

Exhibit O

Draft Environmental Impact Report (DEIR)

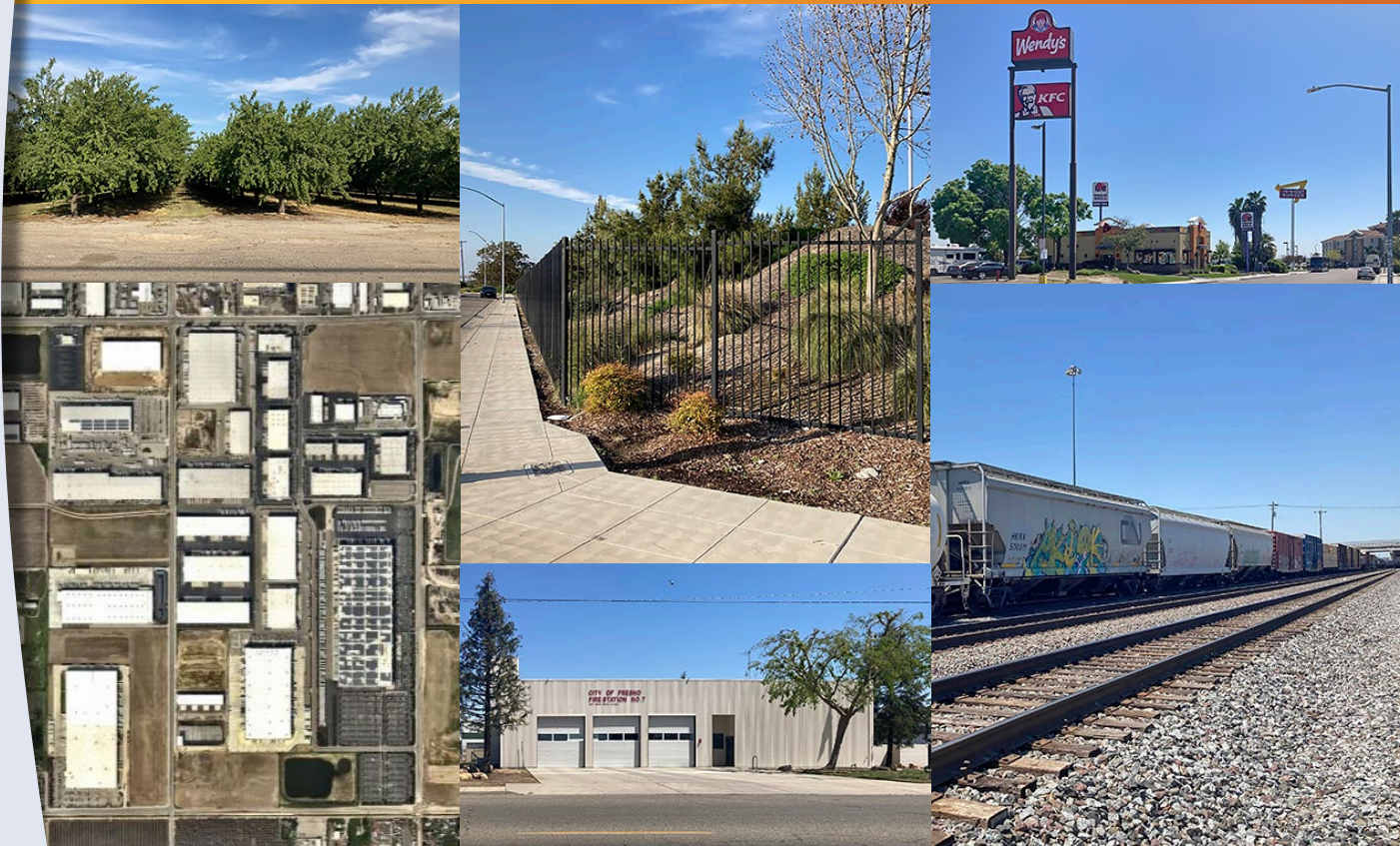
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DRAFT ENVIRONMENTAL IMPACT REPORT

Fresno South Central Specific Plan

STATE CLEARINGHOUSE No.: 2019079022



Prepared for:
City of Fresno

May 2024

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LIST OF ABBREVIATIONS

°F	degrees Fahrenheit
2022 Scoping Plan	<i>Final 2022 Scoping Plan for Achieving Carbon Neutrality</i>
AAF	average annual flows
AAQA	ambient air quality analysis
AAQS	ambient air quality standard
AB	Assembly Bill
ABAU	adjusted business-as-usual
ABM	Activity-Based Model
ACC II Program	Advanced Clean Cars II Program
ACM	asbestos-containing materials
AF	acre-feet
AF/year	acre-feet per year
AFV	alternative fuel vehicle
Alquist-Priolo Act	The Alquist-Priolo Earthquake Fault Zoning Act of 1972
amsl	above mean sea level
APE	Area of Potential Effects
ATP	Active Transportation Plan
BACT	best available control technology
BAU	business-as-usual
BMP	best management practice
CAA	federal Clean Air Act
CAAQS	California Ambient Air Quality Standard
CAFE	Corporate Average Fuel Economy
Cal EPA	California Environmental Protection Agency
Cal/OSHA	California Occupational Safety and Health Administration
CalEEMod	California Emissions Estimator Model
CALGreen	California Green Building Standards
California Energy Code	Title 24, Part 6, Building Energy Efficiency Standards
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CARTS	Cedar Avenue Receiving and Transfer Station
CBC	California Building Code
CCAA	California Clean Air Act
CCR	California Code of Regulations

CDC	Citywide Development Code
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CGP	Construction General Permit
CHP	California Highway Patrol
CI	carbon intensity
CIWMA	California Integrated Waste Management Act
CLG	Certified Local Government
CNDDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO ₂	carbon dioxide
COG	Council of Governments
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CUPA	Certified Unified Program Agency
CVP	Central Valley Project
CWA	Clean Water Act
CWC	California Water Code
dB	decibel
dBA	A-weighted decibels
DDE	dichloro-diphenyldichloroethylene
DDT	Dinoseb, chlordane, dichloro-diphenyltrichloroethane
diesel PM	diesel particulate matter
DOC	California Department of Conservation
DPH	California Department of Public Health
Draft EIR	Draft Environmental Impact Report
DSD	Division of Safety of Dams
DTSC	California Department of Toxic Substances Control
DWR	California Department of Water Resources
EIR	environmental impact report
EO	Executive Order
EOC	Emergency Operations Center
EPA	U.S. Environmental Protection Agency

EPAct	Energy Policy Act of 1992
EPCRA	Emergency Planning and Community Right-To-Know Act
EPO	Emergency Preparedness Officer
EPS	Economic Planning Systems, inc.
ESA	federal Endangered Species Act
EV	electric vehicle
FAR	floor area ratio
FARGMP	Fresno Area Regional Groundwater Management Plan
FAX	Fresno Area Express
FCEHD	Fresno County Environmental Health Division
FCFD	Fresno City Fire Department
FCOG	Fresno Council of Governments
FCRTA	Fresno County Rural Transit Agency
FCTA	Fresno County Transportation Authority
FEMA	Federal Emergency Management Agency
FFD	City of Fresno Fire Department
FHWA	Federal Highway Administration
FICON	Federal Interagency Committee on Noise
FID	Fresno Irrigation District
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
Fire Department	City of Fresno Fire Department
Fire Protection District	Fresno County Fire Protection District
FMC	Fresno Municipal Code
FMFCD	Fresno Metropolitan Flood Control District
FMMP	Farmland Mapping and Monitoring Program
FPD	Fresno Police Department
FSZ	Farmland Security Zone
FTA	Federal Transit Administration
FUSD	Fresno Unified School District
GAMAQI	<i>Guide for Assessing and Mitigating Air Quality Impacts</i>
GHG	greenhouse gas
GHGRP	greenhouse gas reduction plan
GIS	Geographic Information Systems
GSA	groundwater sustainability agency
HAP	hazardous air pollutant
HCD	California Department of Housing and Community Development
HCP	Habitat Conservation Plan
HMMP/HMBP	hazardous materials management plan/hazardous materials business plan
Hot Spots Act	Air Toxics Hot Spots Information and Assessment Act of 1987

