the presence of necessary infrastructure.

PFS-3.6 Fair Share Cost. Ensure that all new developments provide for and fund their fair share of the costs for adequate sewer collection, treatment, and disposal, including line extensions, easements, and dedications.

PFS-3.7 Reduced System Demand. Reduce wastewater system demand by encouraging water conserving designs and equipment, encouraging water-conserving devices, and designing wastewater systems to minimize inflow and infiltration.

PFS-3.8 Septic Systems. Only allow the development of individual septic systems where it is not feasible to provide public sewer service. Such systems shall only be used until such time as City sewer service becomes available and meet the minimum standards of the San Joaquin County Health Department.

PFS-3.9 Public Education. Continue development and implementation of a public education and outreach program that teaches residents and businesses how to help maintain a safe and clean wastewater system, such as by limiting the amount of oils, pesticides, and toxic chemicals entering the sewer system.

IMPLEMENTING ACTIONS

PFS-3a Update the IWRMP regarding wastewater collection and treatment every five years, or as needed. The update shall be reviewed periodically for adequacy and consistency with the General Plan.

PFS-3b Require new development to provide for and fund a fair share distribution, including line extensions, easements, and plant expansions.

PFS-3c Require all wastewater generators within the City's service area to connect to the City's system, except those areas where on-site treatment and disposal facilities are deemed appropriate.

PFS-3d Continue development and implementation of an industrial pretreatment program for business parks and other industrial uses in accordance with state and federal requirements.

PFS-3e Continue to monitor the effluent generation rates citywide, and ensure that the City retains adequate capacity allocations at the Lathrop Consolidated Treatment Facility, and the Manteca Water Quality Control Facility to meet existing and projected demand.

PFS-3f Promote reduced wastewater system demand through efficient water use by:

- A. Requiring water conserving design and equipment in new construction;
- B. Encouraging retrofitting with water conserving devices;
- C. Designing wastewater systems to minimize inflow and infiltration to the extent economically feasible; and
- D. Maintaining a Citywide map of all sewer collection system components and monitoring the condition of the system on a regular basis.

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 (Less than Significant)

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.

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. As such, this impact would be **less than significant**, and no additional mitigation is required.

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.

GENERAL PLAN GOALS, POLICIES, AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

GOALS

PFS-3 Provide the community with a wastewater system that is efficient, safe, cost-effective, and able to meet the needs of existing and future development.

POLICIES

PFS-3.1 Wastewater Infrastructure. Ensure adequate wastewater collection and treatment infrastructure to serve existing and future development.

PFS-3.2 Peak Flow. Maintain the ability to handle peak discharge flow as per the State Regional Water Quality Control Board requirements established in the current Waste Discharge Requirements (WDRs) Order for the Lathrop Consolidated Wastewater Treatment Facility.

PFS-3.3 Statewide Requirements. Maintain compliance with the current Statewide General Waste Discharge Requirements concerning the operation and maintenance of sanitary sewer collection systems.

PFS-3.4 Sewer Disposal Best Practices. Identify and implement best practices and feasible technologies for wastewater collection and treatment, including those that reduce the amount of wastewater requiring treatment, prevent contamination, maintain the highest possible energy efficiency, and reduce costs and greenhouse gas (GHG) emissions.

- PFS-3.5 Development Review. Review new development applications in order to ensure that new growth does not exceed the availability of adequate sewage treatment capacity or predate the presence of necessary infrastructure.
- PFS-3.6 Fair Share Cost. Ensure that all new developments provide for and fund their fair share of the costs for adequate sewer collection, treatment, and disposal, including line extensions, easements, and dedications.
- PFS-3.7 Reduced System Demand. Reduce wastewater system demand by encouraging water conserving designs and equipment, encouraging water-conserving devices, and designing wastewater systems to minimize inflow and infiltration.
- PFS-3.8 Septic Systems. Only allow the development of individual septic systems where it is not feasible to provide public sewer service. Such systems shall only be used until such time as City sewer service becomes available and meet the minimum standards of the San Joaquin County Health Department.
- PFS-3.9 Public Education. Continue development and implementation of a public education and outreach program that teaches residents and businesses how to help maintain a safe and clean wastewater system, such as by limiting the amount of oils, pesticides, and toxic chemicals entering the sewer system.

IMPLEMENTING ACTIONS

- PFS-3a Update the IWRMP regarding wastewater collection and treatment every five years, or as needed. The update shall be reviewed periodically for adequacy and consistency with the General Plan
- PFS-3b Require new development to provide for and fund a fair share distribution, including line extensions, easements, and plant expansions.
- PFS-3c Require all wastewater generators within the City's service area to connect to the City's system, except those areas where on-site treatment and disposal facilities are deemed appropriate.
- PFS-3d Continue development and implementation of an industrial pretreatment program for business parks and other industrial uses in accordance with state and federal requirements.
- PFS-3e Continue to monitor the effluent generation rates citywide, and ensure that the City retains adequate capacity allocations at the Lathrop Consolidated Treatment Facility, and the Manteca Water Quality Control Facility to meet existing and projected demand.
- PFS-3f Promote reduced wastewater system demand through efficient water use by:
- A. Requiring water conserving design and equipment in new construction;
 - B. Encouraging retrofitting with water conserving devices;
 - C. Designing wastewater systems to minimize inflow and infiltration to the extent economically feasible; and

- D. Maintaining a Citywide map of all sewer collection system components and monitoring the condition of the system on a regular basis.

3.15.3 STORMWATER DRAINAGE

The information in this section focuses on the potential for the General Plan to result in the demand for new or expanded stormwater drainage facilities. Section 3.10 (Hydrology) includes an expanded analysis of water quality, flooding, and other stormwater related issues.

STORM DRAINAGE SYSTEM

The City of Lathrop's storm drainage collection system uses pipelines, surface channels and, in some locations, detention basins that store peak flows to direct drainage to the San Joaquin River. The City's documented existing storm drain infrastructure includes approximately 916 inlets, 691 manholes, 21 pump stations, 4 outfalls to the San Joaquin River, 13 detention basins, and 36 miles of storm drain.

The City references three documents to address water quality: the *General Permit for Waste Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems Order No. 2013-0001-DWQ*, the *Multi-Agency Post-Construction Stormwater Standards Manual*, and the *City of Lathrop Department of Public Works Design and Construction Standards*. The Best Management Practices required by these documents are intended to assure that outfall discharges meet Clean Water Act National Pollutant Discharge Elimination System (NPDES) requirements. New developments within the City are also required to mitigate stormwater discharge rate increases caused by development, as noted in the City of Lathrop Design and Construction Standards.

Area-Specific Drainage Master Plans

The last comprehensive City storm drain master plan was published in 1992 and covers facilities in and adjacent to historic Lathrop. As development has occurred, specific plans have become the most current source of information on drainage facilities in each new development. These specific plans include Central Lathrop, Crossroads Business Park, Historic Lathrop, Mossdale Landing, North Lathrop, River Islands and South Lathrop areas. The specific plan areas are described below and are discussed in further detail in the City's *Municipal Service Review and Sphere of Influence Plan*. Some planning areas have changed since the original area-specific plans were developed. The areas covered by each area-specific plan described below correspond to the most recent available information on drainage zones, as shown on Figure 3.15-3.

CENTRAL LATHROP

The *Central Lathrop Specific Plan* proposes future development of 1,520 acres located west of I-5. The Specific Plan proposes low, medium, and high density residential units, commercial land uses, two schools and 200 acres of recreational land use and open space. The *Central Lathrop Specific Plan* identifies pre-development drainage as a system of shallow agricultural ditches that discharge into the San Joaquin River by small, privately-owned pumps. The planned drainage system south of Dos Reis Road has been constructed for this area, including inlets, storm drains, detention, a pump

station and outfall, with full development expected by 2050, although no mapping of utility completion is available. The system will mitigate increased runoff volume and peak flow rates produced by the development. Infiltration from high groundwater into the collection system will be a concern.

CROSSROADS BUSINESS PARK

The Crossroads Business Park area is a commercial and industrial development area. The area historically included a large amount of impervious pavement with a single stormwater detention facility. A new drainage system comprised of gravity mains, detention, pump stations and outfalls has been constructed to mitigate increased runoff volume and peak flow rates produced by development. On-lot detention for 100-year storm volume is also required as noted in the *Crossroads Storm Drainage Master Plan*. As of June 2018, the Crossroads Business Park is nearly fully developed as envisioned by the *Crossroads Storm Drainage Master Plan*. However, mapping of drainage infrastructure is not yet available.

HISTORIC LATHROP

The 1,500-acre portion of the City east of I-5 is anticipated to continue increasing in density, as it has historically. The primary storm drainage system within the study area consists of pipe networks draining to detention basins and pump stations. Detention basins are used to increase the capacity of the system through peak flow reduction, as peak flow rates are greater than the current pumping capacity. Drainage facilities vary widely in adequacy with newer areas having improved effectiveness. Densification and redevelopment are ongoing in the area.

LATHROP INDUSTRIAL AREA

The Lathrop Industrial Area is a large commercial and industrial area that includes the Sharpe Army Depot, and McKinley Corridor. The Sharpe Army Depot was included within the city limits in 1989 and has water, sewer, and storm drainage services solely provided by the U.S. Army. The City is constructing water and sewer systems to serve portions of the Sharpe Army Depot. An emergency water intertie already exists. Future drainage facilities will include a forcemain to pass through Gateway and South Lathrop, servicing McKinley Corridor, and a collection system for the Roth Road corridor, connected to the Stonebridge pump station. Many of the existing Lathrop Industrial Area developments are currently required to maintain on-site detention facilities.

MOSSDALE LANDING

Mosssdale Landing is a mixed-use master planned community that is anticipated to be completed by 2030. The Mosssdale Village planning area is relatively flat, with runoff directed through a series of ditches and basins that are ultimately pumped into the San Joaquin River. Because high water elevations in the San Joaquin River during storm events are higher than anticipated grades within the development area, pump stations have been constructed to remove runoff. Underground detention basins were also constructed to mitigate potential increases in peak runoff during large events and to provide water quality treatment; this development is partially complete.

3.15 UTILITIES AND SERVICE SYSTEMS

NORTHERN LATHROP

The majority of the north area AOI (2,101 acres) located north of the Central Lathrop area and west of I-5 has been removed from Lathrop's Sphere of Influence and is not expected to be served by Lathrop. The *Northern Area Portion Master Plan of Drainage* was developed to identify the facilities required to provide 100-year flood protection for the Stonebridge development. The Stonebridge development was fully constructed in 2006, meets current City criteria, and has a constructed stormwater outfall to the San Joaquin River.

RIVER ISLANDS

The 4,995-acre River Islands development is located west of the San Joaquin River and east of Paradise Cut on the Stewart Tract. The development proposes a mixture of low, medium, and high density residential units, which are currently under construction in phases. The project's estimated completion date is 2040. The original plan to develop this area was approved in 1996 and noted that the predominate drainage mechanisms were historically roadside ditches pumped to Paradise Cut. The report noted that Paradise Cut water surface elevations are influenced by other agricultural discharges, the San Joaquin River, and Old River. Under the guidance of the updated *2003 West Lathrop Specific Plan*, and the approved Phase 2 Vesting Tentative Map, public storm drain facilities are currently under construction to serve the proposed development, as it is constructed. The new collection system is comprised of gravity mains, detention lakes, pump stations and outfalls that will manage drainage and mitigate runoff volume, peak flow rates, and water quality impacts of the development. About 2,800 low density residential units were constructed and occupied by mid-2021.

SOUTH LATHROP

The area described as South Lathrop in the *City of Lathrop Storm Drain Master Plan* has since been broken into two planning areas: the *Lathrop Gateway Business Park Specific Plan* proposes commercial and industrial development of 384 acres north of Highway 120 and the *South Lathrop Specific Plan* that includes approximately 300 acres south of Highway 120 are both slated to be built out by 2035. The plans outline existing drainage facilities as a series of agricultural ditches, roadside ditches and retention basins. Public storm drain facilities were constructed in the fall of 2018 for South Lathrop and winter of 2018 for Lathrop Gateway Business Park to serve the proposed developments. The new drainage systems are comprised of gravity mains, detention facilities, pump stations with adjoining force mains, and outfalls. Infiltration from high groundwater into the collection system is a concern.

REGIONAL FLOOD CONTROL

Due to its central location in the Sacramento-San Joaquin Delta, the City is threatened by seasonal flooding from surrounding waterways, including the San Joaquin River, Old River, and Paradise Cut. High flows in the San Joaquin River system can occur during intense precipitation events occurring between November and April. High river flows may also be sustained during upstream reservoir release periods during snowmelt from April through June. The most significant mapped flood hazard is the San Joaquin River, which flows from south to north, along the western edge of the City. The rivers surrounding the City are leveed, and although the City of Lathrop is outside of the

Federal Emergency Management Agency (FEMA) 100-year Special Flood Hazard Area, as shown on Flood Insurance Rate Maps (FIRMs) 06077C0585-0620, it may be subject to flooding in the event of a levee failure. Protection from regional flooding is a collaborative effort between Federal, State, and local entities.

The City's primary flood protection facilities are levees constructed by the US Army Corps of Engineers (USACE) and local interests, and maintained and improved by Reclamation Districts (RD) 17, RD 2107, and RD 2062. The USACE and other upstream reservoirs operators, control river flows. The USAE own the Lower San Joaquin River and Tributaries "Project levees", which were constructed before 1966. In addition to the USACE "Project levees", there are two segments of "non-project levees" located in RDs 17 and 2062 that protect the City.

In partnership with the regional San Joaquin Area Flood Control Agency (SJAFCA), the Reclamation Districts have primary responsibility for operating, inspecting and correcting problems with levees and other structures. Operation and maintenance costs are covered by property taxes, but the costs of major improvements must be met with State and federal funding managed through cooperative agreements. RD 2107 includes Dell'Oso Farms and other areas south of the Union Pacific Railroad and southeast of I-5. RD 2062 includes the River Islands master planned community located on the Stewart Tract. RD 17 includes land east of the San Joaquin River in the Cities of Lathrop, Manteca, Stockton, and San Joaquin County. Figure 3.15-4 shows the flood control infrastructure within the city; the Reclamation District boundaries are provided in Figure 3.15-4.

Major Drainage Issues and Opportunities

The City's planned urban expansion will require extensive improvements to the existing drainage system. The City's current system of development-driven specific planning presents a challenge to the City's ability to assess and plan for storm drainage issues on a City-wide level. Although the City does not have complete data on existing storm drainage infrastructure, Specific Plan level designs confirm that sufficient capacity will be available for buildout.

Two significant shifts in policy have impacted levees in recent years: in 2006, FEMA undertook a map modernization process in the area to better reflect the risks posed by inadequate levee maintenance, and in 2007, the State of California adopted a new standard of flood protection in urban areas. Both of these changes have resulted in strengthening and raising regional levees to reduce flood risk. The impacts of these changes are described below.

FEMA'S MAP MODERNIZATION

During FEMA's map modernization process, SJAFCA and the local RDs were required to provide data and information to verify that levees that were shown on FEMA's FIRMs provide 100-year protection. Over a period from 2006 to 2010, compliance was demonstrated for levees protecting developed areas of the city. However, the areas south and east of River Islands have never been accredited, as shown on the updated FIRMs, published in 2009. Flood protection for new development in these areas is a concern. Additionally, it should be noted that recently issued FEMA LOMR has taken River Islands out of the FEAM 100-year flood plain.

SENATE BILL 5

In 2007, the State of California approved Senate Bill 5 (SB5) establishing the State Standard for Flood Protection in urban areas within the Central Valley, mandating protection from the 200-year flood event. This level of protection is known as the Urban Level of Protection (ULOP). SB5, requires 200-year flood protection for urban and urbanizing areas no later than 2025. An urban area is defined as “a developed area in which there are 10,000 residents or more.” An urbanizing area as “a developed area or an area outside a developed area that is planned or anticipated to have 10,000 residents or more within the next 10 years.” After July 2016, new development exposed to more than three feet of potential flood depth during the 200-year event is prohibited unless the local land use agency certifies that protection has been provided or that “adequate progress” has been made toward provision of 200-year flood protection by 2025. The City of Lathrop, City of Manteca, RD 17, and RD 2062 are in the process of evaluating flooding risk, existing levee protection, and improvements that may supplement current infrastructure to provide a 200-year level of protection. The status of the evaluation of each area is as follows:

- The existing RD 17 levees currently do not meet the DWR Urban Levee Design Criteria (ULDC) standards adopted in May 2012, and the existing levees are not currently certified to provide 200-year protection. Accordingly, Lathrop and Manteca, in coordination with RD 17, jointly pursued efforts to achieve ULOP by 2025. The *RD 17 Area: 2017 Annual Adequate Progress Report Update* outlines the plan for flood protection through the year 2025 consisting of ongoing Levee Seepage Repair Project and other improvements that will achieve the 200-year requirements. Lathrop and Manteca joined the San Joaquin Area Flood Control Agency (SJAFCFA), and SJAFCFA took on the responsibility of completing the 200-year flood improvements in areas protected by RD 17, now known as the Mossdale Tract. The State Legislature approved a time extension for the Mossdale Tract to achieve ULOP, from 2025 to 2028. A Finding of Adequate Progress toward providing ULOP has been made by Lathrop every year since 2016.
- Similarly, the existing RD 2062 levees do not currently meet the DWR ULDC standards. As outlined in the *RD 2062 River Islands at Lathrop Phase I Area Report of Adequate Progress Towards an Urban Level of Flood Protection*, the developers of this area have decided on a staged approach to flood control. As buildout is achieved in phases, the protected area likewise will increase in advance of each new development phase. New levees designed to provide ULOP 200-year protection has been constructed. FEMA approved several Letters of Map Revision to confirm the new levees met FEMA 100-year standards. The developers plan to certify that the levees provide 200-year flood protection by the year 2025.
- RD 2107 is not currently protected from the 100-year flood, does not include existing or planned urban areas and so does not intend to provide ULOP. The existing levees provide an approximate 50-year level of flood protection.

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:

- 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 San Joaquin River, and other waters in the Lathrop Planning Area. In the Lathrop 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 Lathrop Planning Area were established by the RWQCB and are listed in its Basin Plan.

FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)

San Joaquin County 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 of pollutants to navigable waters of the United States, which includes any discharge to surface waters, including lakes, rivers, streams, bays, the ocean, 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 Environmental Protection Agency Regional Administrator. 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 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.

A new Phase II Small Municipal Separate Storm Sewer (MS4) General Permit was adopted by the State Water Resources Control Board on April 17, 2015 became effective June 1, 2015. The Permit has numerous new components and the City is required to implement these components in stages over the five-year period of the Permit.

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. The Storm Water Strategy developed guiding principles to serve as the foundation of the storm water program; identified issues that support or inhibit the program from aligning with the guiding principles; and proposed and prioritized 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

MULTI-AGENCY POST-CONSTRUCTION STANDARDS (LID)

The City of Lathrop, in collaboration with San Joaquin County, Tracy, Lodi, Manteca, and Patterson prepared a Multi-Agency Post-Construction Stormwater Standards Manual to provide consistent guidance for municipal workers, developers in implementing the requirements under the Statewide Small MS4 NPDES permit (2013-0001-DWQ). The guidance provides tools to address the following objectives:

- Establish the methodology to consider the effects of stormwater runoff from a new development or redevelopment project during the project planning phase;
- Minimize contiguously-connected impervious surfaces in areas of new development and redevelopment, and where feasible, to maximize on-site infiltration of stormwater runoff;
- Implement site design measures to preserve, create, or restore areas that provide important water quality benefits such as riparian corridors, wetlands, stream and buffers, and maintain, protect, and improve underlying soil quality;
- Provide source control measures to minimize the transport of and/or eliminate potential sources of pollution to stormwater runoff or run-on into the MS4 and receiving waters;
- Implement Low Impact Development (LID) control measures to reduce and/or eliminate the volume of stormwater runoff and pollutants leaving the project site;
- Control post-construction peak stormwater runoff discharge volumes and velocities (hydromodification) to mitigate impacts from downstream erosion and to protect downstream habitat; and
- Develop tools for effectively operating, managing, and maintaining stormwater control measures.

CITY OF LATHROP SEWER SYSTEM MANAGEMENT PLAN

The City of Lathrop Sewer System Management Plan (SSMP) (March 2018) was prepared in compliance with the State Water Resource Board (SWRCB) General Order No. 2006-0003-DWQ. This order mandated the development of an SSMP and the reporting of sewer system overflows using an electronic reporting system. The City of Lathrop SSMP was originally adopted in 2009 and was updated in 2013, 2016, and 2018. The SSMP describes the City's wastewater collection system consists of approximately 72 miles of gravity mains, 21 miles of force mains, as well as 12 lift and pump stations. The Plan describes that the City has a supervisory control and data acquisition (SCADA) system for control and monitoring of facilities.

CITY OF LATHROP SB 5 200-YEAR FLOOD PROTECTION GENERAL PLAN AMENDMENT

On March 25, 2015, the City of Lathrop drafted a General Plan Amendment to adhere to State of California Senate Bill 5, which were designed to set new flood protection standards for urban areas. SB 5 established the State standard for flood protection in urban areas as protection from the 200-year frequency flood. Under SB 5, urban and urbanizing areas must be provided with the 200-year flood protection no later than 2025. This General Plan Amendment amends the Safety Element of the City of Lathrop General Plan to comply with the provisions established under SB 5.

CITY OF LATHROP MUNICIPAL CODE

The Lathrop Municipal Code contains ordinances regulating stormwater/drainage and flood control within the City of Lathrop. Chapter 3.20 provides for the City's Impact Fee Ordinance, which requires development impact fees to be charged to fund improvements to the City's infrastructure. Chapter 3.20 provides for the City's Impact Fee Ordinance, which requires development impact fees to be charged to fund improvements to the City's infrastructure. Chapter 3.23 provides the City's interim urban level of flood protection levee impact fee. Chapter 13.28 provides the City's Stormwater Management and Discharge Control Ordinance. Chapter 15.56 describes methods of reducing flood losses. Chapter 16.10 provides that subdivisions in flood hazard zones shall not be approved until applicable findings required in Chapter 17.17 of Lathrop

Municipal Code are made. Chapter 17.17 describes the 200-year flood protection requirements for new development.

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 3.14 and 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 GOALS, POLICIES, AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

GOALS

PFS-4 Provide the Community with an efficient, attractive, and environmentally sound stormwater system to accommodate runoff from existing and new development and prevent property damage due to flooding.

POLICIES

PFS-4.1 Maintain Capacity. Maintain and improve storm drainage infrastructure and flood control facilities in order to protect the community from flood hazards.

PFS-4.2 Regional Partnerships. Continue to work cooperatively with the San Joaquin Area Flood Control Agency and other outside agencies to meet SB-5 requirements to provide a 200-year Urban Level of Protection and other needs and priorities relative to storm drainage issues. Also, continue to participate with the San Joaquin Valley Stormwater Quality Partnership to meet objectives related to compliance with the City's Small MS4 Phase 2 permit.

PFS-4.3 Maintenance Districts. Continue to fund the operation and maintenance of stormwater facilities and regulatory compliance through the creation of maintenance districts and/or other appropriate mechanisms that avoid burdening the City's finances.

PFS-4.4 National Programs. Cooperate in regional programs to implement the National Pollutant Discharge Elimination System program.

PFS-4.5 Development Review. Continue to require all development projects to:

- a. 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 and as required by the City's Small MS4 Phase 2 permit; and
- b. Analyze their drainage and stormwater conveyance impacts and either demonstrate that the City's existing infrastructure can accommodate increased stormwater flows, or make the necessary improvements to mitigate all potential impacts.

PFS-4.6 Stormwater Runoff. Stormwater runoff may be directed towards permeable surfaces to the greatest extent feasible to allow for more percolation of stormwater into the ground.

PFS-4.7 Stormwater Capture. Encourage the use of professionally designed stormwater capture methods to aid in the reuse of rain water for non-potable uses in compliance with applicable State regulations.

PFS-4.8 Stormwater Treatments. Promote Best Management Practices (BMPs) and Low Impact Development measures (LID) to treat stormwater before discharge from the site. The facilities shall be sized to meet regulatory requirements.

3.15 UTILITIES AND SERVICE SYSTEMS

PFS-4.9 Naturalized Stormwater Facilities. Maintain stormwater facilities in a naturalized condition where appropriate, incorporating recreational trails, parkway vegetation, and other amenities, minimizing grading, and ensuring that vegetation does not reduce channel capacity, and consistent with the Recreation and Resources Element.

PFS-4.10 Dual-Use Detention Basins. Allow recreational uses in dual-use detention basins for parks, ball fields, and other uses where appropriate.

PFS-4.11 Data Collection. As necessary to meet storm drainage goal(s), map, track, and analyze data on all current storm drain facilities in order to provide clear and accurate forecasts for future demand.

IMPLEMENTING ACTIONS

PFS-4a Update the City's master plans regarding stormwater runoff, flooding, and removal of surface water contaminants every five years, or as needed. The update shall be reviewed periodically for adequacy and consistency with the General Plan.

PFS-4b Continue to complete gaps in the drainage system in areas of existing development.

PFS-4c Identify which storm water and drainage facilities are in need of repair or reconstruction and address these needs through the City's Capital Improvement Program.

PFS-4d Continue to review 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.

PFS-4e Project designs should minimize drainage concentrations, minimize impervious coverage, utilize pervious paving materials, utilize low impact development (LID) strategies, and utilize Best Management Practices (BMPs) to reduce stormwater runoff.

PFS-4f Promote the use of LID strategies in new development and redevelopment projects, including but not limited to the use of canopy trees and shrubs, vegetated swales, and permeable paving.

PFS-4g Require new development to mitigate increases in stormwater peak flows and/or volume. Mitigation measures, such as LID strategies, should take into consideration impacts on adjoining lands in the City.

PFS-4h Continue to implement a comprehensive municipal stormwater pollution-prevention program in compliance with requirements of the Water Quality Control Plan In collaboration with San Joaquin County and the Cities of Tracy, Lodi, Manteca, and Patterson, continue to implement the Multi-Agency Post-Construction Stormwater Standards Manual to manage stormwater runoff from new development and redevelopment.

3.15.4 SOLID WASTE

Republic Services, a private garbage collection company, provides residential (single family and multi-family) and commercial garbage, recycling, and green waste collection services within the city limits. Solid waste from Lathrop is primarily landfilled at the Forward Sanitary Landfill.

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 Chapter 8.40 of the Municipal Code, submitted by the applicant for any covered project. Prior to project start, the WMP shall identify the types of construction and demolition (C&D) debris materials that will be generated for disposal and recycling. A completed WMP contains actual weight or volume of the material disposed recycled receipts.

WASTE COLLECTION SERVICES

The City of Lathrop has an exclusive contract with Republic Services to collect solid waste, recycling, and green waste from the residential and commercial sector. Republic Services is a private garbage collection company, provides residential (single family and multi-family) and commercial garbage, recycling, and green waste collection services within the city limits. Republic Services is the second largest provider of non-hazardous solid waste collection, transfer, disposal, recycling, and energy services in the United States, as measured by revenue. Republic Services operates in 41 states and Puerto Rico through 340 collection operations, 201 transfer stations, 193

active landfills, 67 recycling centers, 8 treatment, recovery and disposal facilities, and 12 salt water disposal wells. Republic also operated 69 landfill gas and renewable energy projects and had post-closure responsibility for 126 closed landfills. Republic Services serves 14 million customers in total (throughout the United States). Refuse, recycling, and green waste bins are picked up once per week in the City of Lathrop.

The City of Lathrop has a three (3) cart system for the collection of garbage, recycling and green waste. The three-cart system was established to enable residents to assist in reducing the amount of waste that is dumped in landfills. Garbage service is mandatory within the City of Lathrop and Republic Services provides residential garbage service to City of Lathrop residents. Recycling service is provided for newspapers, cardboard (including cereal boxes, soda boxes, etc.), glass bottles and jars, aluminum, tin, steel, plastic containers, and all junk mail and phone books.

WASTE DISPOSAL FACILITIES

The vast majority (77%) of landfill disposal from the City of Lathrop in 2016 (the latest year of information available) went to Forward Landfill. Other landfills that received relatively small amounts of waste from the City of Lathrop in 2016 included:

- Altamont Landfill & Resource Recovery;
- Azusa Land Reclamation Company Landfill;
- Fink Road Landfill;
- Foothill Sanitary Landfill;
- L and D Landfill;
- North County Landfill & Recycling Center;
- Potrero Hills Landfill;
- Recology Hay Road;
- Sacramento County Landfill (Kiefer).

Forward Landfill

The Forward Landfill is a solid waste disposal site, located at 9999 South Austin Road in Manteca. The landfill operates under Permit 39-AA-0015 (July 16, 2021). The Forward Landfill is owned and operated by Forward, Inc. (an Allied Waste North America subsidiary), and contains a total of 371.8 acres of disposal acreage. Forward Landfill has a remaining landfill capacity of over 22,100,000 tons, and has a current maximum permitted throughput of 8,668 tons per day. It has a total maximum capacity of 59,160,000 cubic yards. The landfill has a permitted traffic volume of 620 vehicles per day. The landfill has a cease operation date of 2039.

Other Landfills

The nine other landfills that received solid waste from the City of Lathrop in 2016 are shown in Table 3.15-7. Three landfills received Alternative Daily Cover (ADC) from Lathrop (Fink Road Landfill, L & D Landfill, and Vasco Road Sanitary Landfill). Alternative daily cover (ADC) means cover material other than earthen material placed on the surface of the active face of a municipal solid waste landfill at the end of each operating day to control vectors, fires, odors, blowing litter, and scavenging.

TABLE 3.15-7: LANDFILLS EXISTING DAILY CAPACITY AND ESTIMATES CLOSURE DATE

LANDFILL	DAILY CAPACITY (TONS/DAY)	ANNUAL TONNAGE DISPOSED BY LATHROP IN 2016	ESTIMATED CLOSURE DATE
Altamont Landfill & Resource Recovery	11,150	227	1/01/2025
Azusa Land Reclamation Co. Landfill	8,000	1	1/01/2045
Fink Road Landfill	2,400	436	12/01/2023
Foothill Sanitary Landfill	1,500	6,456	12/31/2082
Forward Landfill, Inc.	8,668	26,228	01/01/2039
L and D Landfill	4,125	125	01/01/2023
North County Landfill & Recycling Center	825	9	12/31/2048
Potrero Hills Landfill	4,330	451	02/14/2048
Recology Hay Road	2,400	20	01/01/2077
Sacramento County Landfill (Kiefer)	No data	156	No data

SOURCE: [HTTP://WWW.CALRECYCLE.CA.GOV/SWFACILITIES/DIRECTORY/SEARCH.ASPX](http://www.calrecycle.ca.gov/SWFACILITIES/DIRECTORY/SEARCH.ASPX). ACCESSED APRIL 2018.

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 City of Lathrop between 2014 and 2019 are shown in Table 3.15-8 below.

TABLE 3.15-8: SOLID WASTE GENERATION RATES IN THE CITY OF LATHROP

YEAR	WASTE GENERATION RATES (POUNDS/PERSON/DAY)		TOTAL DISPOSAL TONNAGE (TONS/YEAR)
	PER RESIDENT	PER EMPLOYEE	
2014	8.7	23.9	31,486
2015	8.0	19.8	29,691
2016	8.5	22.4	34,296
2017	6.9	18.4	29,378
2018	8.8	21.3	37,997
2019	5.9	13.7	26,778

SOURCE:

[HTTPS://WWW2.CALRECYCLE.CA.GOV/LGCENTRAL/ANNUALREPORTING/DISPOSALRATECALCULATOR](https://www2.calrecycle.ca.gov/LGCENTRAL/ANNUALREPORTING/DISPOSALRATECALCULATOR) ACCESSED FEBRUARY 2022.

As shown in the above table, for the years 2014 through 2019 (the latest year of data available), the per capita waste generation rate in the City of Lathrop was at the lowest level in 2019; the per employee waste generation rate was at the lowest level in 2019; and the total annual disposal tonnage in Lathrop was at their lowest level (during this period) in 2019. The City of Lathrop complied with State requirements to reduce the volume of solid waste through recycling and reuse of solid waste. The City of Lathrop achieved the City’s per capita disposal target rates for 2011-

2019 of 20.4 and 41.0 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 (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.

Starting on January 1, 2019, businesses that generate 4 cubic yards or more of commercial solid waste per week shall arrange for organic waste recycling services. By Summer/Fall 2021, if CalRecycle determines that the statewide disposal of organic waste in 2020 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.

SB 1374 (CONSTRUCTION AND DEMOLITION WASTE MATERIALS DIVERSION)

Senate Bill 1374 (SB 1374), Construction and Demolition Waste Materials Diversion Requirements, requires that jurisdictions summarize their progress realized in diverting construction and demolition waste from the waste stream in their annual AB 939 reports. SB 1374 required the CIWMB to adopt a model construction and demolition ordinance for voluntary implementation by local jurisdictions.

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

LATHROP MUNICIPAL CODE, CHAPTER 8.16: GARBAGE COLLECTION AND DISPOSAL

Section 8.16 of the Lathrop Municipal Code provides rules and regulations regarding garbage collection and disposal. It includes a list of hazardous materials (8.16.050), prohibitions on the burning and burial of solid waste (8.16.060), rights of the City related to solid waste collection and transportation (8.16.090), a list of requirements for the contractor for solid waste collection and transportation (8.16.100), restrictions on solid waste collection and transportation (8.16.110), a description of billing and collection fees (8.16.160), the garbage collection rate schedule (8.16.170), permit requirements (8.16.190), and a description of fees and other requirements.