HRA	health risk assessment
HREC	Historical Recognized Environmental Condition
HVAC	heating, ventilation, and air conditioning
Hz	hertz
IEPR	Integrated Energy Policy Report
in/sec	inches per second
lb/day	pounds per day
LBP	lead-based paint
LCFS	Low Carbon Fuel Standard
L _{dn}	Day-Night Level
L _{dn} /CNEL	day-night average noise level Community Equivalent Noise Level
L _{eq}	Hourly Equivalent Sound Level
LHMP	local hazard mitigation plan
LID	Low Impact Development
L _{max})	Maximum Sound Level
LOS	level of service
L RTP	Long-Range Transit Plan
M	Mining
MBTA	Migratory Bird Treaty Act
MCL	maximum contaminant level
MCPP	Mecoprop
Metro Plan	Fresno Metropolitan Water Resources Management Plan
mgd	million gallons per day
MHMP	Multi-Jurisdictional Local Hazard Mitigation Plan
MMBTU	million British thermal units
MMTCO ₂ e	million metric tons of carbon dioxide equivalent
mPa	micro-Pascals
MPO	metropolitan planning organization
MS4 Permit	Municipal Separate Storm Sewer Systems, Order R5-2016-0040
MS4	Municipal Separate Storm Sewer Systems
MTCO ₂ e	metric tons of carbon dioxide equivalent
MY	model year
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
NESHAP	National Emission Standards for Hazardous Air Pollutants
NESWTF	Northeast Surface Water Treatment Facility
NFIP	National Flood Insurance Program

NFWRF	North Fresno Water Reclamation Facility
NHPA	National Historic Preservation Act
NKGSA	North Kings Groundwater Sustainability Agency
NO ₂	nitrogen dioxide
NOP	notice of preparation
NO _x	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NRHP	National Register of Historic Places
O&M	Operation and Maintenance
OPR Technical Advisory	<i>Technical Advisory on Evaluating Transportation Impacts in CEQA</i>
OPR	California Governor's Office of Planning and Research
OSHA	Occupational Safety and Health Administration
PEC	Potential Environmental Concern
PEIR	Program Environmental Impact Report
PG&E	Pacific Gas and Electric Company
Plan Area	South Central Specific Plan area
plan	Fresno County Multi-Hazard Mitigation Plan
PM ₁₀	respirable particulate matter with aerodynamic diameter of 10 micrometers or less
PM _{2.5}	fine particulate matter with aerodynamic diameter of 2.5 or less
Porter-Cologne Act	Porter-Cologne Water Quality Control Act of 1970
ppmw	parts per million by weight
PPV	peak particle velocity
PRC	Public Resources Code
proposed plan	proposed South Central Specific Plan project
REC	Recognized Environmental Condition
RHNA	Regional Housing Needs Allocation
RMS	root-mean-square
ROG	reactive organic gases
RSP	Regional Safety Plan
RTP	regional transportation plan
RWQCB	regional water quality control board
RWRF	Regional Wastewater Reclamation Facility
SARA Title III	Title III of the Federal Superfund Amendments and Reauthorization Act
SB	Senate Bill
SCS	sustainable communities strategy
SCSP TIA	<i>Transportation Impact Analysis: South Central Specific Plan</i>
SCSP	proposed South Central Specific Plan project

SDWA	Safe Drinking Water Act
SESWTF	Southeast Surface Water Treatment Facility
SFHA	Special Flood Hazard Areas
SGMA	Sustainable Groundwater Management Act of 2014
SHPO	State Historic Preservation Office
SIP	state implementation plan
SIPA	South Industrial Priority Area
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO ₂	sulfur dioxide
SOI	sphere of influence
SO _x	oxides of sulfur
SR	State Route
SSJVIC	Southern San Joaquin Valley Information Center
State Water Board	State Water Resources Control Board
SWPPP	storm water pollution prevention plan
SWQMP	Storm Water Quality Management Program
SWRCB	State Water Resources Control Board
SWTF	Surface Water Treatment Facility
TAC	toxic air contaminant
TCP	traffic control plan
TISG	Transportation Impact Study Guide
TMDL	total maximum daily load
tpy	ton per year
TRU	transport refrigeration units
UP	Union Pacific
UPRR	Union Pacific Railroad
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	underground storage tank
UWMP	urban water management plan
VdB	vibration decibels
VHFHSZ	very high fire hazard severity zone
VMT	vehicle miles traveled
VOC	volatile organic compound

WQO	Water Quality Objectives
WSA	water supply assessment
WSCP	water shortage contingency plan
WUSD	Washington Unified School District
ZEV	zero-emission vehicle
ZNE	zero net energy

1 INTRODUCTION

This Draft Environmental Impact Report (Draft EIR) evaluates the environmental impacts of the proposed South Central Specific Plan project (proposed plan or SCSP). A key impetus for the proposed plan is to improve Fresno's economic competitiveness and support employment opportunities for residents. Fresno is projected to grow by an estimated 176,000 to 216,000 new residents and nearly 70,000 new employees by 2040 (City of Fresno 2024). and it is an objective of the City to expand, retain, attract, and create businesses that support the regional economy and provide a wide variety of high-quality jobs.

1.1 PROJECT LOCATION

The SCSP area (Plan Area), encompasses 5,567 acres located just south and southeast of Downtown Fresno. The Plan Area is generally located south of California Avenue, north of American Avenue, and between Fig and Peach Avenues. The area has a range of property types including residential, religious, educational, public, warehouse, and industrial.

1.2 PURPOSE AND INTENDED USES OF THIS DRAFT EIR

This environmental impact report (EIR) has been prepared pursuant to the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Section 21000, et seq.) and the State CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3, Section 1500, et seq.) to evaluate the physical environmental effects of the proposed plan. The City is the lead agency for consideration of this EIR and proposed project approval. CEQA requires that public agencies consider the potentially significant adverse environmental effects of projects over which they have discretionary approval authority before taking action on those projects (PRC Section 21000 et seq.). CEQA also requires that each public agency avoid or mitigate to less-than-significant levels, wherever feasible, the significant adverse environmental effects of projects it approves or implements. If a project would result in significant and unavoidable environmental impacts (i.e., significant effects that cannot be feasibly mitigated to less-than-significant levels), the project can still be approved, but the lead agency decision makers, in this case the Fresno City Council must articulate and adopt findings and issue a "statement of overriding considerations" explaining in writing the specific economic, social, or other considerations that they believe, based on substantial evidence, make those significant effects acceptable (PRC Section 21002; State CEQA Guidelines Section 15093).

According to the State CEQA Guidelines (Section 15064[f][1]), preparation of an EIR is required whenever a project could result in a significant adverse environmental impact. An EIR is an informational document used to inform public agency decision makers and the general public of the significant environmental effects of a project, identify feasible ways to mitigate or avoid those effects, and describe a range of reasonable alternatives to the project that could feasibly attain most of the basic objectives of the project while substantially lessening or avoiding any of the significant environmental impacts. Public agencies are required to consider the information presented in the EIR when determining whether to approve a project.

This EIR evaluates the potential environmental impacts associated with implementing the proposed plan. This document also functions as a Program EIR in accordance with CEQA Guidelines Section 15168, that examines the environmental impacts of a series of actions (e.g., specific plan). This type of EIR focuses on the changes in the environment that would result from the issuance of rules, regulations, plans, or other general criteria attributable to a continuing program. In accordance with section 15168, a program EIR must examine the environmental effects of the entire program and potential actions carried out as part of the program, including construction and operational activities.

The purpose of this EIR is to identify and assess the anticipated environmental impacts of the proposed plan, with a focus on significant and potentially significant environmental impacts. Its role is not to recommend approval or denial of the proposed plan but to provide environmental information sufficient to allow meaningful comment and

participation by public agencies, interest groups, and the public, which will allow the Fresno Planning Commission to make a recommendation to the Fresno City Council, which is the final decision-making body.

1.3 ENVIRONMENTAL REVIEW PROCESS

This Draft EIR is being circulated for public review and comment for a period of 45 days. During this period, comments from the general public as well as organizations and agencies may be submitted to the lead agency.