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 approximately 66,562 persons. As described above, the City of Lathrop has achieved a disposal rate of 5.9 PPD per resident in 2019. 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 392,716 pounds per day of solid waste, which equals 196.4 tons per day or 71,670 tons of solid waste per year.

Forward Landfill has a cease operation date of 2039 and has sufficient capacity to serve the City of Lathrop. Forward Landfill has a remaining landfill capacity of over 22,100,000 tons, and has a current maximum permitted throughput of 8,668 tons per day. It has a total maximum capacity of 59,160,000 cubic yards. The landfill has a permitted traffic volume of 620 vehicles per day.

Other landfills that received relatively small amounts of waste from the City of Lathrop in include:

- Altamont Landfill & Resource Recovery;
- Azusa Land Reclamation Company Landfill;
- Fink Road Landfill;
- Foothill Sanitary Landfill;
- L and D Landfill;
- North County Landfill & Recycling Center;
- Potrero Hills Landfill;
- Recology Hay Road;
- Sacramento County Landfill (Kiefer).

The City's solid waste per capita generation has decreased since 2007 due to the waste diversion efforts of the City. The additional solid waste generation associated with the proposed General Plan, approximately 196.4 tons per day at total buildout, to the Forward Landfill would not exceed the landfill's remaining and additional capacity until landfill closure in 2039. The City will need to secure a new location or expand existing facilities when the Forward Landfill is ultimately closed, if a new permit is not issued at a later date for a cease operation date beyond 2039. There are several options that the City will have to consider for solid waste disposal at that time, including the construction of new facilities or expansion of existing facilities.

If the Forward Landfill were to close in 2039, the City can potentially utilize other landfills such as the Foothill Landfill and the North County Landfill, as locations for solid waste disposal. The permitted maximum disposal at the Foothill Landfill is 1,500 tons per day and the North County Landfill is 825 tons per day. The remaining capacity of these landfills include 125 million cubic yards of solid waste at the Foothill Landfill, with an estimated cease operation date of 2054, and 35.4 million cubic yards of solid waste at the North County Landfill, which has an estimated cease operation date of 2035. The addition of solid waste associated with the proposed Project to the Foothill Landfill and North County Landfill would not exceed the combined landfills' remaining capacity of 160.4 cubic yards. 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. As such, this impact would be less than significant, and no additional mitigation is required.

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 reduced to *less than significant* impact.

GENERAL PLAN GOALS, POLICIES, AND ACTIONS THAT MINIMIZE POTENTIAL IMPACTS

GOALS

PFS-1 Provide the community with environmentally responsible waste disposal and recycling services that minimize the generation and disposal of solid waste.

POLICIES

PFS-9.1 Refuse Collection. Continue to require mandatory refuse collection throughout the city.

PFS-9.2 Source Reduction and Recycling Program. Implement and enforce the provisions of the City's Source Reduction and Recycling Program.

PFS-9.3 Compliance with State Legislation. Continue to comply with all State regulations regarding waste diversion, source reduction, recycling, and composting.

PFS-9.4 Municipal Code. Enforce and periodically update Chapter 8.16 (Garbage Collection and Disposal) of the LMC.

PFS-9.5 Waste Service Performance and Collection Facilities. Support efforts of the solid waste service provider to maintain adequate residential, commercial, and industrial solid waste and mixed recycling collection service levels and solid waste facilities in accordance with state law, and periodically review waste collection performance to verify adequacy of service.

3.15 UTILITIES AND SERVICE SYSTEMS

PFS-9.6 Landfill Capacity. Continue to coordinate with San Joaquin County to ensure adequate landfill capacity in the region.

PFS-9.7 Municipal Waste. 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.

PFS-9.8 Fees and Funding. Work with the solid waste service provider to periodically review collection, recycling, and disposal fees to achieve state and federal mandates, meet community expectations, and reflect cost efficiencies or increases for service delivery.

PFS-9.9 Hazardous Waste. Promote the proper disposal of hazardous waste—including paint, tires, medications, medical sharps, infectious waste, asbestos waste, construction waste, and electronic waste; encourage materials to be recycled or disposed of in a manner that is safe for the environment, residents, and visitors to the city consistent with the Public Safety Element.

PFS-9.10 Public Education. Promote citywide educational programs to inform citizens of the benefits of recycling and appropriate recycling options and locations.

IMPLEMENTING ACTIONS

PFS-9a Continue to implement and update as necessary Chapter 8.16 (Garbage Collection and Disposal) of the LMC.

PFS-9b Regularly monitor the level of service provided by waste and recycling collection contractors to ensure that service levels meet the terms of the contract.

PFS-9c Include standard language in requests for services and in City agreements requiring waste haulers to use best management practices to maximize diversion of waste from the landfill in order to meet the City's specified diversion rates.

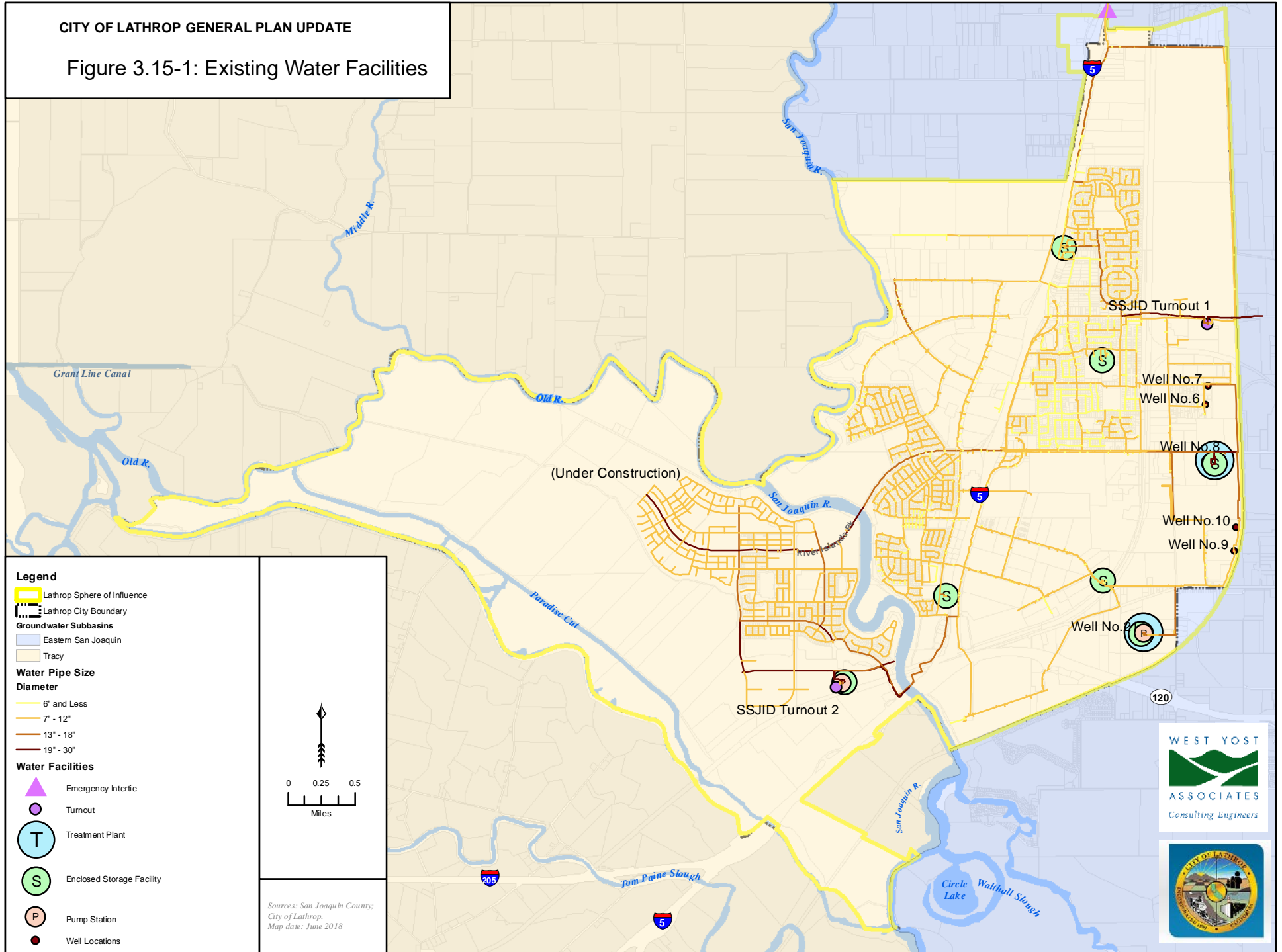
PFS-9d Encourage recycling, reuse, and appropriate disposal of hazardous materials, including the following:

- A. Increased participation in single family and multifamily residential curbside recycling programs;
- B. Increased participation in commercial and industrial recycling programs for paper, cardboard, and plastics;
- C. Reduce yard and landscaping waste through methods such as composting, grass recycling, and using resource efficient landscaping techniques;
- D. Expand the provision of recycling collection containers and services to all City facilities, including parks; and
- E. Encourage local businesses to provide electronic waste (e-waste) drop-off services and encourage residents and businesses to properly dispose of, or recycle, e-waste.

PFS-9e Pursue public funding sources, such as grants, to implement recycling and reuse programs.

CITY OF LATHROP GENERAL PLAN UPDATE

Figure 3.15-1: Existing Water Facilities



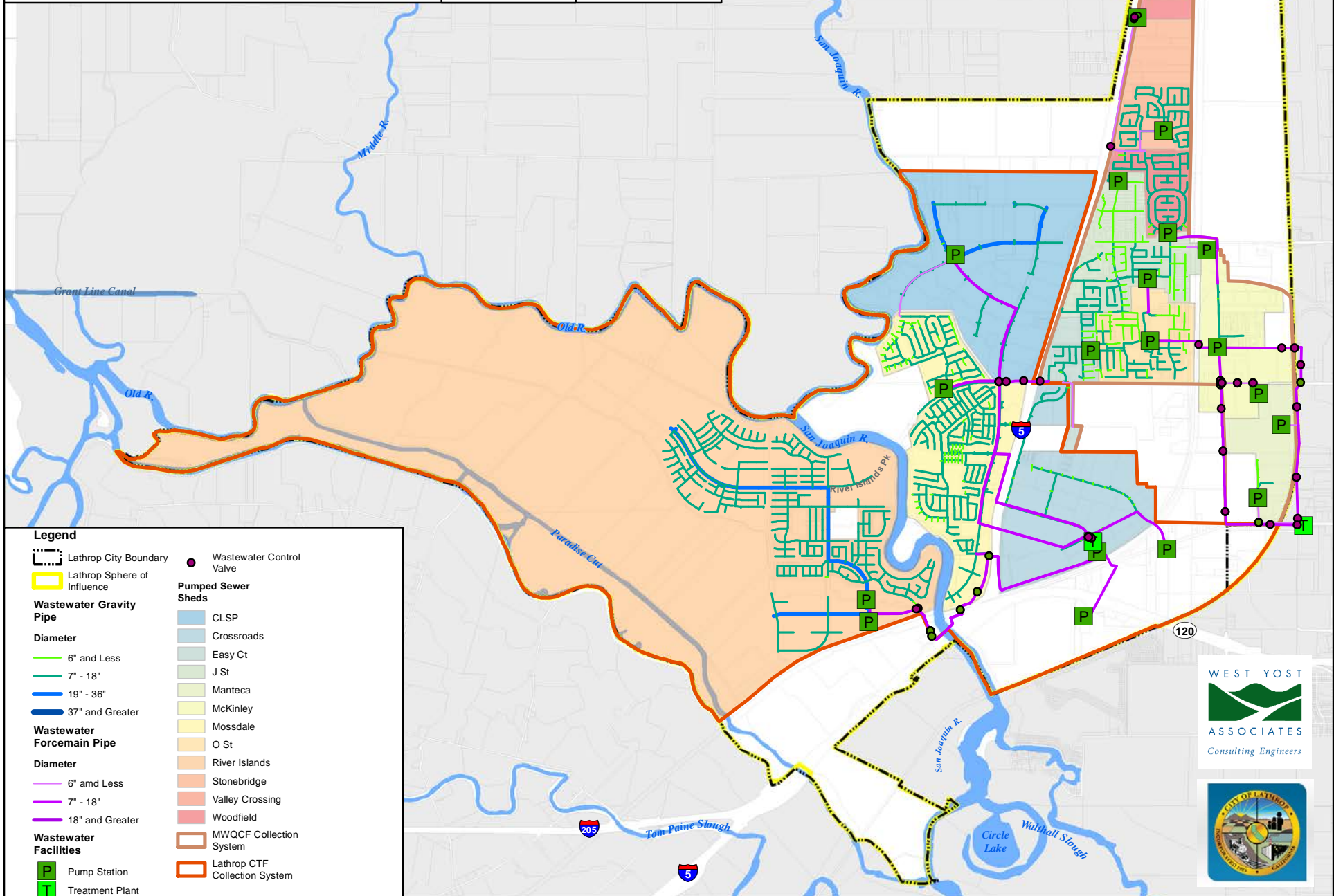
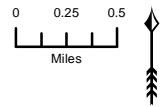
Notes:
Water meters, water valves, fire hydrants, and water repair locations are not shown on this map.

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CITY OF LATHROP GENERAL PLAN

Figure 3.15-2: Existing Sewer Facilities

Sources: San Joaquin County;
City of Lathrop.
Map date: June 2018



Legend

- Lathrop City Boundary
- Lathrop Sphere of Influence
- Wastewater Gravity Pipe**
- Diameter**
- 6" and Less
- 7" - 18"
- 19" - 36"
- 37" and Greater
- Wastewater Forcemain Pipe**
- Diameter**
- 6" and Less
- 7" - 18"
- 18" and Greater
- Wastewater Facilities**
- Pump Station
- Treatment Plant
- Wastewater Control Valve
- Pumped Sewer Sheds**
- CLSP
- Crossroads
- Easy Ct
- J St
- Manteca
- McKinley
- Mossdale
- O St
- River Islands
- Stonebridge
- Valley Crossing
- Woodfield
- MWQCF Collection System
- Lathrop CTF Collection System



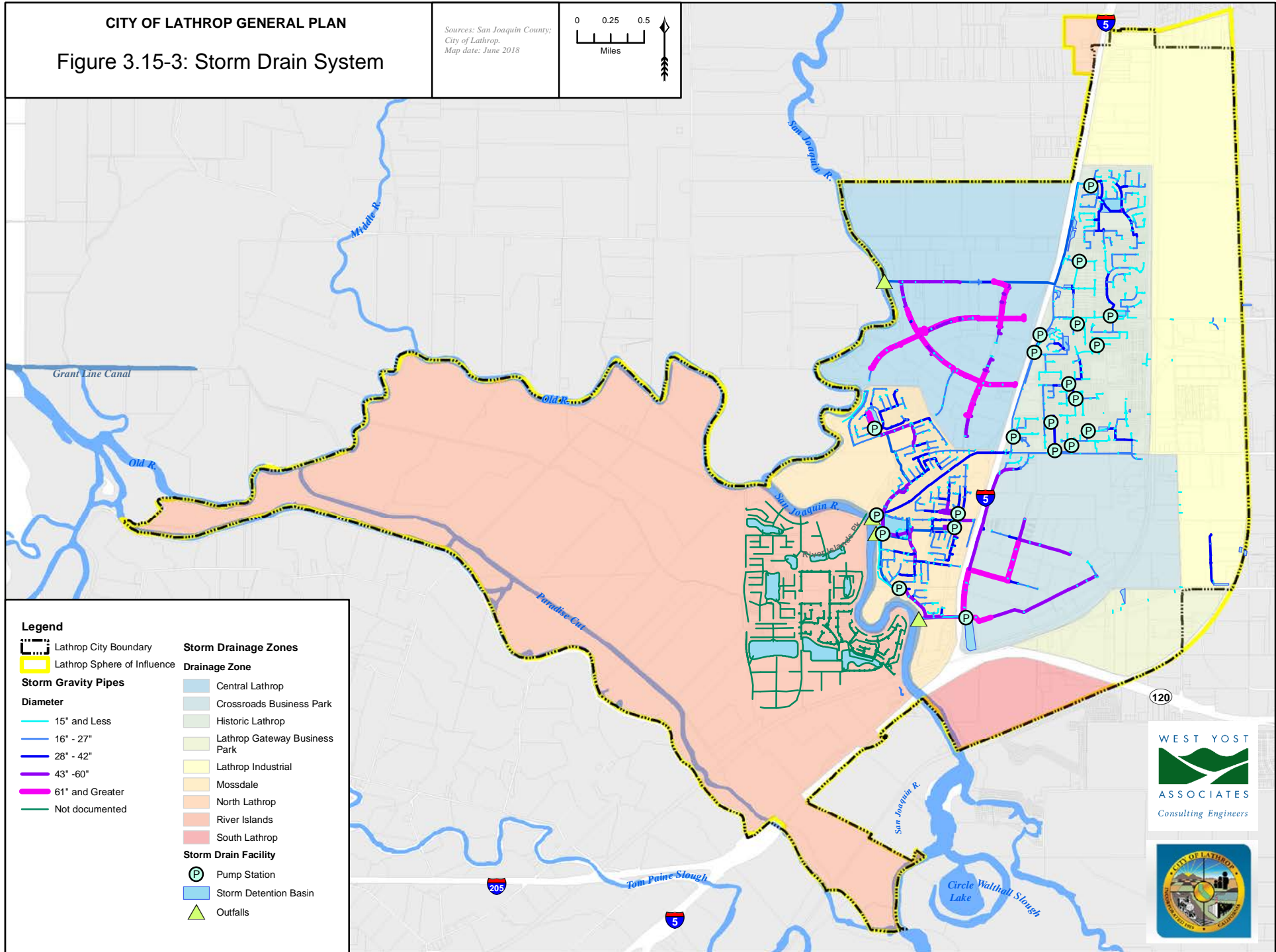
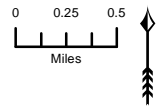
Notes:
Privately owned wastewater structures and all wastewater manholes not shown on this map.

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CITY OF LATHROP GENERAL PLAN

Figure 3.15-3: Storm Drain System

Sources: San Joaquin County;
City of Lathrop.
Map date: June 2018



Legend

- | | |
|-----------------------------|-------------------------------|
| Lathrop City Boundary | Storm Drainage Zones |
| Lathrop Sphere of Influence | Drainage Zone |
| Storm Gravity Pipes | Central Lathrop |
| Diameter | Crossroads Business Park |
| 15" and Less | Historic Lathrop |
| 16" - 27" | Lathrop Gateway Business Park |
| 28" - 42" | Lathrop Industrial |
| 43" - 60" | Mossdale |
| 61" and Greater | North Lathrop |
| Not documented | River Islands |
| | South Lathrop |
| | Storm Drain Facility |
| | Pump Station |
| | Storm Detention Basin |
| | Outfalls |

WEST YOST
ASSOCIATES
Consulting Engineers

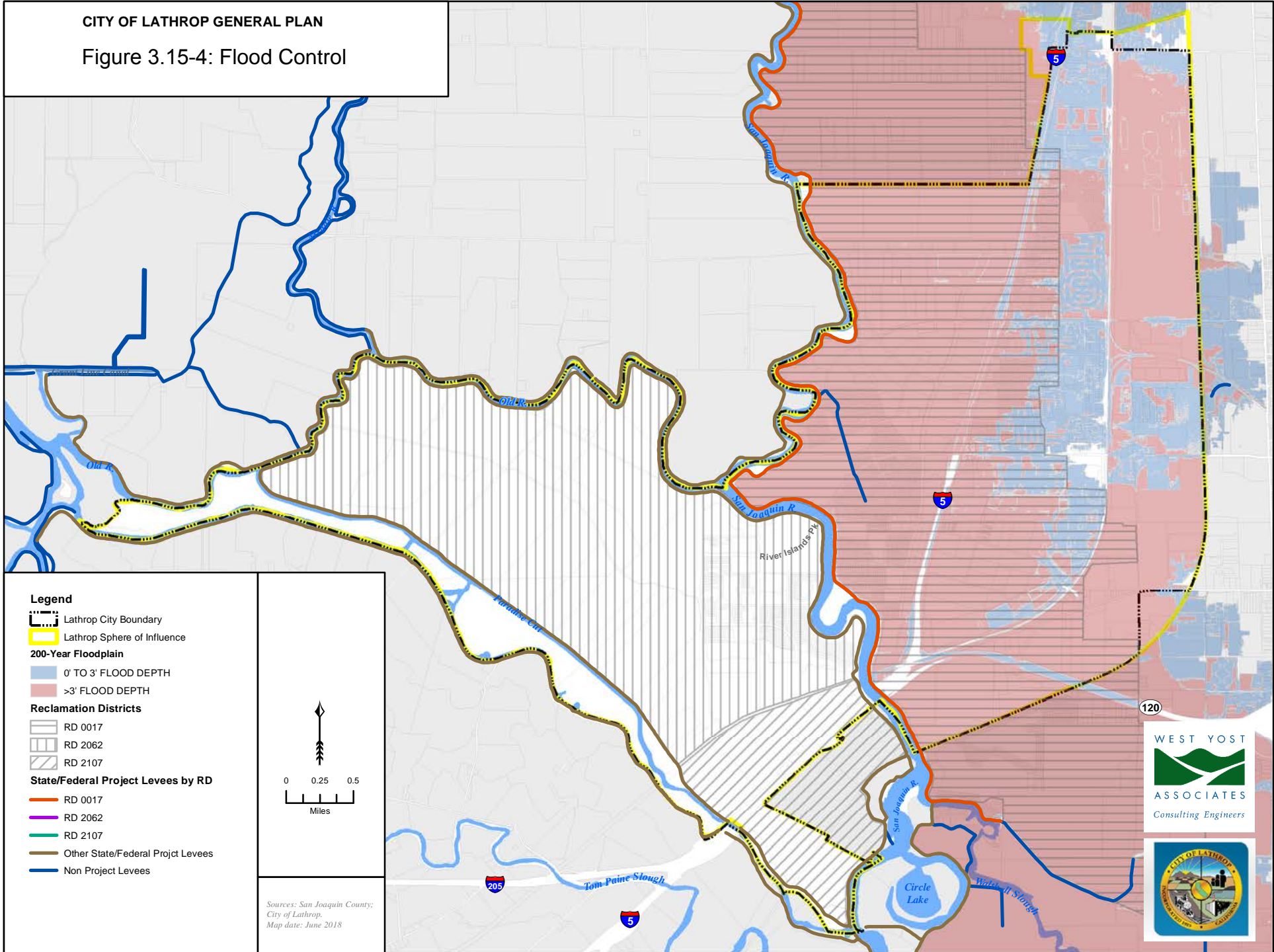


Notes:
Storm drain manholes and inlets not shown on this map.

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CITY OF LATHROP GENERAL PLAN

Figure 3.15-4: Flood Control



Legend

- Lathrop City Boundary
- Lathrop Sphere of Influence

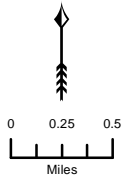
- 200-Year Floodplain**
- 0' TO 3' FLOOD DEPTH
 - >3' FLOOD DEPTH

Reclamation Districts

- RD 0017
- RD 2062
- RD 2107

State/Federal Project Levees by RD

- RD 0017
- RD 2062
- RD 2107
- Other State/Federal Project Levees
- Non Project Levees



Sources: San Joaquin County;
City of Lathrop.
Map date: June 2018

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WEST YOST
ASSOCIATES
Consulting Engineers

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This section provides a background discussion of the hazards associated with wildfires in the Planning Area. Additional information related to fire hazards including the discussion of fire suppression resources is located within Chapter 3.13, Public Services and Recreation, of this report.

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

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.

The Planning Area includes LRAs and a Federal responsibility area (Sharpe Army Depot). No State Responsibility Areas are included within City boundaries.

Local Responsibility Areas

The majority of the Planning Area is not located within a LRA. The City of Lathrop is not categorized as a "Very High" FHSZ by CalFire. No cities within San Joaquin County are categorized as a "Very High" FHSZ by CalFire.

State Responsibility Areas

There are no SRAs within the vicinity of the Planning Area.

Federal Responsibility Areas

There is one Federal Responsibility Areas (FRAs) area within the Planning Area. (Sharpe Army Depot). This area is generally uncategorized with a small portion containing a moderate rating.

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

San Joaquin Office of Emergency Services

The mission of the Office of Emergency Services (OES) is to minimize or reduce injury, loss of life, environmental and property damage from emergencies within San Joaquin County. OES is the key disaster preparedness office of the County, and has direct responsibility to support and coordinate the efforts of County departments carrying out their functions in the field. To ensure a coordinated response to their disaster needs, OES also provides disaster information, logistical support, facilitates mutual aid requests, and facilitates inter-jurisdictional coordination with agencies from 7 cities, 120 special districts, and locally-based State and Federal agencies.

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 (No Impact)

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 (VHFHSZ) within or near the Planning Area. Therefore, the General Plan would have *no impact* related to wildfire risks associated with lands in or near State Responsibility Areas or lands classified as very high fire hazard severity zones.

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 Lathrop 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 Lathrop'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 Lathrop General Plan includes the entire City Limits and the City's sphere of influence (SOI) and area of influence (AOI), 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 San Joaquin County, the San Joaquin Valley 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. 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 a 20-year plan for Lathrop, and the General Plan is scheduled for adoption in 2022.

Growth Projections

Table 4.0-1 summarizes the range of net growth, including residential units (single family and multifamily) and non-residential square footage (commercial, office, industrial, governmental, public/quasi-public) that could occur upon full buildout of the proposed General Plan.

TABLE 4.0-1: COMPARATIVE GROWTH PROJECTIONS, EXISTING GENERAL PLAN LAND USE MAP AND PROPOSED 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					
	28,503	7,747	13,327,713	9,153	1.18
NEW GROWTH POTENTIAL					
Existing General Plan	72,954	19,048	23,812,822	43,459	2.28
Proposed General Plan	66,562	17,379	30,630,722	49,250	2.83
TOTAL GROWTH: EXISTING PLUS NEW GROWTH POTENTIAL					
Existing General Plan	101,457	26,795	37,140,535	52,612	1.96
Proposed General Plan	95,065	25,126	43,958,435	58,403	2.32

SOURCES: SAN JOAQUIN COUNTY ASSESSOR 2021; CALIFORNIA DEPARTMENT OF FINANCE 2021; U.S CENSUS ONTHEMAP; ESRI 2020, DE NOVO PLANNING GROUP 2021.

Table 4.0-2 identifies growth accommodated by the proposed General Plan grouped into categories by unit type as well as broad categories of non-residential development. As shown in Table 4.0-2, buildout of the proposed General Plan may yield 17,379 dwelling units, and 49,250 jobs.

TABLE 4.0-2: GROWTH ACCOMMODATED UNDER THE PROPOSED GENERAL PLAN BASED ADDITIONAL DEVELOPMENT PROJECTS

<i>LAND USE TYPE</i>	<i>DEVELOPMENT</i>	
RESIDENTIAL DEVELOPMENT	UNITS	
Single Family Units	7,454	
Multifamily Units	9,925	
Total Housing Units	17,379	
NON-RESIDENTIAL DEVELOPMENT	TOTAL KSF	TOTAL EMPLOYEES
Commercial	2,476	5,670
Industrial	20,778	22,045
Office	5,219	15,750
Office/Commercial (Mixed)	2,159	5,785
Total Non-Residential Square Feet and Employees	30,631	49,250

SOURCES: SAN JOAQUIN COUNTY ASSESSOR 2021; ESRI 2020, DE NOVO PLANNING GROUP 2021.

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

4.0 OTHER CEQA-REQUIRED TOPICS

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 Lathrop 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 San Joaquin County, as summarized and addressed in the 2018 Regional Transportation Plan/Sustainable Communities Strategy (2018 RTP/SCS). Development of the 2018 RTP/SCS included review of land use plans for each jurisdiction within San Joaquin County, including:

- County of San Joaquin
- City of Manteca
- City of Stockton
- City of Tracy
- City of Lodi
- City of Lathrop
- City of Escalon
- City of Ripon

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 2018 RTP/SCS projects that growth Countywide would result in 343,170 households, 360,328 employees, and a population of 1,094,253 in 2045 (see Figure 1 of the 2018 RTP/SCS). Appendix W of the 2018 RTP/SCS provides more detailed projections of regional growth, estimating a population of 1,323,236, 411,589 households, and 432,168 housing units in 2060. Table 4.0-3 shows the population and housing forecasts between 2020 and 2045 in San Joaquin County.

TABLE 4.0-3: POPULATION AND HOUSING PROJECTIONS

	2020	2025	2030	2040	2045
<i>POPULATION</i>					
City of Escalon	7,612	7,889	8,186	8,878	9,257
City of Lathrop	28,896	35,475	42,109	58,969	67,976
City of Lodi	69,219	73,397	77,610	88,317	94,037
City of Manteca	77,018	82,912	88,855	103,958	112,027
City of Ripon	16,525	17,850	19,186	22,582	24,396
City of Stockton	329,729	352,239	374,939	432,627	463,445
City of Tracy	95,040	102,236	109,492	127,933	137,7884
County Total	775,819	829,426	883,484	1,020,862	1,094,253
<i>HOUSING UNITS</i>					
City of Escalon	2,674	2,771	2,866	3108	3,230
City of Lathrop	7,440	9,310	11,162	15,441	17,737
City of Lodi	24,756	26,206	27,782	31,406	33,375
City of Manteca	26,570	28,404	30,343	34,975	37,513
City of Ripon	5,702	6,174	6,638	7,745	8,344
City of Stockton	102,702	110,037	117,235	134,504	143,700
City of Tracy	27,767	29,920	32,357	37,539	40,247
County Total	246,715	263,876	280,716	321,379	343,170

SOURCE: SJCOG RTP/SCS DRAFT PROGRAMMATIC EIR, TABLES 33 AND 34.

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 Lathrop Planning Area contains areas and viewsheds with scenic characteristics, such as views of open space and agricultural land, there are no officially designated scenic vista points in the Planning Area. Additionally, as described in Chapter 3.1, there are no officially designated scenic highways located in the vicinity of Lathrop. The most significant visual features within or

4.0 OTHER CEQA-REQUIRED TOPICS

adjacent to the Lathrop Planning Area are the San Joaquin River located to the west of the city and agricultural land and open space located in undeveloped areas within and around the city.

However, 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 use, and public/quasi-public uses by the Land Use Map. This new development may result in changes to the skyline 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 Lathrop Planning Area and within the other cities within San Joaquin 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 San Joaquin County and the cities of Stockton, Tracy, Lodi, Lathrop, Escalon, and Ripon.

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. 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 Lathrop. 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. 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 (Considerable Contribution and Significant and Unavoidable)

As shown in Table 3.2-4, there are approximately 7,800 acres of Important Farmlands located within the city, including approximately 4,180 acres of Prime Farmland, 824 acres of Statewide Important Farmland and 2,612 acres of locally important farmland. As shown on Figure 3.2-1, the Planning Area includes approximately 4,221 acres designated as has Urban and Built-Up.

The 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 under Impact 3.2-1. The proposed General Plan Land Use Map does not designate any new areas for urban development that were not already designated for urban development under the existing Land Use Map. However, there are currently undeveloped parcels within the City limits that are classified as Prime Farmlands or Important Farmlands, some of which are actively farmed. While these farmlands are not currently designated for agricultural uses, they are still considered to be agricultural resources.

As described in greater detail under Impact 3.2-1, there is no feasible mitigation available to reduce this impact to a less than significant level. Other conversions of farmland within San Joaquin County over the buildout period is also likely to occur. The policies and actions identified in Section 3.2 would reduce this impact to the greatest extent feasible, and other General Plans in San Joaquin County have also mitigated 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 (Considerable Contribution 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.

Table 3.3-6 in Section 3.3 shows the combined population and jobs growth generated by the proposed project, compared to existing levels within the city. Table 3.3-7 shows the existing baseline VMT and projected VMT following buildout of the proposed project. As shown in the two tables, implementation of the proposed Project would result in an approximately 401.0% increase in citywide VMT, greater than the projected 307.6% increase in combined population and jobs. Therefore, the growth rate associated with the proposed General Plan is anticipated to be slower than the VMT increase associated with it. Therefore, the proposed project is anticipated to result in VMT increases on a per service population basis.

Table 3.3-10 in Section 3.3 displays the residential cancer risk and acute and chronic incidence rate results at nearest receptors from the heavy-duty truck trips anticipated to be generated by Light Industrial Development located north of Dos Reis Road, West of I-5, at General Plan buildout (including the cumulative impacts associated with the combined impact of proposed segments and interacting segments together). As shown, maximum health risks associated with the worst-case

truck route segments that could occur with implementation of the proposed General Plan would exceed the applicable significance threshold for residential cancer risk. The model results do not take into account the potential reductions in emissions exposures to sensitive receptors that would occur following the update and implementation of the Central Lathrop Specific Plan, as called for in Action LU-5f. The updates would require a reconfiguration of the circulation network in and around new light industrial areas in Lathrop, which would divert traffic from the modeled roadway segments where impacts may occur.

Lastly, with respect to other emissions, future development under the proposed General Plan would be required to comply with Air Quality Management Plan (AQMP), State Implementation Plan (SIP), California Air Resources Board (CARB), San Joaquin Valley Air Pollution Control District (SJVAPCD) regulations, Title 24 energy efficiency standards, and the proposed General Plan policies and actions. Nevertheless, based on the above described information, this is considered a **cumulatively considerable** and **significant and unavoidable** impact.

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 San Joaquin 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.