Upon completion of the public review and comment period, a Final EIR (Final EIR) will be prepared that will include both written and verbal comments on the Draft EIR received during the public-review period, responses to those comments, and any revisions to the Draft EIR made in response to public comments. The Draft EIR and Final EIR will comprise the EIR for the project.

Before adopting the proposed project, the lead agency is required to certify that the EIR has been completed in compliance with CEQA, that the decision-making body reviewed and considered the information in the EIR, and that the EIR reflects the independent judgment of the lead agency.

1.3.1 Notice of Preparation and Scoping

The environmental review process began with efforts to gather information to establish the breadth, or scope, of environmental review. A notice of preparation (NOP) was issued to inform agencies and the public that an EIR was being prepared for the project and to solicit views of agencies and the public regarding the scope and content of the document. Scoping meetings were held to allow written and oral expression of those views, provide information about the proposal, and answer questions. A summary of the written and oral comments and the issues raised by the public, agencies, and organizations, as well as the comment letters in their entirety, are included in Appendix A.

An NOP was initially distributed on July 8, 2019, to responsible agencies, interested parties, and organizations, as well as private organizations and individuals that may have an interest in the project. The NOP was available at the City of Fresno offices, Fresno County Library, and online at <https://www.fresno.gov/cityclerk/notices-publications>. A public scoping meeting was held on July 8, 2019, from 5:30 to 7:30 p.m. at the City Council Chambers, 2600 Fresno Street.

A revised NOP was recirculated on April 14, 2021, to reflect revisions to the South Central Specific Plan, formerly referred to as the South Industrial Priority Area Specific Plan. Again, the NOP was made available to responsible agencies and interested parties, organizations, and individuals, and an additional scoping meeting was held virtually on April 6, 2021, from 6 to 8 p.m. The revised NOP is consistent with the project description in Chapter 3 of this EIR.

The purpose of the NOPs was to provide notification that an EIR for the South Central Specific Plan project was being prepared and to solicit input on the scope and content of the document. Numerous responses were received, offering meaningful guidance to the City on the scope and content of the EIR, expressing environmental and other concerns, presenting opinions on the merits of the project, and suggesting revisions to the land use plan. Chapter 4 provides a summary of comments received for each related environmental issue.

1.3.2 Draft EIR

This Draft EIR is being made available for 45 days to allow public review and comment. Copies of the Draft EIR and proposed plan may be reviewed online at, or downloaded from, <https://www.fresno.gov/planning/plans-projects-under-review/#south-central-specific-plan-scsp>, or may be reviewed at the following location:

City of Fresno
Planning and Development Department
2600 Fresno Street, Room 3065
Fresno, CA 93721

Fresno County Public Library
2420 Mariposa Street
Fresno, CA 93721

Mosqueda Branch Library
4670 E Butler Ave
Fresno, CA 93702

West Fresno Branch Library
188 California Avenue
Fresno, CA 93706

City offices and libraries are open during normal business hours.

Agencies, organizations, and interested parties have the opportunity to comment on the Draft PEIR during the 45-day public review period. Written comments on this Draft PEIR should be addressed to:

Jennifer Clark, Director
Planning and Development Department
c/o Sophia Pagoulatos, Planning Manager
Planning and Development Department
2600 Fresno Street, Room 3065
Fresno, CA 93721
Jennifer.Clark@fresno.gov
sophia.pagoulatos@fresno.gov

Submittal of electronic comments in Microsoft Word or Adobe PDF format is encouraged. Following the public and agency review and comment period, comments relating to the environmental analysis will be reviewed, and written responses will be prepared. Together, this Draft EIR, the responses to comments, and other CEQA-mandated information will constitute the Final EIR. The Final EIR will be considered for certification by the Fresno City Council and if it is certified, the Council may consider taking action on the SCSP.

1.4 SCOPE OF THIS DRAFT EIR

This Draft EIR includes an evaluation of the following 16 environmental issue areas as well as other CEQA-mandated issues (e.g., cumulative impacts, growth-inducing impacts, significant unavoidable impacts, alternatives):

- ▶ aesthetics;
- ▶ agriculture and forestry resources;
- ▶ air quality;
- ▶ biological resources;
- ▶ cultural and tribal cultural resources;
- ▶ energy;
- ▶ geology, soils, and mineral resources;
- ▶ greenhouse gas emissions and climate change;
- ▶ hazards and hazardous materials;
- ▶ hydrology and water quality;
- ▶ land use and planning;
- ▶ noise;
- ▶ population and housing;
- ▶ public services and recreation;
- ▶ transportation and circulation; and
- ▶ utilities and service systems.

1.5 DRAFT EIR ORGANIZATION

This Draft EIR is organized into chapters, as identified and briefly described below.

- ▶ Chapter 1, "Introduction": briefly describes the proposed plan and project location; describes agency roles and the purpose of this EIR, the environmental review process, this EIR's intended uses, and the organization of this EIR; and defines terminology used in this EIR.
- ▶ Chapter 2, "Executive Summary": This chapter introduces the project; provides a summary of the environmental review process, effects found not to be significant, and key environmental issues; and lists significant impacts and mitigation measures to reduce significant impacts to less-than-significant levels.
- ▶ Chapter 3, "Project Description": This chapter presents a detailed description of the proposed project evaluated in this EIR.
- ▶ Chapter 4, "Affected Environment, Environmental Consequences and Mitigation Measures": The sections within this chapter describe the approach to the impact analysis and analyze the impacts identified for the 16 environmental resource areas listed above. Each section includes the following subsections:
 - "Environmental Setting" describes the existing conditions as they relate to the attributes of the environment that may be affected by implementing the project.
 - "Regulatory Setting" describes the applicable regulatory framework, including the federal, state, regional, and local laws and regulations.
 - "Analysis, Impacts, and Mitigation Measures" identifies and describes the methods and assumptions used in the environmental impact analysis. The anticipated changes to the existing environmental conditions resulting from construction and operation of the project are evaluated for each resource. The level of significance is identified for each impact based on a comparison with the relevant standards of significance. For any significant or potentially significant impact that would result from project implementation, mitigation measures are presented with a discussion of the residual level of significance. Environmental impacts are numbered sequentially in each chapter (e.g., Impact 4.1-1, Impact 4.1-2, etc.). Any required mitigation measures are numbered to correspond to the impact; therefore, the mitigation measure for Impact 4.1-1 would be Mitigation Measure 4.1-1. Cumulative impacts also are described in this section.
- ▶ Chapter 5, "Cumulative Impacts": This chapter provides information required by CEQA regarding cumulative impacts that would result from implementation of the project together with other past, present, and probable future projects.
- ▶ Chapter 6, "Alternatives": This chapter identifies the alternatives to the proposed plan and evaluates the environmental effects of each alternative. The discussion of each alternative also includes analysis of the alternative's ability to meet the project objectives.
- ▶ Chapter 7, "Other CEQA Sections": This chapter addresses growth-inducing impacts, the relationship between short-term uses of the environment and maintenance and enhancement of long-term productivity, irreversible and irretrievable commitments of resources, a summary of the significant environmental effects that cannot be avoided, and a summary of the CEQA environmentally superior alternative.
- ▶ Chapter 8, "List of Preparers": This chapter identifies the City of Fresno and consultant staff who prepared this EIR.
- ▶ Chapter 9, "References": This chapter identifies the organizations and persons consulted during preparation of this Draft EIR and the documents and individuals used as sources for the analysis.

1.6 TERMINOLOGY USED IN THIS EIR

This EIR includes the following terminology regarding the significance of environmental impacts of the proposed plan and alternatives:

- ▶ *No Impact*: Implementing the project would not result in an adverse effect.
- ▶ *Less-than-Significant Impact*: The impact would be adverse but would not exceed the defined standard of significance. Less-than-significant impacts do not require mitigation.
- ▶ *Significant Impact*: The impact would exceed the defined standard of significance and would or could cause a substantial adverse change in the environment. Potentially feasible mitigation measures or alternatives are recommended to eliminate the impact, reduce it to a less-than-significant level, or reduce it to the degree feasible.
- ▶ *Potentially Significant Impact*: The impact may be or is likely to be significant. Because information is limited, the conclusion is not definitive. For purposes of the EIR analysis, a potentially significant impact is equivalent to a significant impact and requires feasible mitigation measures or alternatives.
- ▶ *Significant and Unavoidable Impact*: The substantial adverse effect on the environment cannot be feasibly mitigated to a less-than-significant level or reduced to a less-than-significant level by adoption of a feasible alternative.
- ▶ *Standard of Significance*: This standard is established by the lead agency to define at what level an impact would be considered significant. That is, if an impact exceeds the defined standard, it would be considered significant.
- ▶ *Mitigation Measure*: The measure could feasibly avoid, minimize, or compensate for a significant impact. Mitigation measures must be fully enforceable through permit conditions, agreements, or other legally binding instruments. Compliance with City of Fresno codes, state and federal laws, or other regulations, including potential actions to achieve such compliance, may be sufficient mitigation in instances in which compliance would be reasonably expected to avoid, minimize, or compensate for the environmental impact.