Additionally, implementation of the General Plan would not conflict with the provisions of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), or other approved local, regional, or State habitat conservation plan. The SJMSCP, in accordance with ESA Section 10(a)(1)(B) and CESA Section 2081(b) Incidental Take Permits, provides compensation for the Conversion of Open Space to non-Open Space uses which affect the plant, fish and wildlife species covered by the Plan, hereinafter referred to as "SJMSCP Covered Species". The 97 SJMSCP Covered Species include 25 state and/or federally listed species. The SJMSCP Covered Species

include 27 plants (6 listed), 4 fish (2 listed), 4 amphibians (1 listed), 4 reptiles (1 listed), 33 birds (7 listed), 15 mammals (3 listed) and 10 invertebrates (5 listed). The San Joaquin Council of Government uses the collected SJMSCP fees to preserve open space land of comparable types throughout the County, often coordinating with other private or public land trusts to purchase conservation easements or buy land outright for preservation. Compliance with the SJMSCP addresses impacts to biological resources, including special-status species, on a local and regional level. 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), future projects 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 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 (Considerable Contribution and Significant and Unavoidable)

Implementation of the Lathrop 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 Lathrop 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.

The "per service population" metric, which accounts for both population and employment, is a common way to analyze the GHG efficiency of new development in comparison to an existing baseline. The land use modifications and policies proposed as part of the proposed General Plan

would result in an overall approximately 22.9% increase in per service population vehicle miles traveled compared to the existing baseline condition, upon full buildout.

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 to 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.

Nevertheless, 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. 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 a **cumulatively considerable and significant and unavoidable** impact.

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.

4.0 OTHER CEQA-REQUIRED TOPICS

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, would 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 new growth within the Planning Area in undeveloped areas currently designated for urban development, 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. 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 (Considerable Contribution and Significant and Unavoidable)

Within the Planning Area, mineral resources include sand and gravel. The western portion of the planning area within and adjacent to the Stewart Tract area is designated as MRZ-2, which consists of a large PCC-grade sand deposit situated along the San Joaquin River and in south Lathrop. The area is classified as an important MRZ for PCC grade aggregate by the DOC. PCC-grade aggregate is valuable in Central California where it used for a variety of construction purposes. Brown Sand and Gravel, Incorporated, has produced processed sand located within the area designated as "resources of regional significance" just south of Lathrop within the AOI. Lands adjacent to the existing quarry within the City Limits, the majority of which are currently designated as urban reserve, and resource conservation uses. A small portion of the MRZ-2 zone is designated for more intensive developed uses, including commercial and residential uses. In addition, a large area

designated MRZ-3 is located in the central and south portion of the Planning Area within zones designated for residential, commercial and industrial uses by the existing and proposed General Plans.

General Plan GOAL RR-5 aims to balance the extraction of mineral resources with future development and conservation opportunities and includes policies to allow the extraction of resources. Additionally, Policy RR-5.2 Ensures that areas with mineral resources can be mined while productive and are ultimately reused for suitable development or open space.. The Lathrop General Plan and Land Use Map have been developed to focus development within the existing city limits and promote infill development to conserve resources throughout the region. No urban expansions are planned beyond what has been currently identified for urban development. The following General Plan goals, policies, and actions have been included to limit impacts to mineral resources. However, implementation of the General Plan and development allowed under the Land Use Map would permanently convert undeveloped portions of Planning Area to urban uses and this may preclude the recovery of mineral resources from the Plan Area.

Moreover, Brown Sand and Gravel, Incorporated, will continue to produce processed sand located within the areas identified as resources of local significance just south of Lathrop within portions of the AOI. As described previously, the Lathrop General Plan and Land Use Map has been developed to focus development within the existing city limits and promote infill development to conserve resources throughout the region. No urban expansions are planned beyond what has been currently identified for urban development. General Plan goals, policies, and actions described under Impact 3.11-1 have been included to limit impacts to mineral resources. However, implementation of the General Plan and development allowed under the Land Use Map would permanently convert undeveloped portions of Planning Area to urban uses. As a result, the General Plan's incremental contribution to cumulative mineral resource impacts is considered a **cumulatively considerable** and **significant and unavoidable** impact.

NOISE

Impact 4.12: Cumulative impacts related to noise (Considerable Contribution and Significant and Unavoidable)

Table 3.12-11 shows the future noise levels and the increase in noise levels associated with traffic on the local roadway network under the proposed General Plan, versus the existing (Baseline 2020) conditions.

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 Tables 3.12-11 in Section 3.12: Noise, the related traffic noise level increases with a 20-year circulation system buildout of the proposed General Plan are predicted to increase between 0.3 to 28.1 dB versus the existing Baseline (2020) conditions.

In order to reduce these impacts, the use of sound walls or quiet pavements could be employed. Construction of new sound walls could be a feasible mitigation measure. However, many of the impacted residential uses along the roadway segments listed above are accessed directly via

driveways off the main roadway or may even already have a sound wall. A new sound wall would require many driveway openings, resulting in partial noise barriers. These openings in the sound wall would substantially reduce the noise barrier performance. Additionally, raising the heights of sound walls, or construction of new noise barriers would result in encroachment into private property. Such encroachment would require private property owners to allow permission to enter their property. Raising sound wall heights would likely require enlarging footings, thereby requiring demolition of existing sound walls. Therefore, use of new sound walls, or modifying sound walls is not considered to be practical.

Quiet pavements have been used to mitigate traffic noise and are typically assumed to provide a 3 to 5 dBA reduction. Assuming a minimum reduction of 3 dBA, quiet pavement placed along sensitive receptor areas on the impacted roadway segments could reduce traffic noise level increases. Many of the noise impacts outlined in the previous tables could potentially be mitigated through the use of quiet pavement. However, not all of the impacted roadway segments could be mitigated through use of quiet pavements due to the magnitude of the traffic noise increases. Additionally, widespread repaving of city streets with quiet pavements would be expensive and impractical.

General Plan Policies N-1.1 through N-1.18, and Actions N-1a through N-1f, are intended to minimize exposure to excessive noise, including noise associated with traffic. Specifically, Policies N-1.1 and N-1.14 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-1.1, for exposure to traffic noise meet or exceed the noise level standards of the adopted General Plan. Policy N-1.14 and Actions N-1c would ensure that new development mitigates potential noise impacts through incorporating the noise control treatments necessary to achieve acceptable noise levels. Policy N-1.4 sets criteria for evaluating future increases in traffic noise levels. Implementation Action N-1a would ensure that the Lathrop Municipal Code, including the updated noise ordinance, is consistent with the noise standards established in the General Plan. Implementation Action N-1d 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.

While 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 3.12-11, the traffic noise increases associated with the proposed General Plan exceed the applicable noise exposure criteria. Therefore, this is considered a **cumulatively considerable** and **significant and unavoidable** 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 17,379 new residential dwelling units and up to 30,630,722 square feet of non-residential building space within the city at full buildout.

This new growth could increase the City's population by approximately 66,562 residents and could include approximately 49,250 new jobs. The full development of the new non-residential uses are 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 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 Lathrop.

Cumulative growth that would occur within San Joaquin County and other cities within San Joaquin 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 AND CIRCULATION

Impact 4.14: Cumulative impacts on the transportation network (Considerable Contribution and Significant and Unavoidable)

Table 4.0-4 compares the VMT per dwelling unit and VMT per employee associated with proposed General Plan implementation with the threshold. As shown in the table, the proposed General Plan would exceed VMT thresholds. While the proposed General Plan is not expected to result in VMT per dwelling unit exceeding 85 percent of baseline for residential-related land uses, the proposed General Plan is expected to result in VMT per employee exceeding 85 percent of baseline for employment-related land uses.

TABLE 4.0-4: VMT ANALYSIS

LAND USE	UNITS	THRESHOLD	PROPOSED GENERAL PLAN ¹	REDUCTION NEEDED TO ACHIEVE THRESHOLD
Single family	VMT per dwelling unit	94.8	64.5	-
Multi family	VMT per dwelling unit	73.1	54.6	-
Age restricted	VMT per dwelling unit	40.4	27.3	-
Restaurant	VMT per employee	182.9	248.9	27%
Industrial	VMT per employee	66.2	79.1	16%
Office	VMT per employee	31.0	47.3	34%
Retail	VMT per employee	115.0	211.5	46%

NOTES: ¹**BOLD = EXCEEDS THRESHOLD**

²VMT PER EMPLOYEE RATIOS INCLUDE ALL TRIPS BY EMPLOYEES, CUSTOMERS, AND DELIVERIES.

SOURCE: FEHR & PEERS, 2021

As shown in Table 4.0-4, the proposed General Plan would result in VMT increases exceeding the threshold for employment-related land uses. As previously described, this result is due to the change in the balance between jobs and housing in Lathrop, which is based upon the large increases in employment shown in Table 3.14-7 of Section 3.14: Circulation. In the future, more

employees and customers are expected to travel to employment centers, increasing VMT per employee.

The updated General Plan includes policies designed to reduce vehicle travel and vehicle miles traveled. The Circulation Element addresses providing adequate pedestrian, bicycle, and transit facilities and opportunities, promoting non-vehicle travel modes, requiring employers with 100 or more employees to implement TDM programs, and ensuring regional coordination on trip and VMT reduction efforts. General Plan policies and actions that contribute to VMT reductions are identified in DEIR Chapters 3.14 (Circulation), and 3.7 (GHG and Climate Change). These policies and actions would help to reduce the severity of these significant impacts to the greatest extent feasible.

The VMT generated by buildout of the proposed General Plan would exceed the VMT threshold of 85 percent of baseline. Implementing the proposed General Plan policies and actions will help to reduce VMT through encouraging non-vehicle transportation modes, expanded transit services, and developing TDM program requirements including measures to reduce VMT associated with new development. However, reductions in VMT per employee from 16 to 46 percent would be required to achieve thresholds as shown in Table 3.14-10. Additionally, the feasibility and effectiveness of a local or regional VMT impact bank or exchange is unknown at this time. The City cannot demonstrate definitively at this time that implementation of these policies would achieve VMT reductions to meet the VMT per employee thresholds.

The General Plan goals, policies, and implementation measures will achieve meaningful reductions in VMT generated by land uses within the City. However, reductions in VMT per employee from 16 to 46 percent would be required to achieve thresholds as shown in Table 4.4-4. The City at this time cannot demonstrate that VMT will be reduced to the degree that it meets these thresholds. Although large changes in the proposed General Plan land use could potentially reduce VMT of the City 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 well as transit provided by agencies other than the City. The feasibility and effectiveness of a local or regional VMT impact bank or exchange 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 (Considerable Contribution and Significant and Unavoidable)

Cumulative growth that would occur within the service areas for the South San Joaquin Irrigation District's (SSJID) 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: 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.

In November 2021, West Yost developed a Water Supply Assessment (WSA) for the City of Lathrop General Plan Update. In the WSA, West Yost summarized the land uses in the General Plan Update, projected future demand at Buildout (projected in 2040) and compared the projected water demand to the water supply documented in the City's 2020 Urban Water Management Plan (UWMP), and the SSJID 2020 UWMP. A comparison of the available water supply and projected demands at buildout of the General Plan is shown in Table 3.15-5 of Section 3.15: Utilities.

As indicated in Table 3.15-5, based on the assumptions presented in the WSA, the City would have a 2 percent deficiency in water supplies to serve development of the proposed Project land uses during some dry years (i.e during dry year 3 and dry year 4).

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 and/or allocation of land use are updated based on the current General Plan update, then the ability to serve new growth may need to be re-evaluated. The proposed General Plan includes a range of policies and actions (listed in DEIR Chapter 3.15) to ensure that the City's water supply plans are updated to address development and land use changes in order to ensure that future supply levels meet demands. For example, Policy PFS-2.1 requires the City to manage the water system to ensure that the water supply is adequate to meet the needs of existing and future development and is utilized in a sustainable manner. Nevertheless, based the available data, the City is anticipated to have a slight deficit of water supplies during dry years 3 and 4 if the levels of potential new growth analyzed in this EIR occur by 2040.

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. Projected water demands associated with General Plan buildout would not exceed the projected

4.0 OTHER CEQA-REQUIRED TOPICS

available water supplies during normal years, and the proposed General Plan includes a comprehensive set of goals, policies, and actions to ensure an adequate and reliable source of clean potable water. Nevertheless, as described in the WSA, it is anticipated that the City, with implementation of the General Plan Update, would have a slight deficiency in water supplies during multiple dry years 3 and 4. Therefore, impacts associated with sufficient water supplies are considered to be **cumulatively considerable** and a **significant and unavoidable**.

Wastewater: The City's wastewater collection system consists of approximately 72 miles of gravity mains ranging from 6 to 36 inches, 21 miles of force mains ranging from 4 to 18 inches, and 12 pump stations. Approximately 63 percent of gravity mains are polyvinyl chloride pipes, which is the City's current standard pipe material. The remaining 37 percent of pipes are vitrified clay pipes that are in Historic Lathrop and Crossroad Business Park areas. The City has a supervisory control and data acquisition (SCADA) system for control and monitoring of facilities. The City's wastewater collection system service area is generally contiguous with the city limits.

The City currently provides wastewater service to approximately 6,100 residential, commercial, industrial and institutional/governmental properties. However, there are areas within the city limits that are not served by the wastewater system. Many large facilities (e.g., Simplot, the former Pilkington Glass facility, the former Sharpe Army Depot, and former Carpenter Company facility) and the Next Generation STEAM Academy in River Island have historically self-managed their wastewater (West Yost Associates, 2018). Some of these areas have been planned to move to City service, as they are re-developed. Some residential homes and businesses in the central portion of Lathrop (e.g. Lathrop Industrial and South Lathrop) are served by a septic system.

Wastewater treatment facilities that serve the City include the MWQCF and the LCTF. LCTF and MWQCF have independent sewer sheds except at the 8-inch Mossdale Intertie. The Mossdale Intertie crosses beneath I-5 on River Islands Parkway and Louise Avenue. The Mossdale intertie is not routinely operated, but could potentially be utilized in the future to reroute a portion of flows from the Mossdale Pump Station to the MWQCF collection system. A map of wastewater infrastructure is shown in Figure 3.15-2.

As Lathrop 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 City's IWRMP 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.

The Central Valley Regional Water Quality Control Board and the IWRMP guide the long-term strategy for meeting future discharge and capacity requirements. From 2009 to 2016, total per capita ADWF varied between 60 and 69 gallons of wastewater per capita per day. As described in the City's Sewer System Management Plan, based on the City's existing General Plan, the City's total ADWF in 2040 was anticipated be 5.69 mgd, and increase to 7.07 mgd in 2050. Of this total, the MWQCF is projected to treat ADWFs of 1.39 mgd from Central Lathrop in 2040 and 1.47 mgd

at buildout. Areas served by the LCTF have larger increases in planned development and are projected to treat ADWFs of 4.30 mgd in 2040 and 5.61 mgd at buildout.

Additionally, 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.

Given that projected wastewater generation volumes associated with General Plan buildout is not anticipated to exceed the capacity of the wastewater treatment provider to have adequate capacity, and wastewater treatment and conveyance facilities would be evaluated at the project-level in association with subsequent development projects, cumulative wastewater impacts are considered be **less than significant** and 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. 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 3.14 and 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 the proposed General Plan's incremental contribution to cumulative wastewater impacts would be **less than cumulatively considerable**.

4.0 OTHER CEQA-REQUIRED TOPICS

The policies and actions listed in DEIR Chapters 3.9 (Hydrology), and 3.15 (Utilities) 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.

Solid Waste: 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 approximately 66,562 persons. As described above, the City of Lathrop has achieved a disposal rate of 5.9 PPD per resident in 2019. 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 392,716 pounds per day of solid waste, which equals 196.4 tons per day or 71,670 tons of solid waste per year.

Forward Landfill has a cease operation date of 2039 and has sufficient capacity to serve the City of Lathrop. Forward Landfill has a remaining landfill capacity of over 22,100,000 tons, and has a current maximum permitted throughput of 8,668 tons per day. It has a total maximum capacity of 59,160,000 cubic yards. The landfill has a permitted traffic volume of 620 vehicles per day.

Other landfills that received relatively small amounts of waste from the City of Lathrop in include:

- Altamont Landfill & Resource Recovery;
- Azusa Land Reclamation Company Landfill;
- Fink Road Landfill;
- Foothill Sanitary Landfill;
- L and D Landfill;
- North County Landfill & Recycling Center;
- Potrero Hills Landfill;
- Recology Hay Road;
- Sacramento County Landfill (Kiefer).

The City's solid waste per capita generation has decreased since 2007 due to the waste diversion efforts of the City. The additional solid waste generation associated with the proposed General Plan, approximately 196.4 tons per day at total buildout, to the Forward Landfill would not exceed the landfill's remaining and additional capacity until landfill closure in 2039. The City will need to secure a new location or expand existing facilities when the Forward Landfill is ultimately closed, if a new permit is not issued at a later date for a cease operation date beyond 2039. There are several options that the City will have to consider for solid waste disposal at that time, including the construction of new facilities or expansion of existing facilities.

If the Forward Landfill were to close in 2039, the City can potentially utilize other landfills such as the Foothill Landfill and the North County Landfill, as locations for solid waste disposal. The permitted maximum disposal at the Foothill Landfill is 1,500 tons per day and the North County Landfill is 825 tons per day. The remaining capacity of these landfills include 125 million cubic yards of solid waste at the Foothill Landfill, with an estimated cease operation date of 2054, and 35.4 million cubic yards of solid waste at the North County Landfill, which has an estimated cease operation date of 2035. The addition of solid waste associated with the proposed project to the Foothill Landfill and North County Landfill would not exceed the combined landfills' remaining capacity of 160.4 cubic yards. 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 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, and no additional mitigation is required.

The proposed General Plan includes actions to further reduce the project's impact on solid waste services, as identified in Chapter 3.15 (Utilities). With the implementation of these policies and payment of a solid waste connection fees for project within the Planning Area, potential solid waste impacts would be reduced to ***less than significant*** impact and 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)

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 (VHFHSZ) within or near the Planning Area. Therefore, the General Plan would have ***no impact*** related to wildfire risks associated with lands in or near State Responsibility Areas or lands classified as very high fire hazard severity zones. 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:

4.0 OTHER CEQA-REQUIRED TOPICS

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 Lathrop. 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 Lathrop 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 Lathrop 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 Lathrop, 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.

At buildout, growth associated with the proposed General Plan would yield a total of approximately 95,065 residents and 58,403 jobs. Depending on growth rates, the actual growth during the life of the General Plan could be lower, but would not exceed the 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 Lathrop 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 reduce 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 Lathrop 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.

Nonrenewable agricultural resources such as agricultural land, farmland, and agricultural soils, would be converted during the construction and operation of development projects contemplated under the General Plan buildout. The proposed General Plan includes a variety of policies that seek to conserve and protect agricultural resources. 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.

Irretrievable 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 agricultural 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 sustainability features of 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 Lathrop 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 4.4). These impacts include increases in localized noise, considerable increases of criteria pollutants, reduced air quality, and visual degradation, 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, 3.11, 3.12, 3.14, 3-15, 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 3.2-1:** General Plan implementation would result in the conversion of farmlands, including Prime Farmland, Unique Farmland, and Farmland of Statewide Importance, to non-agricultural use.
- **Impact 3.2-2:** General Plan implementation would conflict with existing zoning for agricultural use, or a Williamson Act Contract.
- **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 3.3-2:** General Plan implementation would expose sensitive receptors to substantial pollutant concentrations.
- **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.

4.0 OTHER CEQA-REQUIRED TOPICS

- **Impact 3.11-1:** General Plan implementation would 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 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.
- **Impact 3.12-1:** General Plan implementation may result in exposure to significant traffic noise sources.
- **Impact 3.14-1:** General Plan implementation may result in VMT per employee that are greater than 85 percent of Baseline conditions.
- **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.
- **Impact 3.14-3:** General Plan implementation may increase hazards due to a design feature, incompatible uses, or inadequate emergency access.
- **Impact 3.15-1:** General Plan implementation would not result in sufficient water supplies available to serve the City and reasonably foreseeable future development during normal, dry and multiple dry years.
- **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 4.11:** Cumulative impacts related to mineral resources.
- **Impact 4.12:** Cumulative impacts related to noise.
- **Impact 4.14:** Cumulative impacts on the transportation network.
- **Impact 4.15:** Cumulative impact 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 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

- 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; and
- Address emerging transportation, housing, and employment trends.

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 3.2-1:** General Plan implementation would result in the conversion of farmlands, including Prime Farmland, Unique Farmland, and Farmland of Statewide Importance, to non-agricultural use (Significant and Unavoidable)
- **Impact 3.2-2:** General Plan Implementation would conflict with existing zoning for agricultural use, or a Williamson Act Contract (Significant and Unavoidable)
- **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)
- **Impact 3.3-2:** General Plan implementation would expose sensitive receptors to substantial pollutant concentrations (Significant and Unavoidable)
- **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)
- **Impact 3.11-1:** General Plan implementation would 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 (Significant and Unavoidable)
- **Impact 3.11-2:** General Plan implementation would 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 (Significant and Unavoidable)
- **Impact 3.12-1:** General Plan implementation may result in exposure to significant traffic noise sources (Significant and Unavoidable)
- **Impact 3.14-1:** General Plan implementation may result in VMT increases that are greater than 85 percent of Baseline conditions (Significant and Unavoidable)
- **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 (Significant and Unavoidable)
- **Impact 3.14-3:** General Plan implementation may increase hazards due to a design feature, incompatible uses, or inadequate emergency access (Significant and Unavoidable)

- **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)
- **Impact 4.2:** Cumulative impact to agricultural lands and resources (Considerable Contribution and Significant and Unavoidable)
- **Impact 4.3:** Cumulative impact on the region's air quality (Considerable Contribution and Significant and Unavoidable)
- **Impact 4.7:** Cumulative impacts related to greenhouse gases, climate change, and energy (Considerable Contribution and Significant and Unavoidable)
- **Impact 4.11:** Cumulative impacts related to mineral resources (Considerable Contribution and Significant and Unavoidable)
- **Impact 4.12:** Cumulative impacts related to noise (Considerable Contribution and Significant and Unavoidable)
- **Impact 4.14:** Cumulative impacts on the transportation network (Considerable Contribution and Significant and Unavoidable)
- **Impact 4.15:** Cumulative impacts related to utilities (Considerable Contribution and Significant and Unavoidable)
- **Impact 4.17:** Irreversible Effects (Significant and Unavoidable)

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 and standards to potentially address impacts. The alternatives analyzed in this EIR include the following:

- **Alternative 1: No Project Alternative.** Under Alternative 1, the City would not adopt the General Plan Update. The existing Lathrop General Plan would continue to be implemented and no changes to the General Plan, including the Land Use Map, Circulation Diagram, goals, policies, or actions would occur. Subsequent projects, such as amending the Municipal Code (including the zoning map) and the City's Design Guidelines, would not occur. The Existing General Plan Land Use Map is shown on Figure 5.0-1.
- **Alternative 2: Modified Project Alternative.** Under Alternative 2, the City would adopt the updated General Plan policy document, but would retain the existing land use map. This alternative would result in the same growth as the existing General Plan and Alternative 1, but would implement the updated goals, policies, and actions found in the General Plan Update. This Alternative would result in more residential growth, and less non-residential development than the proposed Project. This alternative was developed to potentially reduce the severity of impacts associated with noise, air quality, and workforce VMT.

- **Alternative 3: Balanced Density Residential Focused Alternative.** Alternative 3 would adopt the General Plan Update, including the proposed General Plan Land Use Map and updated goals, policies, and actions. However, Alternative 3 would place more emphasis on residential development, increasing the allowed densities for the residential land uses, while reducing the intensity of non-residential development. For comparison it is assumed that this Alternative would result in a 25 percent increase in the number of new residential dwelling units, and a 10 percent decrease in jobs and non-residential square footage when compared to the proposed Project. This Alternative would result in the most dwelling units compared to all other Alternatives. This Alternative would also result in more non-residential growth than Alternatives 1 and 2, but 10% less non-residential growth than the proposed Project. This alternative was developed to create a more equal jobs/housing balance, potentially reducing the severity of impacts related to greenhouse gas emissions and VMT, as new development would be within close proximity to the new job generating uses, which would help to reduce per capita employment VMT. Figure 2.0-2 of Chapter 2 (Project Description) shows the proposed General Plan Land Use Map.

A summary of the potential growth, including population growth, housing units, jobs, and the resultant job/housing balance for the Project and each Alternative is shown in Table 5.0-1.

TABLE 5.0-1: GROWTH PROJECTIONS BY ALTERNATIVE

	<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>					
	28,503	7,747	13,327,713	9,153	1.18
<i>NEW GROWTH POTENTIAL</i>					
Proposed General Plan	66,562	17,379	30,630,722	49,250	2.83
Alternative 1: Existing General Plan/No Project	72,954	19,048	23,812,822	43,459	2.28
Alternative 2: Modified Project Alternative	72,954	19,048	23,812,822	43,459	2.28
Alternative 3: Balanced Density (Residential Focused Alternative)	83,203	21,724	27,567,650	44,325	2.04
<i>TOTAL GROWTH: EXISTING PLUS NEW GROWTH POTENTIAL</i>					
Proposed General Plan	95,065	25,126	43,958,435	58,403	2.32
Alternative 1: Existing General Plan/No Project	101,457	26,795	37,140,535	52,612	1.96
Alternative 2: Modified Project Alternative	101,457	26,795	37,140,535	52,612	1.96
Alternative 3: Balanced Density (Residential Focused Alternative)	111,706	29,471	40,895,363	53,478	1.81

SOURCE: DE NOVO PLANNING GROUP, 2021

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 5.0-4 summarizes the comparative effects of each alternative.

The primary difference between the proposed General Plan and Alternative 2 is the Land Use Maps associated with each of these alternatives while the primary difference between the proposed General Plan and Alternative 3 is the assumption of a 25 percent increase in the number of dwelling units developed in each residential/mixed use land use, and a 10% reduction on jobs and non-residential square feet. 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 and Land Use Descriptions 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 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 general plan update team 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 and policy document 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 that has reduced potentially significant impacts to the environment to the greatest extent feasible, while still meeting the project objectives identified by the City of Lathrop decision makers and stakeholders.

As demonstrated in the discussion below, the Alternative 3 is the environmentally superior alternative, as it was able to reduce as many environmental effects as possible, while still meeting Project objectives. Alternative 3 would be slightly environmentally superior to the proposed Project, as it would slightly reduce impacts related to VMT, Noise, Air Quality and GHG. However, this alternative would not reduce any significant impacts to a less than significant level.

ALTERNATIVE 1 - NO PROJECT

Under Alternative 1, 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, energy, safety, and conservation. The General Plan goals, policies, and actions, would not be updated to address the concerns of the city’s residents, property owners, decision-makers, and other stakeholders that participated in the visioning process, which lead to many of the General Plan’s goals and subsequent policy development.

Alternative 1 would result in the continuation of existing conditions and development levels. 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. Table 5.0-2 shows the acreages of each land use designation for the existing General Plan Land Use Map.

TABLE 5.0-2: ALTERNATIVE 1 GENERAL PLAN LAND USE DESIGNATIONS

<i>LAND USE</i>	<i>AOI</i>	<i>CITY LIMITS</i>	<i>SOI</i>	<i>TOTAL</i>
AOI - North	2,122.16			2,122.16
AOI	2,122.16			2,122.16
Central Lathrop		1,373.62		1,373.62
CP-CL		80.09		80.09
HR-CL		75.69		75.69
K-8-CL		37.42		37.42
NC-CL		12.02		12.02
NP-CL		44.80		44.80
OC-CL		226.09		226.09
OS-CL		48.37		48.37
P-SP-CL		10.94		10.94
R/MU-CL		41.41		41.41
ROW-CL		10.06		10.06
SPC-CL		7.82		7.82
VR/K-8/DS-CL		17.85		17.85
VR-CL		695.19		695.19
WWTP-CL		65.88		65.88
City Proper		4,519.76	120.49	4,640.25
CC		59.46		59.46
CP		35.59		35.59
ES		26.37		26.37
FC		132.34	54.54	186.88
FS		8.20		8.20
GI		1,065.37		1,065.37
HD		8.96		8.96
LD		879.61		879.61
LI		1,410.97	65.94	1,476.92

5.0 ALTERNATIVES

<i>LAND USE</i>	<i>AOI</i>	<i>CITY LIMITS</i>	<i>SOI</i>	<i>TOTAL</i>
MD		177.44		177.44
NC		29.74		29.74
NP		40.33		40.33
OS		57.54		57.54
P		63.55		63.55
PO		15.97		15.97
RecR		54.13		54.13
ROW		251.12		251.12
SC		185.85		185.85
VC		17.23		17.23
Lathrop Gateway		303.97	62.79	366.76
CO-LG		68.17		68.17
LI-LG		184.34		184.34
ROW-LG		13.41	7.02	20.43
SC-LG		38.05	55.77	93.82
River Islands		4,412.46		4,412.46
MU-RI		164.58		164.58
NC-RI		23.38		23.38
RCO-RI		667.29		667.29
RGC-RI		500.20		500.20
RH-RI		34.37		34.37
RL-RI		2,813.73		2,813.73
RM-RI		208.91		208.91
South Lathrop		301.83		301.83
CO-SL		13.00		13.00
LI-SL		250.75		250.75
OS-SL		12.79		12.79
P/QP-SL		10.34		10.34
ROW-SL		14.94		14.94
Stewart Tract	432.52	737.11		1,169.63
RCO-ST		181.37		181.37
RC-ST	273.88	77.03		350.91
ROW-ST	13.60	44.50		58.10
RR-ST	145.03			145.03
R-ST		12.41		12.41
UR-ST		421.80		421.80
Grand Total	2,554.68	11,648.75	183.28	14,386.70

SOURCE: DE NOVO PLANNING GROUP, 2021

Under Alternative 1 at Project buildout, there would be an increase over existing conditions in residential growth (approximately 19,048 dwelling units) and jobs (approximately 43,459 jobs) within City limits. Under cumulative conditions, development in Planning Area combined under Alternative 1 would result in a population of 101,457 and 52,612 jobs. 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 policy framework proposed by the General Plan Update, encourages and aims to achieve a community with a compatible land use pattern that meets the City's long-term housing, employment, and civic needs while reducing impacts created by growth through a self-mitigating approach to the policy framework. Land uses allowed under the proposed General Plan provide opportunities for additional multifamily residential growth at in-fill locations within existing urbanized areas of the city, as well as new growth adjacent to existing urbanized areas. 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 greenhouse gases, community health, equity/environmental justice 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 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 addressing new requirements of State law; and addressing emerging transportation, housing, and employment trends.

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 5.0-4 to provide a general comparison between the adopted General Plan (Alternative 1 – No Project), the Proposed Project, and Alternatives 2 and 3.

ALTERNATIVE 2 – MODIFIED PROJECT ALTERNATIVE

Alternative 2 (Modified Project Alternative) would result in the same growth as under the existing General Plan. Under Alternative 2, the City would adopt the updated General Plan policy document, including the revised goals, policies, and actions; however, the City would retain the existing land use map. Alternative 2 would result in more residential and less nonresidential growth than the proposed General Plan, but it would result in the same growth as Alternative 1. However, Alternative 1 would result in less residential and nonresidential growth when compared to Alternative 3. Land use designations would be the same as in Alternative 1 and are summarized in Table 5.0-2.

5.0 ALTERNATIVES

The goals, policies, and actions of the General Plan Update would apply to subsequent development, planning, and infrastructure projects under this alternative. As shown previously in Table 5.0-1, Alternative 2 would result in additional housing units and residents within Lathrop when compared to the proposed General Plan Land Use Map. Nonresidential square feet would be reduced and employment opportunities would be decreased under this alternative, with fewer jobs created within the city limits when compared to the proposed General Plan.

Alternative 2 would provide for additional residential only land uses and fewer light industrial and business park type uses within the Planning Area when compared to the proposed Project. However, Alternative 2 would also provide for fewer opportunities for multifamily residential land uses.

ALTERNATIVE 3 – BALANCED DENSITY (RESIDENTIAL FOCUSED)

Alternative 3 - Balanced Density (Residential Focused Alternative) provides for a balance of job-creating and residential development land uses within the City. Alternative 3 would allow more non-residential and residential development when compared to the existing General Plan, but Alternative 3 would increase the residential densities providing even more residential development than all other alternatives.

As described previously, Alternative 3 would implement the proposed General Plan Land Use Map as shown in Figure 2.0-2 of Chapter 2 (Project Description); however, under Alternative 3, it is assumed that the density of residential development would increase by 25 percent, resulting in 4,345 more dwelling units than the proposed Project. The goals, policies, and actions of the General Plan Update would apply to subsequent development, planning and infrastructure projects under this alternative. Alternative 3 would maintain the same acreage of land uses as the proposed Project (as shown in Chapter 2.0 Table 2.0-1), but would support increased densities for residential developments and slightly reduced commercial and industrial development intensities.

As shown in Table 5.0-1, Alternative 3 would result in approximately 21,724 new housing units or 4,345 more housing units within the city when compared to the proposed General Plan Land Use Map. Employment opportunities would be slightly reduced when compared to the proposed General Plan, resulting in approximately 44,325 jobs created within the city limits.

Under Project buildout conditions, this alternative would result in a total population within the Planning Area of approximately 111,706, which is higher than the total population projection under the proposed General Plan by approximately 16,641.

IMPACT COMPARISON

Aesthetics

As described in Chapter 3.1 (Aesthetics and Visual Resources) impacts related to Aesthetics were found to be less than significant. All Project Alternatives would result in similar development patterns, and development footprint. As described in Chapter 3.1 (Aesthetics), Lathrop has prepared the proposed General Plan to include numerous policies and actions related to maintain existing open space lands within the city, to coordinate with regional partners to maintain and preserve open space areas, and to protect the city's scenic resources, including scenic corridors along roads and views of the hillsides, waterways, and other significant natural features, to the extent practical.