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2 EXECUTIVE SUMMARY

2.1 INTRODUCTION

This executive summary is provided in accordance with California Environmental Quality Act Guidelines (State CEQA Guidelines) Section 15123. As stated in Section 15123(a), an EIR shall contain a brief summary of the proposed action and its consequences. The language of the summary should be as clear and simple as reasonably practical. Section 15123(b) of the guidelines states, “The summary shall identify: 1) [e]ach significant effect with proposed mitigation measures and alternatives that would reduce or avoid that effect; 2) [a]reas of controversy known to the Lead Agency, including issues raised by agencies and the public; and 3) [i]ssues to be resolved, including the choice among alternatives and whether or how to mitigate the significant effects.” Accordingly, this summary includes a brief synopsis of the SCSP and alternatives; environmental impacts and mitigation; areas of known controversy; and issues to be resolved during environmental review.

2.2 SUMMARY DESCRIPTION OF THE PROJECT

2.2.1 Project Location

The Plan Area encompasses 5,567 acres located just south and southeast of Downtown Fresno. The Plan Area is generally located south of California Avenue, north of American Avenue, and between Fig and Peach Avenues. The area has a range of property types including industrial, warehouse, commercial, residential, religious, educational, and public.

2.2.2 Background and Need for the Project

The City of Fresno is proposing to adopt the South Central Specific Plan (proposed plan or SCSP). The SCSP would facilitate opportunities for economic growth and job creation and promote development of underutilized lands within the planning area. The purpose of the proposed plan is to serve as a policy and regulatory document that seeks to balance economic benefit, environmental impacts, and quality of life. Buildout of the SCSP would result in approximately 18.5 million square feet of industrial uses (less than the General Plan), 10 million square feet of commercial/office uses, and 1.2 million square feet of retail and public facilities. Economic analysis projects that, based on market demand and absorption rates, this level of development would not occur in the near term, and may not occur for many decades. To ensure a meaningful assessment, the City determined—based on a market study prepared by Economic & Planning Systems, Inc. (EPS)—that 2040 represents a reasonable planning horizon for EIR analysis. To estimate the level of development that could occur by 2040, buildout numbers were recalibrated to conservatively reflect twice the nonresidential market demand estimated by EPS. Therefore, while development levels considered in this EIR may be higher than what may actually occur by 2040, they are reasonable for purposes of environmental evaluation and to ensure that the analysis is appropriately conservative. It is estimated that an additional 12 million square feet of nonresidential uses and 91 dwelling units would be constructed by 2040.

2.2.3 Project Objectives

The overarching vision of the SCSP is to improve the City’s overall economic competitiveness, support employment opportunities for residents, and maintain and improve community livability. The objectives that would help realize this vision are as follows:

- ▶ **Stimulate economic development.** Promote inclusive and sustainable economic growth and attract development that focuses on emerging markets and new technologies.

- ▶ **Provide diverse employment.** Create diverse employment opportunities, including an accessible and resilient employment zone.
- ▶ **Minimize environmental and neighborhood impacts.** Consider project-specific environmental effects (e.g., truck traffic, air emissions, noise and vibration) on existing and potential future sensitive receptors and impose measures to minimize such impacts.
- ▶ **Preserve existing operations:** Preserve the viability of existing industrial and manufacturing operations in the Plan Area.
- ▶ **Protect against incompatible uses.** Protect existing and future development from adverse impacts associated with incompatible uses.
- ▶ **Implement infrastructure improvement:** Improve Plan Area infrastructure (e.g., transportation, sewer, water) to expand the supply of “shovel-ready” sites.
- ▶ **Be a good neighbor.** Participate in “good neighbor” policies to provide residents with clear and transparent access to information regarding community development and assist in addressing disputes and concerns.
- ▶ **State Routes 99 and 41 as Gateways.** Transform State Routes 99 and 41 as gateways into the City. Utilize landscaping and architectural design to improve the visual quality when entering the Plan Area.

2.2.4 Characteristics of the Project

The SCSP proposes land use designation changes for certain areas, requiring a General Plan amendment and rezone of the same properties. The changes are proposed primarily to 1) reconcile land use designations with existing conditions, 2) to buffer sensitive uses (e.g., residential areas, Orange Center School) with less intensive uses (e.g., business park instead of industrial), and 3) to provide more opportunities for neighborhood-serving general commercial uses near residential areas. The SCSP would result in substantial reductions in acreage of Heavy Industrial land uses and a modest decrease in Regional Business Park, with corresponding increases in acreage of Business Park, Single-Family Residential, Public, Light Industrial, and General Commercial uses.

The Plan Area currently supports nearly 19.6 million square feet of nonresidential development and 400 residential units. It is estimated that an additional 12 million square feet of nonresidential uses and 91 dwelling units would be constructed by 2040 (Table 2-1). Growth in the Plan Area would be primarily industrial, with smaller amounts of office and retail uses. Other land uses would be permitted in accordance with General Plan land use designations, but are not the focus of the SCSP.

Table 2-1 Assumed Development for the Proposed Plan Compared to Existing Conditions

Land Use Designation	Existing (square footage)	Proposed Plan (square footage) 2022-2040
Retail	0	866,676
Office	10,912	578,790
Industrial	19,624,154	10,576,278
Total Non-residential	19,635,066 ¹	12,021,744
Residential Units	400 dwelling units	91 dwelling units

¹ Existing development only reflects the employment land use categories within the Specific Plan Area.

Source: Ascent 2023.

A primary impetus for the SCSP is economic development and job growth. As discussed in Chapter 3 “Project Description,” more than 14,000 new jobs would be created by 2040 with anticipated development, primarily in the industrial sector, with lesser but still substantial growth in office and retail jobs.

2.3 REQUIRED PERMITS AND APPROVALS

The Fresno City Council is the CEQA lead agency responsible for considering adoption and implementation of the proposed plan. As the lead agency under CEQA, Fresno is responsible for considering the adequacy of the EIR and determining if the project should be approved (Table 2-2).

Table 2-2 Required Approvals

Project Approval	Approving Authority
Repeal of the North Avenue Industrial Triangle Specific Plan	Fresno City Council
Replace overlapping portion of the plan areas for the Roosevelt Community Plan and the South Central Plan with the South Central Specific Plan	Fresno City Council
Approval of the General Plan Amendment, Development Code Amendment, and Rezone	Fresno City Council
Adoption of the South Central Specific Plan	Fresno City Council
Certification of the EIR	Fresno City Council

Notes: The EIR is intended to apply to all listed project approvals as well as to any other approvals necessary or desirable to implement the project.

2.4 SUMMARY OF ALTERNATIVES

State CEQA Guidelines Section 15123.6 mandates that all EIRs include a comparative evaluation of the proposed plan with alternatives to the plan that are capable of attaining most of the plan's basic objectives but that would avoid or substantially lessen any of the significant effects of the project. CEQA requires an evaluation of a "range of reasonable" alternatives, include the "no project" alternative. The following provides brief descriptions of the alternatives evaluated in this Draft EIR.