Aesthetic impacts would generally be the same under Alternate 2 when compared to the proposed Project and Alternative 3. Slight variations in development types, units, and non-residential square footages would be seen throughout these alternatives, however as the development types and the overall development footprint within the planning area would remain substantially the same under all alternatives. The updated policy document under the proposed Project as well as Alternative 2 and 3 would enhance the review of individual development projects and would be a slight improvement when compared to Alternative 1 which does not include an updated policy document.

Agriculture and Forest Resources

As described in Impact 3.2-1, and 3.2-2 of 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 Prime Farmland and Unique Farmland, to non-agricultural use, as well as conversion of Williamson Act Enrolled Lands.

All Project Alternatives would result in General Plan land use designations, and a land use map that would result in a buildout Planning area and the loss of Important Farmlands. All development Alternatives would designate developed uses throughout the Planning Area with similar development footprints. Therefore, impacts under all alternatives would remain substantially similar for the proposed Project when compared to Alternatives 2 and 3,

This impact would remain significant under all of the Alternatives. All Project Alternatives would result in general plan land use designations that would result in similar development patterns. Therefore, the impact level under all scenarios would remain the same. However due to updated policy guidance as a result of the updated policy document the proposed Project as well as Alternatives 2 and 3 may have a slightly reduced impact when compared to the no project alternative.

As described in Chapter 3.2 (Agricultural Resources), the updated policy document under the proposed Project as well as Alternatives 2 and 3 would include policies and actions related to agricultural uses, compatibility and enhanced coordination that promote agricultural uses and

compatibility and would be a slight improvement when compared to Alternative 1, which does not include an updated policy document.

Air Quality

As described in Chapter 3.3 (Air Quality) Impact 3.3-1, the proposed General Plan implementation would result in significant impacts to air quality.

As further described in Chapter 3.3, policies and actions included in the proposed General Plan would further the fundamental goals of the SJVAPCD in reducing emissions of criteria pollutants associated with reducing building energy usage, and would increase opportunities for transit ridership in Lathrop and the surrounding areas. The General Plan policies and actions that would work to further criteria pollutant emissions reductions, including reviewing projects for conformance with applicable air quality plans and regulations, reducing energy demands, and implementing methods to reduce vehicle miles traveled. However, even with implementation of the General Plan policies and actions that would reduce criteria pollutant emissions, the proposed General Plan would increase VMT at a rate faster than the combined increase in jobs and population growth.

As shown in Chapter 3.3, implementation of the proposed Project would result in an approximately 401.0% increase in citywide VMT, greater than the projected 307.6% increase in combined population and jobs. Therefore, the growth rate associated with the proposed General Plan is anticipated to be slower than the VMT increase associated with it. Additionally, as described in Chapters 3.3, and 3.14 (Circulation), employment VMT increases outpace residential VMT as the city is adding additional jobs that would require workforce commuting from surrounding areas to fill positions. Offsetting workforce VMT impacts could be accomplished through reduced jobs or increased residential populations within the City (or a combination of both) so that local jobs are filled locally, thus reducing the commute lengths and reducing workforce VMT. As shown in Table 5.0-1, all alternatives to the proposed Project provide for fewer jobs, and increased residential units with the intent of reducing VMT compared to the proposed Project.

As shown in Table 5.0-1 the jobs housing ratio at buildout would be 2.32 for the Proposed General Plan, 1.96 for Alternatives 1 and 2, and 1.81 under Alternative 3. Therefore Alternatives 1 and 2 would have slightly reduced VMT impacts, while Alternative 3 would further reduce impacts as this alternative would support additional housing opportunities that would reduce both residential and workforce VMT to the greatest extent compared to all other alternatives.

Additionally the Proposed General Plan, as well as Alternatives 2 and 3 would include an updated policy document with an extensive list of policies and actions that are specifically aimed at improving air quality. These policies and actions (which are provided in Chapters 3.3, and 3.14), limit impacts to air quality by reducing the number and length of vehicle trips, supporting green and sustainable building development, promoting the use of renewable energy, and encouraging the conservation of resources. As such, the air quality impacts may increase slightly under Alternative 1 and decrease slightly under Alternative 2 when compared to the proposed General

Plan. Moreover, when compared to the proposed Project, Alternative 3 impacts would be reduced when compared to all other Alternatives.

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 Lathrop, which could result in adverse impacts to special-status plant and wildlife species, as well as sensitive natural habitat and 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 development footprint and development types would be similar under all alternatives. The City has prepared the proposed General Plan to include policies and actions intended to protect special status plants and animals, including habitat, from adverse effects associated with future development and improvement projects. The proposed General Plan and Alternatives 2 and 3 would include these updated biological policies and actions aimed at protecting biological resources (as described in detail in Chapter 3.4), while Alternative 1 would rely on the biological policies and actions within the existing General Plan.

Therefore, because Alternatives 2 and 3 would update conservation and biological resource policies consistent with the proposed General Plan, impacts to biological resources would be slightly reduced when compared to the Alternative 1 (No Project Alternative), which does not include an updated policy document. Impacts under Alternative 2 would remain the same when compared to the Alternative 3, which has a comparable development footprint and updated policies consistent with the proposed General Plan.

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.

All Project Alternatives would result in similar development patterns and a similar development footprint. However, because Alternatives 2 and 3 would update cultural resource policies to include new policies and actions related to agency coordination, consultation, and monitoring consistent with the proposed General Plan Policy Document, impacts to cultural resources would be slightly reduced when compared to the No Project Alternative which does not include additional and updated policies related to cultural resources. The impact under all other scenarios (the proposed General Plan, and Alternatives 2 and 3) would remain the same.

Greenhouse Gas Emissions and Energy

As described in Chapter 3.7 (Greenhouse Gas Emissions and Energy), Impact 3.7-1 the proposed General Plan would result in significant impacts as 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.

As stated in Chapter 3.7, the “per service population” metric, which accounts for both population and employment, is a common way to analyze the GHG efficiency of new development in comparison to an existing baseline. The land use modifications and policies proposed as part of the proposed General Plan would result in an overall approximately 22.9% increase in per service population vehicle miles traveled compared to the existing baseline condition. Separately, the proposed General Plan would result in an approximately 19.4% increase in per service population vehicle miles traveled compared to the existing General Plan.

As described in Chapter 3.7, 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. For example, Goal CIR-2 encourages the creation of a system of pedestrian, bicycle, and transit facilities that enables non-automotive accessibility, thereby limiting greenhouse gas emissions. Additionally, Policy LU-3.3 requires that climate change and adaptation planning principles are integrated into future updates of the Zoning Code, and other related long-range utilities and facilities planning documents. Additionally, Policy LU-4.2 emphasizes efforts to reduce regional vehicle miles traveled (VMT) by supporting land use patterns and site designs that promote active modes of transportation, and public transit. Policy CIR-2.1 requires consideration of all modes of travel in design (i.e. complete streets). Furthermore, Policy RR-6.9 requires consideration and adoption of new policies and programs that will help to provide energy efficient alternatives to fossil fuel use and reduce consumption in order to reduce greenhouse gas emissions. Moreover, Policy RR-6.8 establishes City per capita GHG reduction targets, in order to meet the requirements established by the state under AB 32 and SB 32, consistent with the CARB’s 2017 Scoping Plan.

All of these comprehensive policy approaches identified in Chapter 3.7 serve to support regional and statewide efforts to reduce GHG emissions, including CARB’s Scoping Plan and SJCOG’s 2018 RTP/SCS through energy efficiency, green building, land use development, and the other 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. 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.

As described in Chapter 3.7 the VMT per service population is 47.48 under Buildout of the existing General Plan and 48.89 under buildout of the proposed General Plan. Using this metric alone it could be assumed that impacts related to GHG would be reduced slightly under the existing General plan. However, when compared to Alternative 1 (No Project), the proposed General Plan,

Alternative 2 and Alternative 3 all include a range of goals and policies that would reduce GHG emissions, including policies to encourage mixed-use development, complete streets and multi modal improvements that would further reduce per capita GHG impacts. It is unknown how these policies and actions may offset slight reductions in VMT, but it would be assumed that the proposed updated policy document will further reduction goals over the life of the general plan and thus all alternatives would be a slight improvement when compared to the No Project Alternative that does not include the updated policy document.

Under Alternatives 2, the Planning Area would be developed with the existing General Plan Land Use Map, but would be required to adhere to the same policy guidance and local, state, and regional greenhouse gas measures as the proposed General Plan and Alternative 3. Alternative 2 would result in approximately 1,669 more housing units, and 5,791 fewer jobs within Lathrop when compared to the proposed General Plan Land Use Map. Under Alternative 3 there would also be an increase in residential units (4,345), and a decrease in jobs (4,925) when compared to the proposed General Plan.

The decrease in total jobs may decrease the total greenhouse gas emissions and energy use, while the additional residents may offset these reductions. However, increased unit counts and population increases would generally be seen to decrease per capita GHG emissions levels as additional residents will increase the service population and reduce workforce VMT. As such, the greenhouse gas emissions impact is expected to decrease slightly under Alternative 2 and to a greater extent under Alternative 3 when compared to the proposed General Plan.

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 when compared to 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 and other local hazards. These policies and actions in the General Plan would ensure that potential hazards are identified on a project site specific basis, 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, under all Project Alternatives no development would take place in areas of high wildland fire risk.

All Project Alternatives would result in additional urban uses including commercial, industrial, residential, and mixed-use and public facility development. The impacts under all scenarios would remain similar, however impacts to hazards and hazardous materials would be slightly reduced when compared to the No Project Alternative Because the proposed General Plan and alternatives 2 and 3 includes the adoption of the updated General Plan policy document, that included additional policies and actions specifically aimed to reduce hazards, and hazardous materials impacts when compared to the existing General Plan.

Hydrology and Water Quality

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.

All of the alternatives generally would allow development to occur in a manner similar to the proposed General Plan within the same development footprint, where flood control and water quality protection measures are established and enforced. This variation in intensity and land use designation changes would not substantially alter impacts from flooding, or to water quality, or on groundwater supplies because existing federal, State, and local regulations would apply to guard against flood hazards, water quality contamination, or impact on groundwater supplies. Impact for each alternative, like the proposed Project, would be less than significant.

Alternative 2 and Alternative 1 (No Project) would result in development under the existing General Plan Land Use Map, which results in the least amount of non-residential square feet when compared to the proposed General Plan and Alternative 3. However, Alternative 2 and Alternative 1 would result in an increase in residential units when compared to the proposed General Plan (see table 5.0-1). Compared to the proposed General Plan, the potential water quality impacts related to construction and operation would be similar under all alternatives. As described in Chapter 3.9, General Plan implementation would not result in construction, or long-term impacts to surface water quality from urban stormwater runoff. All alternatives would also be required to submit a SWPPP with BMPs to the RWQCB and comply with all storm water sewer system (MS4)

requirements. It would be expected that impacts related to water quality would be similar under Alternatives 2 and Alternative 3 as compared to the Proposed General Plan. The implementation of the General Plan policies and actions, includes policies aimed to enhance stormwater quality and infiltration as well as actions to review development projects to identify potential stormwater and drainage impacts. Additionally the General Plan requires development to include measures to ensure off-site runoff, is not increased as a beyond pre-development levels. Without updates to the General Plan's policy document new and updated policies related to permeable surfaces onsite detention, and infiltration would not be included and may result in increased impacts. Therefore, this impact under the No-Project Alternative may be slightly increased when compared to all other alternatives.

Land Use Planning and Population/Housing

The proposed General Plan and all alternatives 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 Alternatives 2 and 3 would include adoption of the updated policy document consistent with the Proposed General Plan. 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. Therefore, Alternatives 2 and 3 would also result in the same impact level as the proposed General Plan.

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, and would not implement changes in State law that address environmental concerns related to climate adaptation, environmental justice, and VMT. Alternatives 2 and 3 are both comparable to the proposed General Plan and would result in similar impacts related to land use, population, and housing.

Mineral Resources

As described in Chapter 3.11, Impact 3.11-1, the proposed General Plan would result in significant impacts relating to 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, urbanizing, or are planned for similar development patterns.

The General Plan includes goals, policies, and actions to limit impacts to mineral resources. However, implementation of the General Plan and development allowed under the Land Use Map would permanently convert undeveloped portions of Planning Area to urban uses and this may preclude the recovery of some mineral resources from the Plan Area. Therefore, this impact would remain significant and unavoidable under all alternatives.

Noise

As described in Chapter 3.12, Impact 3.12-1, and Chapter 4.0, the proposed General Plan would result in significant noise impacts. Buildout of the General Plan would contribute to transportation noise and in increases in traffic noise levels at existing sensitive receptors. The proposed General Plan and Alternatives 2 and 3 include updated General Plan Policies intended to minimize exposure to excessive noise, including noise associated with increased traffic. Policies included within the updated policy document would ensure that new development minimizes potential noise impacts to the greatest extent feasible by incorporating noise control treatments and criteria for evaluating future increases in traffic noise levels; however, this impact would remain significant.

The impact under all scenarios would be substantially similar and all would be expected to result in significant noise impacts when compared to the existing noise environment. However, Alternative 2 which includes an updated policy document, while retaining the existing land use map would likely result in reduced traffic noise levels when compared to all other alternatives due to less areas of the city being identified for Industrial types of development resulting in fewer truck trips. The No Project alternative also retains the existing General Plan Land Use Map; however, without the updated policy document that includes best practices and additional noise minimizing policies and actions this alternative may result in only slightly fewer impacts when compared to the proposed Project and Alternative 3 due to reduced non-residential development potential. Additionally, Alternative 3 would include reduced non-residential building intensities and would result in fewer jobs and truck trips when 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.

When compared to Alternative 1 all project alternatives would be superior as Alternative 1 would not include adoption of the updated General Plan policy document that included policies and actions that support public services and recreational opportunities and service levels throughout the community. Alternatives 2 and 3 would adopt the updated General Plan policy document. Under all alternatives, the development area and development types would remain similar; however, there would be more dwelling units, and a slightly increased population when compared to the Propose General Plan and thus, impacts to public services (the demand for police, fire and other public services) would be slightly increased and may require additional facilities when compared to the proposed General Plan. Overall, Alternatives 1, 2, and 3 would have a slightly increased impact to public services when compared to the proposed Project.

Transportation

As described in Chapter 3.14 (Transportation and Circulation) and Chapter 4.0, the proposed General Plan would result in significant and unavoidable impacts related to transportation VMT and circulation and safety. Each are discussed below:

Citywide VMT

As described in Chapter 3.14, Impact 3.14-1, General Plan implementation may result in VMT per employee that are greater than 85 percent of Baseline conditions and was therefore found to be significant and unavoidable.

The updated General Plan includes policies designed to reduce vehicle travel and vehicle miles traveled. The Circulation Element addresses providing adequate pedestrian, bicycle, and transit facilities and opportunities, promoting non-vehicle travel modes, requiring employers with 100 or more employees to implement TDM programs, and ensuring regional coordination on trip and VMT reduction efforts. General Plan policies and actions that contribute to VMT reductions are identified below.

Table 5.0-3 compares VMT for the Proposed General Plan to VMT projected for the existing general plan map, providing VMT by type of use and a VMT summary for VMT generated by households, residents, and service population.

5.0 ALTERNATIVES

TABLE 5.0-3: DAILY TOTAL VMT EFFICIENCY COMPARISON BY SCENARIO

Land Use	Units	2020 Baseline	Threshold (85 Percent of Baseline)	Previous General Plan Buildout	Proposed General Plan Buildout	Previous vs. Proposed General Plan
Single family	VMT per dwelling unit	111.5	94.8	64.8	64.5	-0.5%
Multi family	VMT per dwelling unit	86.0	73.1	56.0	54.6	-2.6%
Age restricted	VMT per dwelling unit	47.5	40.4	26.9	27.3	1.3%
Restaurant	VMT per employee	215.2	182.9	247.6	248.9	0.5%
Industrial	VMT per employee	77.8	66.2	79.0	79.1	0.1%
Office	VMT per employee	36.5	31.0	46.5	47.3	1.7%
Retail	VMT per employee	135.3	115.0	212.2	211.5	-0.3%
All residential	VMT per dwelling unit	108.3	NA ³	60.3	58.9	-2.3%
All residential	VMT per resident ¹	27.9	NA ³	15.5	15.2	-2.3%
All employment	VMT per employee	85.8	NA ³	106.7	101.6	-4.7%
All land uses	VMT per service population ^{1,2}	42.9	NA ³	46.0	47.4	3.0%
Total VMT	VMT	1,497,700	NA ³	7,315,900	7,503,700	2.6%

Notes: ¹Based on 3.88 residents/dwelling unit (California Department of Finance, E-5 City/County Population and Housing Estimates, 1/1/2020)

²Service population includes residents and employees

³NA = not applicable, metric for informational purposes only

⁴**Bold** = Exceeds proposed General Plan threshold

Source: Fehr & Peers, 2021

Table 5.0-3 shows the VMT measures per dwelling unit, per employee, per resident, and per service population for General Plan buildout conditions, as well as for the baseline condition. As shown in the table, the proposed General Plan would result in increased VMT for employment-generating land uses and would also result in an increase in total VMT in comparison to the existing condition as well as in comparison to the baseline scenario.

While all alternatives would also result in VMT per household that meets the VMT per household threshold, the proposed Project would have a worse employment VMT when compared to all

other alternatives. As shown in Table 5.0-3, the changes in VMT per dwelling unit or employee range from a 2.6 percent decrease to a 1.7 percent increase. The increase in total VMT is 2.6%.

This result is due to the change in the balance between jobs and housing in Lathrop, which is based upon the large increases in employment shown in Chapter 3.14, Table 3.14-4. In the future, a smaller share of residents are expected to leave the City for employment, reducing VMT per dwelling unit, but a greater share of employees and customers are expected to travel from outside the City to employment centers within the City, increasing VMT per employee. If such employment growth does not occur, actual VMT per dwelling unit could be higher and VMT per employee could be lower than estimated for General Plan buildout conditions. As a result, the VMT impacts associated with employment-based uses allowed by the proposed General Plan were considered significant and unavoidable.

Alternative 2 and Alternative 1 (No Project) would result in development of the existing General Plan Land Use Map; therefore, as stated above, the average residential VMT per capita would be slightly increased; however, the average employment VMT per employee would be decreased.

Under Alternative 2 and Alternative 1, the VMT impacts associated with employment-based uses would still be considered significant and unavoidable. However, under Alternative 2, the updated policy document would be adopted and future developments would be required to adhere to the same policy guidance and local, state, and regional air quality measures as the Proposed General Plan and Alternative 3. Therefore, when compared to Alternative 1, Alternative 2 would slightly reduce impacts to transportation and circulation. While the proposed General Plan and Alternative 3 would result in a slightly higher average employment VMT per employee than Alternative 2 and Alternative 1, the land use patterns and intensities under Alternative 3 would create a more balanced mix of residential and employment generating uses and would result in a reduction in workforce VMT through opportunities for trip internalization and less people commuting to the city for work, and increased opportunities for walking and bicycling due to the updated policy document. Therefore, the transportation impacts related to VMT are slightly increased under Alternative 2 when compared to the proposed General Plan and Alternative 3.

Circulation and Safety

As described in Chapter 3.14, Impact 3.14-2, and Chapter 4.0, the General Plan may conflict with a program, plan, policy, or ordinance addressing the circulation system, including transit, bicycle, and pedestrian facilities so this impact was found to be significant and unavoidable. Additionally, as described under Impact 3.14-3 the General Plan may increase hazards due to a design feature, incompatible uses, or inadequate emergency access and was also found to be significant and unavoidable.

Although the proposed General Plan's updated policies and actions help make the circulation system including transit, bicycle, and pedestrian facilities consistent with applicable programs, plans, policies, and ordinances, as well as addressing the needs of growth accommodated by the proposed General Plan; increasing vehicle traffic may increase the number of collisions involving transit users, bicyclists, and pedestrians. Increasing vehicle traffic may increase the number of

collisions on Lathrop roadways, and therefore result in an increase in hazards. The City cannot demonstrate definitively at this time that implementation of these policies would maintain the number of collisions for vehicles, pedestrians, and bicyclists at current or lower levels. For these reasons this impact would remain significant and unavoidable under all alternatives.

The No Project Alternative would not implement updated and additional transportation policies including policies that support complete streets, safe routes to schools, and active transportation principles. Alternatives 2 and 3 would include the updated goals, policies, and programs associated with pedestrian, bicycle, safe route to schools, and alternative transit modes, and would implement the active transportation policies, and would be comparable to the Proposed General Plan. However, Alternatives 2 and 3 would include reduced amounts of non-residential development, which would result in fewer truck trips that when compared to the proposed Project may result in reduced safety hazards with Alternative 2 having the least overall impact potential.

Utilities and Service Systems

As described in Chapters 3.15, and 4.0, the proposed General Plan would result in a significant impact relating Utilities. As described under Impact 3.15-1 General Plan implementation would result in insufficient water supplies available to serve the City and reasonably foreseeable future development during multiple dry years.

New development would place increased demands on utilities. Under all alternatives the Planning Area would be developed with similar development patterns. Alternatives 1 and 2 would result in the least amount of non-residential development and smallest increase in housing units and population would be under the proposed General Plan. The quantity of infrastructure installed would not be substantially reduced under any alternative, as all alternatives would require similar development patterns and footprints, but the demand for utility services, including wastewater and solid waste services would generally be assumed to be less under the proposed General Plan due to its reduced housing. Impacts under Alternative 3 would also be slightly reduced compared to Alternatives 1 and 2, which include more residential units that would require greater amounts of water and wastewater services and utilities.

Total storm drainage runoff under all alternatives would be approximately the same when compared to the proposed Project, due to the general development footprint remaining the same.

Overall, the proposed Project's demand for utilities would be slightly less than under alternatives 1, 2, and 3.

Wildfire

As described in Chapter 3.16 (Wildfire), the proposed General Plan would result in less than significant impacts relating to all Wildfire impacts. All alternatives would result in similar development patterns and a similar development footprint. The impact under all other scenarios would remain the same.

Irreversible Effects

The proposed General Plan 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 irreversible commitments by introducing development onto sites that are presently undeveloped. Additionally, development will physically change the environment in terms of 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 Alternatives 2 and 3 would include similar overall development footprints and development patterns when compared to the proposed General Plan. Under cumulative conditions, Alternatives 2 and 3 would result in more residential, and less non-residential floor area (see Table 5.0-1). All Project alternatives would use nonrenewable resources, including metals, stone, and other materials related to construction, and result in on-going demand for fossil fuels and other resources associated with energy production at levels similar to the proposed Project. The associated irreversible commitment of nonrenewable resources and permanent conversion of undeveloped lands under Alternatives 2 and 3 would remain a significant impact. Alternative 2 and 3 would have a similar impact in comparison to the proposed General Plan due similar development levels, and the same overall development footprint, however Alternative 1 would not include an updated policy document that included additional policies and actions related to the conservation of resources and sustainable development patterns and therefore, would be considered inferior to all other alternatives.

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 5.0-4 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.

As shown in Table 5.0-4, Alternative 3 (Balanced Density Alternative) is the environmentally superior alternative when looked at in terms of all potential environmental impacts. However, it should be noted that all of the alternatives would 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 the community all expressed a desire and commitment to ensuring that the General Plan serve as a self-mitigating document and should avoid significant environmental impacts to the greatest extent feasible. To that end, the proposed General Plan includes the full range of feasible minimization measures in the form of policies and actions that the City can take to reduce potential impacts to the greatest extent possible.

TABLE 5.0-4: COMPARISON OF ALTERNATIVES TO THE PROPOSED PROJECT

<i>ENVIRONMENTAL ISSUE</i>	<i>PROPOSED PROJECT</i>	<i>ALTERNATIVE 1 (NO PROJECT)</i>	<i>ALTERNATIVE 2 (MODIFIED PROJECT)</i>	<i>ALTERNATIVE 3 BALANCED DENSITY (RESIDENTIAL FOCUS)</i>
Aesthetics	3 – Same	4 – Slightly Worse	3 - Same	3 - Same
Agricultural Resources	3 – Same	4 – Slightly Worse	3 – Same	3 - Same
Air Quality	3 – Same	4 – Slightly Worse	2 – Slightly Better	1 – Better
Biological Resources	3 – Same	4 – Slightly Worse	3 – Same	3 – Same
Cultural Resources	3 – Same	4 – Slightly Worse	3 – Same	3 – Same
Geology and Soils	3 – Same	4 – Slightly Worse	3 – Same	3 – Same
Greenhouse Gases, Climate Change, and Energy	3 – Same	4 – Slightly Worse	2 – Slightly Better	1 – Better
Hazards and Hazardous Materials	3 – Same	4 – Slightly Worse	3 - Same	3 - Same
Hydrology and Water Quality	3 – Same	4 – Slightly Worse	3 – Same	3 – Same
Land Use and Population	3 – Same	4 – Slightly Worse	3 – Same	3 – Same
Mineral Resources	3 – Same	3 – Same	3 – Same	3 – Same
Noise	3 – Same	2 – Slightly Better	1 – Better	2 - Slightly Better
Public Services and Recreation	3 – Same	4 – Slightly Worse	4 – Slightly Worse	4 – Slightly Worse
Transportation and Circulation	3 – Same	4 – Slightly Worse	2 – Slightly Better	2 – Slightly Better
Utilities	3 – Same	4 – Slightly Worse	4 – Slightly Worse	4 – Slightly Worse
Wildfire	3 – Same	3 – Same	3 – Same	3 – Same
Irreversible Effects	3 – Same	4 – Slightly Worse	3 – Same	3 – Same
SUMMARY	51	64	48	47

Overall, Alternative 3 is the environmentally superior alternative as it is the most effective in terms of overall reductions of impacts compared to the proposed General Plan and all other alternatives. As such, Alternative 3 is the environmentally superior alternative for the purposes of this EIR analysis.

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 meets most Project objectives.

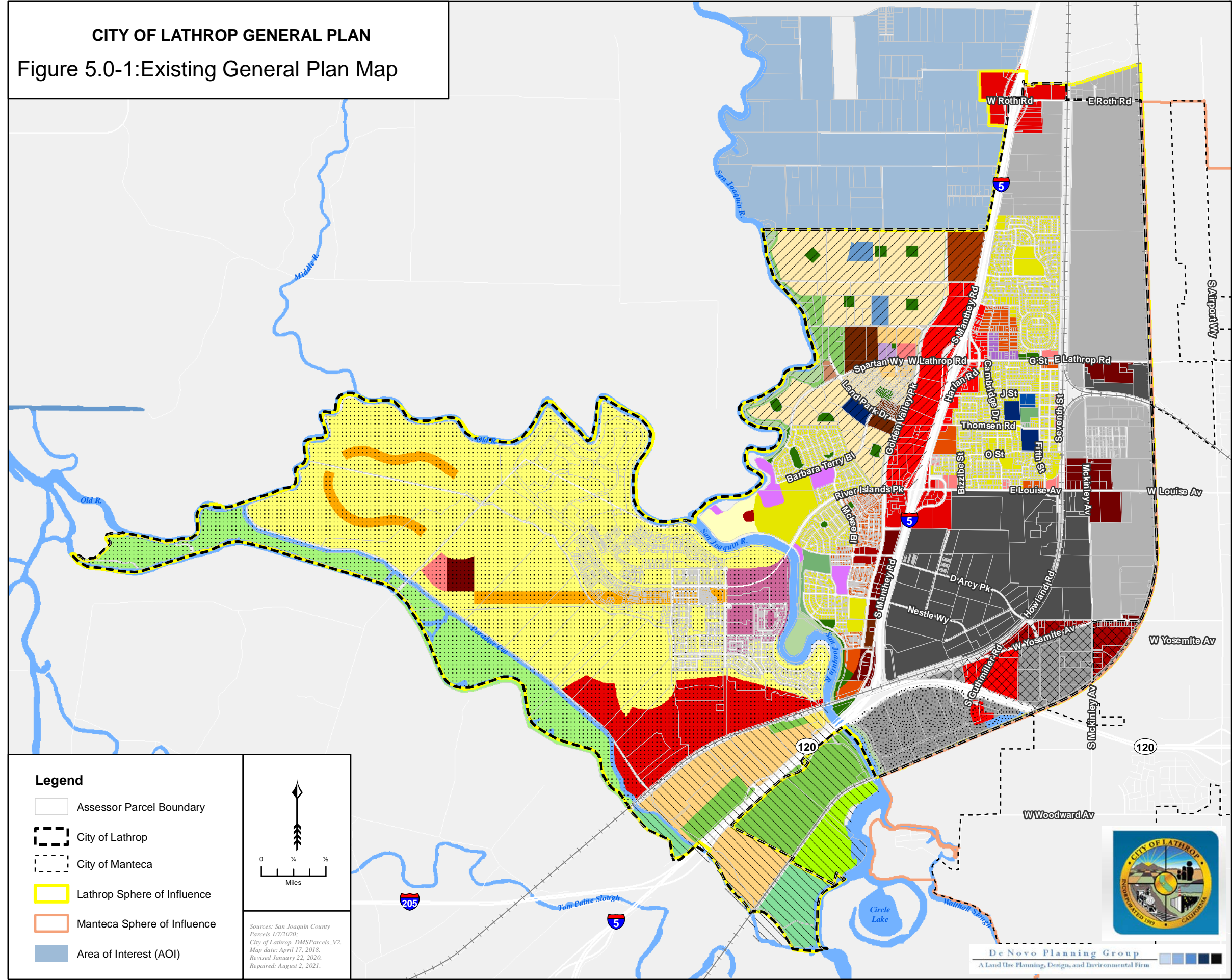
Alternative 2 would provide for additional residential only land uses and fewer light industrial and business park type uses within the Planning Area when compared to the proposed Project. However, Alternative 2 would provide for fewer opportunities for multifamily residential land

uses. Additionally, most of the land use map changes included on the Proposed Land Use Map are considered cleanup land use changes and matching existing and proposed development to correlated land uses. Therefore Alternative 2 would not implement land use cleanup edits to more accurately designated lands throughout the community.

Alternative 3

Like the proposed Project, Alternative 3 would satisfy all Project objectives as it would adopt the updated policy document as well as the updated Land Use Map. This alternative would update the land use descriptions to allow greater residential densities and would allow for more residential growth that would be allowed under the proposed Project. Alternative 3 meets all Project objectives and would be slightly environmentally superior to the proposed Project, as it would slightly reduce impacts related to VMT, Air Quality and GHG. However, this alternative would not reduce any significant impacts to a less than significant level.

CITY OF LATHROP GENERAL PLAN
Figure 5.0-1: Existing General Plan Map



Land Use Designations

- LD-Low Density Residential (1-7 du/A)
- RecR: Recreational Residential (1-15 du/A)
- MD: Medium Density Residential (8-15 du/A)
- HD: High Density Residential (16-25 du/A)
- NC: Neighborhood Commercial
- VC: Village Center
- CC: Community Commercial
- SC: Service Commercial
- FC: Freeway Commercial
- PO: Professional Office
- LI: Limited Industrial
- GI: General Industrial
- P: Public
- ES: Elementary School
- FS: Fire Station
- NP: Neighborhood Park
- CP: Community Park
- OS: Open Space

- VR-CL: Variable Density Residential (3-16 du/A)
- HR-CL: High Density Residential (15-49 du/A)
- R/MU-CL: Residential Mixed Use (10-40 du/A)
- OC-CL: Office Commercial
- NC-CL: Neighborhood Commercial
- P-SP-CL: Public/Semi-Public
- K-8-CL: Elementary School
- VR/K-8/DS-CL: Elementary School
- SPC-CL: Specialty Commercial
- OC/VR/WWTP-CL: Office Commercial/Variable (3-16 du/A)/Res'l Wastewater Treatment Plant
- NP-CL: Neighborhood Park
- CP-CL: Community Park
- OS-CL: Open Space

- CO-SL: Commercial Office
- LI-SL: Limited Industrial
- P/QP-SL: Public/Quasi-Public Facilities
- OS-SL: Open Space River/Levee Park

- CO-LG: Commercial Office
- SC-LG: Service Commercial
- LI-LG: Limited Industrial

- RL-RI: Residential Low (3-9 cu/A)
- RM-RI: Residential Medium (6-20 du/A)
- RH-RI: Residential High (15-40 du/A)
- NC-RI: Neighborhood Retail
- RGC-RI: Regional Commercial
- MU-RI: Mixed Use Town Center
- RCO-RI: Resource Conservation

- RC-ST: Recreation Commercial
- R-ST: Residential - Stewart Tract
- RCO-ST: Resource Conservation
- RR-ST: Recreation Residential
- UR-ST: Urban Reserve

City Proper

Central Lathrop

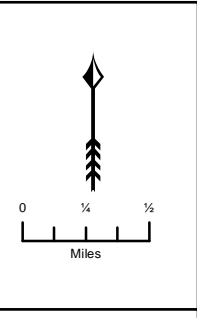
Lathrop Gateway

South Lathrop Specific Plan

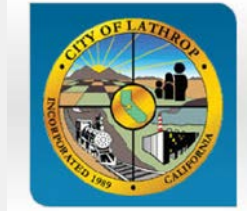
River Islands

Stewart Tract

- Legend**
- Assessor Parcel Boundary
 - City of Lathrop
 - City of Manteca
 - Lathrop Sphere of Influence
 - Manteca Sphere of Influence
 - Area of Interest (AOI)



Sources: San Joaquin County
 Parcels 1/7/2020;
 City of Lathrop, DMSParcels_V2.
 Map date: April 17, 2018.
 Revised January 22, 2020.
 Repaired: August 2, 2021.



De Novo Planning Group
 A Land Use Planning, Design, and Environmental Firm

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CITY OF LATHROP

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