- ▶ **No Project/General Plan Land Use Alternative.** This alternative assumes that the SCSP would not be approved and that buildout of the planned land uses in the adopted General Plan occurs. The total level/acreage of development for this alternative would be the same as the SCSP, but the mix of land uses would be different. No residential uses are included in this alternative.
- ▶ **Farmland Conservation Alternative.** This alternative would reduce the proposed plan's significant impact related to conversion of farmland by conserving specific parcels of farmland within the Plan Area. No future development would be permitted on farmland designated for conservation. This would reduce the total amount of development allowed in the Plan Area by about 18 percent compared with the SCSP and would include a similar mix of land uses, including some residential.
- ▶ **Reduced Plan Area Alternative.** This alternative would reduce the Plan Area acreage and not provide for development within the sphere of influence outside the existing City boundary. The acreage of the Plan Area would be reduced by approximately 2,343 acres, for a total of 3,224 acres, instead of 5,567 acres as compared to the proposed plan, resulting in a commensurate reduction in development capacity.

In addition to the CEQA alternatives, the alternatives section includes analysis of two project options put forward by various community members and businesses. The following options are provided to compare the impacts from these options to the project for purposes of full disclosure:

- ▶ **Community Plan Option.** This option reflects the community's desire to increase quality of life in the Plan Area by decreasing land use intensity. This option would include more residential units (739 units compared with 91 units under the SCSP) and would decrease land use intensity surrounding sensitive uses. Additionally, this alternative would increase the amount of office and retail, while reducing the amount of industrial land use.
- ▶ **Business Plan Option.** This option reflects the business community's desire to maximize economic growth in the Plan Area by designating industrial as the primary land use. No new residential uses are included in this option.

2.4.1 Environmentally-Superior Alternative

State CEQA Guidelines Section 15123.6 states that an EIR should identify the “environmentally superior” alternative. As discussed in Section 6, “Alternatives,” implementing the No Project/General Plan Land Use Alternative would not avoid or substantially reduce any of the significant impacts of the proposed plan and it would not meet most of the project objectives.

The Reduced Plan Area Alternative would result in a reduction of impacts specifically for air quality, greenhouse gas emissions and noise due to its reduced footprint and reduced level of development. However, this alternative would not avoid or substantially reduce any of the significant impacts of the proposed plan.

The Farmland Conservation Alternative is considered environmentally superior because it would eliminate the proposed plan’s significant and unavoidable impacts related to the conversion of farmland and conflicts with Williamson Act contracts. However, this alternative would not meet several of the City’s objectives for the SCSP.

2.5 AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

A notice of preparation (NOP) was issued to inform agencies and the public that an EIR was being prepared for the project and to solicit views of agencies and the public regarding the scope and content of the document. Scoping meetings were held to allow written and oral expression of those views, provide information about the proposal, and answer questions. A summary of the written and oral comments and the issues raised by the public, agencies, and organizations, as well as the comment letters in their entirety, are included in Appendix A.

An NOP was initially distributed on July 8, 2019, to responsible agencies, interested parties, and organizations, as well as private organizations and individuals that may have an interest in the project. The NOP was available at the City of Fresno offices, Fresno County Library, and online at <https://www.fresno.gov/cityclerk/notices-publications>. A public scoping meeting was held on July 8, 2019, from 5:30 to 7:30 p.m. at the City Council Chambers, 2600 Fresno Street.

A revised NOP was recirculated on April 14, 2021, to reflect revisions to the South Central Specific Plan, formerly referred to as the South Industrial Priority Area Specific Plan. Again, the NOP was made available to responsible agencies and interested parties, organizations, and individuals, and an additional scoping meeting was held virtually on April 6, 2021, from 6 to 8 p.m. The revised NOP is consistent with the project description in Chapter 3 of this EIR.

The purpose of the NOP and the scoping meetings were to provide notification that an EIR was being prepared for the project and to solicit input on the scope and content of the environmental document. Appendix A of this Draft EIR contains the NOP and all comments received during and after the scoping period, including late comments.

Based on the comments received during the NOP comment periods, the major areas of controversy associated with the plan are:

- ▶ Air Quality impacts (including construction and operational air quality impacts, compliance with AB 617 and AB 686, Health Risk Assessment)
- ▶ Greenhouse Gas Emissions Impacts
- ▶ Human Health Risk (related to air quality/diesel)
- ▶ Noise impacts
- ▶ Public safety
- ▶ Truck traffic and safety hazards
- ▶ Environmental justice and social concerns

2.6 ISSUES TO BE RESOLVED

Section 15123 of the State CEQA Guidelines requires the summary section of a Draft EIR to identify issues to be resolved in the EIR, including the choice among alternatives and whether or how to mitigate the significant project effects. The major issues to be resolved by the City regarding the project are whether:

- ▶ recommended mitigation measures should be adopted or modified;
- ▶ additional mitigation measures need to be applied to the proposed project; and
- ▶ the proposed project should or should not be approved or an alternative approved.

2.7 SUMMARY OF ENVIRONMENTAL IMPACTS AND RECOMMENDED MITIGATION MEASURES

Under State CEQA Guidelines Section 15382, a significant effect on the environment is defined as “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance.” The technical sections in Chapters 4 and 5 of this draft EIR describe in detail the significant environmental impacts, including cumulative impacts, that would result from implementing the proposed plan. Table 2-3 presents a summary of environmental impacts, their level of significance without mitigation, the mitigation measures, and the level of significance following the implementation of mitigation measures.

Table 2-3 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
4.1 Aesthetics			
<p>Impact 4.1-1: Result in a Substantial Adverse Effect on a Scenic Vista Implementation of the proposed plan would result in additional industrial, commercial, and to a lesser degree, residential development and supporting infrastructure in the Plan Area. New development would be visually consistent with existing uses in the Plan Area. As noted above, there are no designated scenic vistas in the Plan Area so no adverse effect would result. Therefore, this impact would be less than significant.</p>	LTS	No mitigation is required for this impact.	LTS
<p>Impact 4.1-2: Damage Scenic Resources within a State Scenic Highway Development under the proposed plan would not occur along an eligible or designated state scenic highway, and no project components would be visible from any designated or eligible state scenic highway. Consequently, development under the proposed plan would not damage scenic resources within a state scenic highway. Therefore, there would be no impact.</p>	NI	No mitigation is required for this impact.	NI
<p>Impact 4.1-3: Substantially Degrade the Existing Visual Character or Quality of Public Views of the Site and Its Surroundings Implementation of the proposed plan would facilitate future development and result in a substantial alteration to the existing visual character and quality of the Plan Area. Specifically, implementation of the proposed plan would result in increases of densities and intensification primarily of industrial and commercial land uses within the Plan Area. Substantial changes in the existing visual character would result in a significant impact.</p>	S	No feasible mitigation measures are available to substantially reduce the impact.	SU
<p>Impact 4.1-4: Create a New Source of Substantial Light or Glare Which Would Adversely Affect Day or Nighttime Views The proposed plan would facilitate future development and would introduce new sources of light and glare associated with new buildings and facilities. Although residential development is limited in the Plan Area and the SCSP proposes relatively little residential development that could be affected by additional light and glare, such lighting could nonetheless contribute to indirect lighting/glare on adjacent land uses that could adversely affect daytime or nighttime views and result in additional skyglow. This impact would be significant.</p>	S	<p>Mitigation Measure 4.1-1: Use Nonreflective Materials To reduce the potential for glare from new and redeveloped buildings and structures within the Plan Area, the Preliminary and Final Design Review plan(s) for all future projects in the Plan Area shall show that the use of reflective building materials that have the potential to result in glare that would be visible from sensitive receptors located in the vicinity of the project sites is prohibited. The City of Fresno Planning and Development Department shall ensure that the approved project uses appropriate building materials with low reflectivity to minimize potential glare nuisance to off-site receptors. These requirements shall be included</p>	LTS

NI = No impact LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		in future project improvement plans, subject to review and approval by the City of Fresno. Mitigation Measure 4.1-2: Prepare a Lighting Plan A lighting plan for all future projects in the Plan Area subject to section 15-2508 and section 15-2015 of the City of Fresno Municipal Code shall be prepared prior to approval of each project. The lighting plan shall demonstrate that the lighting systems and other exterior lighting throughout the project area have been designed to minimize light spillage onto adjacent properties to the greatest extent feasible, consistent with section 15-2508, Lighting and Glare and section 15-2015, Outdoor Lighting and Illumination of the City of Fresno Municipal Code. Use of LED lighting or other proven energy efficient lighting shall be required for facilities to be dedicated to the City of Fresno for maintenance. These requirements shall be included in future project improvement plans, subject to review and approval by the City of Fresno.	
Cumulative Impact 5.4-1: Contribution to cumulative visual character or quality impacts	SU	No mitigation is available.	SU
4.2 Agriculture and Forestry Resources			
Impact 4.2-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) to Non-agricultural Use Implementation of the proposed plan would accommodate development of additional industrial, commercial, and a small amount of residential land uses. While the locations of specific developments cannot be known at this time, it is likely that development would result in conversion of existing Prime Farmland and Farmland of Statewide Importance to non-agricultural uses. The conversion of existing Farmland to non-agricultural use would result in a significant impact.	S	Mitigation Measure 4.2-1: Preserve Farmland In compliance with General Plan Policy RC-9-c, until the City's Farmland Preservation Program is implemented, future development that would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within the Plan Area shall be analyzed on a project-by-project basis at the time a project application is submitted. Project proponents shall mitigate the loss at a 1:1 ratio. One of the following mitigation options shall be utilized to mitigate the loss: Restrictive Covenants or Deeds, In Lieu Fees, Mitigation Banks, Fee Title Acquisition, Conservation Easements, Land Use Regulation, or other feasible mitigation. The mitigation shall be verified by the City of Fresno for each such project during improvement plan review.	SU
Impact 4.2-2: Conflict with existing zoning for agricultural use, or a Williamson Act contract The plan area includes lands outside the Fresno city limits, in unincorporated Fresno County, but within the City's SOI. While no lands within the City of Fresno are under Williamson Act contracts, approximately 153 acres within the SOI are so	S	No mitigation is available.	SU

NI = No impact LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
<p>enrolled. Although no proposals for annexation have been submitted (and none are assessed as part of the SCSP), implementation of the proposed plan is likely to result in conversion of existing Farmlands that are enrolled in Williamson Act contracts to non-agriculture uses. Therefore, this impact would be significant.</p>			
<p>Impact 4.2-3: Involve Other Changes in the Existing Environment That Would Lead to the Abandonment of Agricultural Operations and Conversion of Farmland or Forest Land to Non-Agricultural or Non-Forest Land Use</p> <p>The proposed plan would result in the conversion of farmland and designated agricultural land into non-agricultural use. However, the proposed plan would not result in other changes in the existing environment other than those discussed under Impacts 4.2-1 and 4.2-2. Therefore, impacts would be considered less than significant.</p>	LTS	No mitigation is required for this impact.	LTS
<p>Cumulative Impact 5.4-2: Contribution to cumulative impacts related to farmland conversion and conflicts with Williamson Act contracts</p>	SU	No mitigation is available.	SU
<p>4.3 Air Quality</p>			
<p>Impact 4.3-1: Conflict with or Obstruct Implementation of the Applicable Air Quality Plan</p> <p>Development under the proposed plan would introduce new operational sources of emissions that would exceed SJVAPCD’s mass emissions thresholds of significance which would, in turn, interfere with SJVAPCD’s long-term regional air quality planning. This impact would be significant.</p>	S	<p>Mitigation Measure 4.3-1a: Prepare an Ambient Air Quality Analysis and Mitigation Plan or Voluntary Emissions Reduction Agreement</p> <p>Prior to future discretionary project approval, and once all feasible on-site reduction measures have been incorporated, development project applicants shall prepare and submit to the Director of the Fresno Planning and Development Department, or designee, an AAQA to determine whether any SJVAPCD annual mass emissions thresholds are exceeded or if a future project’s emissions may result in the violation of an AAQS. If no thresholds are exceeded, no further action is necessary. If one or more thresholds are exceeded, prior to the issuance of Certificates of Occupancy, future development will engage in a voluntary emissions reduction agreement (VERA) through coordination with SJVAPCD to reduce emissions to meet SJVAPCD’s annual mass emissions thresholds for any pollutant that exceeds the respective threshold. The project applicant shall engage in a discussion with SJVAPCD prior to the adoption of the VERA to ensure that feasible mitigation has been identified to reduce emissions to a less-than-significant level consistent with the direction given in SJVAPCD’s GAMAQI. As allowed by SJVAPCD, the project applicant shall be provided the opportunity to perform an additional quantification of the project’s operational emissions to estimate the type of</p>	LTS

NI = No impact LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<p>reduction needed to reduce emissions to meet SJVAPCD’s annual thresholds of significance.</p> <p>Mitigation Measure 4.3-1b: Use Clean Fleets during Construction Prior to issuance of future construction contracts, to reduce impacts from construction-related diesel exhaust emissions resulting from development under the SCSP, construction contractors shall demonstrate that they shall use the cleanest available fleet of heavy-duty equipment. This can be accomplished through submitting Construction Clean Fleet paperwork to SJVAPCD. All on-site yard trucks and forklifts shall be powered by electricity where such equipment is readily available in the marketplace as reasonably determined by the City. Electric forklifts will continue to become more available as the requirements of CARB’s proposed Zero-Emissions Forklifts Regulation stimulate the production of these forklifts over time. For any on-site equipment that cannot be electric-powered, and diesel-powered equipment is the only available option, construction contractors shall use equipment that either uses only high-performance renewable diesel or meets EPA Tier 4 emissions standards.</p> <p>Mitigation Measure 4.3-1c: Prohibit Portable Diesel Engines To reduce diesel exhaust emissions, portable diesel engines shall be prohibited during construction of plan-related development where access to alternative sources of power (e.g., electricity) are available. The applicability of this measure is contingent upon the infrastructure available to support electric-powered diesel engines as well as the availability of such equipment at the time of development application review. This measure shall be enforced through City conditions of approval prior to issuance of construction/building permits for individual development applications.</p> <p>Mitigation Measure 4.3-1d: Implement Dust Control Measures To reduce impacts from construction-related fugitive dust emissions resulting from plan-related development, construction contractors shall be required to implement the following dust control measures in accordance with SJVAPCD’s Regulation VIII including additional dust reducing measures:</p> <ul style="list-style-type: none"> ▶ All soil being actively excavated or graded shall be sufficiently watered to prevent excessive dust. Watering shall occur as needed with complete coverage of disturbed soil areas. Watering shall take place a minimum of three times daily on disturbed soil areas with active construction activities operations unless dust is otherwise controlled by rainfall or use of a dust suppressant. 	

NI = No impact LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<ul style="list-style-type: none"> ▶ After active construction activities, soil shall be stabilized with a non-toxic soil stabilizer or soil weighting agent, or alternative soil stabilizing methods. ▶ All unpaved construction and operation/maintenance site roads, as they are being constructed, shall be stabilized with a non-toxic soil stabilizer, water, or soil weighting agent. ▶ All clearing, grading, earth moving, and excavation activities shall cease during periods of winds greater than 20 miles per hour (averaged over one hour), or when dust plumes of 20 percent or greater opacity impact public roads, occupied structures, or neighboring property or as identified in a plan approved by the SJVACD. ▶ All trucks leaving construction sites will cover all loads of soils, sands, and other loose materials, or be thoroughly wetted with a minimum freeboard height of six inches. ▶ Areas disturbed by clearing, earth moving, or excavation activities shall be minimized at all times. ▶ Stockpiles of soil or other fine loose material shall be stabilized by watering or other appropriate method to prevent wind-blown fugitive dust. ▶ All soil storage piles and disturbed areas that remain inactive for longer than 10 days shall be covered or shall be treated with appropriate dust suppressant compounds. ▶ Prior to construction, wind breaks (such as chain-link fencing including a wind barrier) shall be installed where appropriate. ▶ Where applicable, mowing will be utilized to clear construction areas instead of disking or grading. ▶ The proponents/operators of future projects shall use GPS or lasers to level posts, generally avoiding grading except when elevation changes exceed design requirements. ▶ When grading is unavoidable, grading is to be phased and done with the application of a non-toxic soil stabilizer or soil weighting agent, or alternative soil stabilizing methods. ▶ Where feasible, plant roots shall be left in place where possible to stabilize the soil. ▶ Reduce and/or phase the amount of the disturbed area (e.g., grading, excavation) where possible. 	

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<p>After active clearing, grading, and earth moving is completed within any portion of the site, the following dust control practices shall be implemented:</p> <ul style="list-style-type: none"> ▶ Dust suppressant should be used on the same day or day immediately following the cessation of activity for a particular area where further activity is not planned. ▶ All unpaved road areas shall be treated with a dust suppressant or graveled to prevent excessive dust. ▶ The proponents/operators of future projects shall use dust suppression measures during road surface preparation activities, including grading and compaction. <p>During all phases of construction, the following vehicular control measures shall be implemented:</p> <ul style="list-style-type: none"> ▶ On-site vehicle speed shall be limited to 15 miles per hour on unpaved areas within individual project sites. Vehicles may travel up to 25 miles per hour on paved roads. ▶ Visible speed limit signs shall be posted at main ingress point(s) on site. ▶ Streets used by projects during construction shall be kept clean, and project-related accumulated silt shall be removed a minimum of once daily, or as necessary to prevent substantial off-site fugitive dust releases. The use of dry rotary brushes (unless prior wetting) and blower devices is prohibited. ▶ If site soils cling to the wheels of the vehicles, then a track out control device, or other such device shall be used on the road exiting the project site, immediately prior to the pavement, to remove most of the soil material from vehicle tires. <p>This shall be enforced by the City with verification by SJVAPCD.</p> <p>Mitigation Measure 4.3-1e: Implement Exhaust Control Measures</p> <p>To reduce impacts from construction-related exhaust emissions, for all construction activities occurring from projects under the proposed plan, construction contractors shall implement the following measures, as recommended by the Sacramento Metropolitan Air Quality Management District, among other air districts:</p> <ul style="list-style-type: none"> ▶ Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes [CCR Title 13, Sections 2449(d)(3) and 2485] as enforced by an identified compliance officer within the construction crew. Idling restrictions shall be enforced by highly visible posting at the site 	

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		<p>entry, posting at other on-site locations frequented by truck drivers, conspicuous inclusion in employee training and guidance material and owner, operator or tenant direct action as required.</p> <ul style="list-style-type: none"> ▶ Maintain construction equipment and provide current certificate(s) of compliance for CARB's In-Use Off-Road Diesel-Fueled Fleets Regulation [CCR Title 13, Sections 2449 and 2449.1] to SJVAPCD. ▶ Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determined to be running in proper condition before it is operated. Documentation of a certified mechanic's inspection and determinations shall be maintained by the Construction Manager and available for City inspection upon reasonable request. <p>This shall be enforced by the City.</p> <p>Mitigation Measure 4.3-1f: Reduce Emissions from Architectural Coatings</p> <p>During construction, to reduce impacts from construction-related ROG emissions leading to ozone formation, for all construction activities occurring from development under the proposed plan, construction contractors shall use low-VOC (i.e., ROG) coatings beyond SJVAPCD's mandatory requirement (i.e., Regulation VIII, Rule 3, "Architectural Coatings"). This shall be enforced by the City with verification by SJVAPCD.</p> <p>Mitigation Measure 4.3-1g: Incorporate Cool Communities Strategies</p> <p>Prior to future discretionary project approval, development under the proposed plan shall demonstrate that it has incorporated strategies to cool the urban heat island effect, reduce energy use and ozone formation, and maximize air quality benefits by requiring new development to implement four key strategies: plant trees, selective use of vegetation for landscaping, install cool roofing (i.e., high-albedo), and install cool (i.e., high-albedo) pavements.</p> <p>Mitigation Measure 4.3-1h: Use Low- or Zero-Emission Heavy-Duty Trucks and Equipment</p> <p>Future tenants of new and redeveloped commercial and industrial land uses (those over which the City will have discretionary approval) shall ensure that all heavy-duty trucks (Class 7 and 8) domiciled on the project site are model year 2014 or later from start of operations and shall expedite a transition to zero-emission vehicles, with the fleet fully zero-emission by December 31, 2026, or when commercially</p>	

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		<p>available for the intended application (as determined by the City based on substantial evidence), whichever date is later. For industrial uses or uses that would require deliveries to/from the site (i.e., at loading docks), all heavy-duty truck fleets associated with operational activities must utilize the cleanest available heavy-duty trucks, including zero and near-zero that meet 0.02 gram per brake horsepower-hour NOx technologies. For industrial uses or any other use that requires operational on-site equipment (cargo handling, yard hostlers, forklifts, pallet jacks), zero-emissions technologies shall be used. "Domiciled at the project site" shall mean the vehicle is either (i) parked or kept overnight at the project site more than 70 percent of the calendar year or (ii) dedicated to the project site (defined as more than 70 percent of the truck routes (during the calendar year) that start at the project site even if parked or kept elsewhere). Zero-emission, heavy-duty trucks which require service can be temporarily replaced with model year 2014 or later trucks. Replacement trucks shall be used for only the minimum time required for servicing fleet trucks.</p> <p>Future tenants of commercial and industrial land uses shall ensure that adequate electrical infrastructure is provided to allow for the transition to electric heavy-duty trucks.</p> <p>Owners, operators, or tenants shall prohibit the use of diesel generators, except in emergency situations, in which case such generators shall have Best Available Control Technology (BACT) that meets ARB Tier 4 emission standards.</p> <p>This shall be enforced through oversight by the City and shall be included as part of contractual lease agreement language to ensure the tenants/lessees are informed of all ongoing operational responsibilities.</p> <p>Mitigation Measure 4.3-1i: Use Low- or Zero-Emission Vehicles</p> <p>Future tenants of new and redeveloped commercial and industrial land uses within the plan area (those over which the City will have discretionary approval) shall ensure use of a "clean fleet" of vehicles/delivery vans/trucks (Class 2 through 6) as part of business operations as follows: For any vehicle (Class 2 through 6) domiciled at the project site, the following "clean fleet" requirements apply: (i) 33 percent of the fleet shall be zero emission vehicles at start of operations, (ii) 65 percent of the fleet shall be zero emission vehicles by December 31, 2027, (iii) 80 percent of the fleet shall be zero emission vehicles by December 31, 2029, and (iv) 100 percent of the fleet will be zero emission vehicles by December 31, 2031. "Domiciled at the project site" shall mean the vehicle is either (i) parked or kept overnight at the</p>	

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		<p>project site more than 70 percent of the calendar year or (ii) dedicated to the project site (defined as more than 70 percent of the truck routes (during the calendar year) that start at the project site even if parked or kept elsewhere). Zero-emission, heavy-duty trucks which require service can be temporarily replaced with model year 2014 or later trucks. Replacement trucks shall be used for only the minimum time required for servicing fleet trucks.</p> <p>Zero-emission vehicles which require service can be temporarily replaced with alternate vehicles. Replacement vehicles shall be used for only the minimum time required for servicing fleet vehicles. The property owner/tenant/lessee shall not be responsible to meet “clean fleet” requirements for vehicles used by common carriers operating under their own authority that provide delivery services to or from the project site. This shall be enforced through oversight by the City and shall be included as part of contractual lease agreement language to ensure the tenants/lessees are informed of all ongoing operational responsibilities.</p> <p>Mitigation Measure 4.3-1j: Decarbonize New Residential and Commercial Buildings</p> <p>To reduce criteria air pollution and greenhouse gas (GHG) emissions and provide savings for project residents, the proposed plan will integrate special energy conservation and production features. All new residential, commercial, and other non-residential structures that do not include unique uses or processes where nonrenewable energy is required based on technological or availability limitation shall be all electric, with natural gas infrastructure extended only to industrial uses. Fully electric development shall be demonstrated to the City prior to the issuance of building permits to construct and shall be subject to City approval.</p> <p>Mitigation Measure 4.3-1k: Decarbonize New Industrial Use Buildings</p> <p>For industrial uses that do not include major manufacturing or processing equipment requiring natural gas for processing purposes (e.g., logistics, warehouses, distribution, some research and development), no natural gas infrastructure shall be permitted. Consistency with this measure shall be determined at the development application stage, based on a site-specific feasibility study submitted to the City for approval.</p> <p>Mitigation Measure 4.3-1l: Reduce Areawide Source Emissions</p> <p>The use of gasoline-powered landscape equipment within the Plan Area shall be prohibited. This shall be enforced through verification through the City through a development agreement made between future project applicants and the City.</p>	

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		<p>Mitigation Measure 4.3-1m: Reduce Off-Site Emissions</p> <p>Once all on-site reduction measures (i.e., Mitigation Measure 4.3-1a through 4.3-1i) have been exhausted or for uses where further on-site emissions reductions are deemed infeasible, based on environmental review, the development of new or participation in existing off-site emissions reduction strategies/programs (e.g., urban forestry programs, local building retrofit programs, off-site EV charger funding, public transit subsidies) shall be required. This can be implemented in conjunction with Mitigation Measure 4.3-1a through the VERA process, if needed, as overseen by SJVAPCD.</p>	
<p>Impact 4.3-2: Result in a Cumulatively Considerable Net Increase in Any Criteria Pollutant for Which the Project Region Is in Nonattainment under an Applicable Federal or State Ambient Air Quality Standard</p> <p>In accordance with SJVAPCD guidance, annual and daily construction and operational emissions were quantified for the assumed level of development that would occur under the proposed plan over the planning period (through 2040) based on the high-level understanding of allowable development within the proposed plan. Modeling indicates that development under the proposed plan would not generate construction emissions of criteria air pollutants and ozone precursors exceeding SJVAPCD’s annual mass emissions thresholds; however, daily emissions would exceed SJVAPCD’s daily mass emissions screening criteria. SJVAPCD’s annual thresholds are used for CEQA determinations, and these thresholds are inherently tied to long-term regional air quality planning (i.e., SJVAPCD’s air quality management plans) which demonstrates that the proposed plan would not conflict with the applicable air quality plans. Nevertheless, the proposed plan, which comprises many future individual development projects, would generate operational emissions of criteria air pollutants and ozone precursors exceeding SJVAPCD’s annual mass emissions thresholds of significance and daily screening criteria. Operation-related emissions of ROG, NO_x, CO, PM₁₀, and PM_{2.5} would exceed SJVAPCD’s annual mass emissions thresholds of significance. This impact would be significant.</p>	S	Implement Mitigation Measure 4.3-1a through 4.3-1m.	LTS
<p>Impact 4.3-3: Expose Sensitive Receptors to Substantial Pollutant Concentrations</p> <p>As described in Impacts 4.3-1 and 4.3-2, construction and operation of development assumed in the Plan Area by 2040 would result in exceedance of SJVAPCD daily emissions screening criteria for ROG, NO_x, and CO during worst-case construction, and annual mass emissions and daily screening thresholds for</p>	S	<p>Mitigation Measure 4.3-3a: Require Construction Health Risk Assessment</p> <p>A site-specific HRA shall be required for all construction projects anticipated to last more than six months and located within 1,000 feet of sensitive receptors (as defined by SJVAPCD) regardless of intensity of construction. All recommendations from the HRA shall be enforced as conditions of approval of the development. If</p>	SU

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<p>ROG, NO_x, CO, PM₁₀, and PM_{2.5} during operation. This level of emissions can result in adverse human health outcomes, particularly for sensitive receptors, and is determined to be significant. With regard to TACs and resultant cancer risk, specifically, construction of new land uses under the proposed plan, transportation and utility improvements, and the development of new stationary sources of TACs subject to the permitting requirements of SJVAPCD would not result in the exposure of sensitive receptors to an incremental increase in cancer risk greater than 20 in 1 million or a hazard index greater than 1.0. The proposed plan would not result in development of new residential land uses or other sensitive receptors within 500 feet of a freeway or high-volume roadway, which is the setback distance recommended by CARB. The SCSP designates land near SR 99 as heavy industrial, and traffic volumes on SR 41 through the Plan Area do not exceed 100,000 vehicles per day, CARB's threshold for requiring a minimum 500-foot setback. Nevertheless, the development of land uses under the proposed plan with truck routes, operations, and loading near residences could result in the exposure of sensitive receptors to a level of cancer risk greater than 20 in 1 million. This impact would be significant.</p>		<p>the recommendations of the HRA are insufficient to reduce impacts to levels at or below SJVAPCD's threshold of 20 in one million, such development with significant cancer risk (i.e., that exceed that threshold) shall be prohibited.</p> <p>Mitigation Measure 4.3-3b: Require Operational Health Risk Assessment</p> <p>A site-specific HRA shall be required for the operation of projects that propose the use of TAC-emitting equipment or industrial processes located within 1,000 feet of sensitive receptors (as defined by SJVAPCD). All recommendations from the HRA shall be enforced as conditions of approval of the development. If the recommendations of the HRA are insufficient to reduce impacts to levels at or below SJVAPCD's threshold of 20 in one million, such development with significant cancer risk shall be prohibited.</p> <p>Mitigation Measure 4.3-3c: Incorporate Design Features at Truck Loading Areas to Reduce Health Risk Exposure at Sensitive Receptors</p> <p>Future developments under the plan shall be designed so that truck loading/unloading facilities shall not be located within 1,000 feet of any sensitive receptor unless a qualified, site-specific HRA conducted in accordance with guidance from SJVAPCD and approved by SJVAPCD shows that the associated level of cancer risk at the sensitive receptors would not exceed 20 in 1 million. A truck loading/unloading facility is defined as any truck distribution yard, truck loading dock, or truck loading or unloading area where more than one truck with three or more axles will be present for more than 10 minutes per week, on average; and sensitive receptors include residential land uses, campus dormitories and student housing, residential care facilities, hospitals, schools, parks, playgrounds, and daycare facilities. If the HRA determines that a nearby sensitive receptor would be exposed to an incremental increase in cancer risk greater than 20 in 1 million then design measures shall be incorporated to reduce the level of risk exposure to less than 20 in 1 million. Design measures may include but are not limited to the following:</p> <ul style="list-style-type: none"> ▶ All truck loading/unloading facilities to be equipped with one 110/208-volt power outlet for every two-truck loading/unloading facility. A minimum 2-foot-by-3-foot sign shall be clearly visible at each loading dock that indicates, "Diesel engine idling limited to a maximum of 2 minutes." The sign shall include instructions for diesel trucks idling for more than 2 minutes to connect to the 110/208-volt power to run any auxiliary equipment. ▶ The use of electric-powered "yard trucks" or forklifts to move truck trailers around a truck yard or truck loading/unloading facility. 	

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		<ul style="list-style-type: none"> ▶ The use of buildings or walls to shield commercial activity from nearby residences or other sensitive land uses. ▶ The use of EPA-rated Tier 4 Final engines in diesel-fueled construction equipment when construction activities are adjacent to existing sensitive receptors. ▶ The planting and maintenance of vegetative buffers between truck loading/unloading facilities and nearby residences, schools, daycare facilities, and any other sensitive receptors. As part of detailed site design, a landscape architect licensed by the California Landscape Architects Technical Committee shall identify all locations where trees should be located, accounting for areas where shade is desired such as along pedestrian and bicycle routes, the locations of solar photovoltaic panels, and other infrastructure. ▶ The use of all electrical-powered Transportation Refrigeration Units (TRUs). ▶ The use of all electric heavy-duty trucks. <p>Mitigation Measure 4.3-3d: Protect New and Existing Sensitive Land Uses</p> <p>To minimize impacts from TAC exposure, for future subsequent development under the proposed plan, the following measures shall be implemented:</p> <ul style="list-style-type: none"> ▶ Avoid siting new sensitive land uses within 500 feet from the centerline of a freeway, unless such development contributes to smart growth, open space, or transit-oriented goals, in which case the development shall include feasible measures such as separation/setbacks, landscaping, barriers, ventilation systems, air filters/cleaners, and/or other effective measures to minimize potential impacts from air pollution. ▶ Require new sensitive land uses to include feasible measures such as separation/setbacks, landscaping, barriers, ventilation systems, air filters/cleaners, and/or other effective measures to minimize potential impacts from air pollution. ▶ For future development requiring the use of heavy-duty trucks, designate truck routes that avoid sensitive land uses. ▶ Require that zoning regulations provide adequate separation and buffering between existing and proposed residential and industrial uses (i.e., a minimum of 1,000 feet). ▶ Designate truck routes to avoid residential areas including low-income and minority neighborhoods. 	

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<p>Impact 4.3-4: Result in Other Emissions (Such as Those Leading to Odors) Adversely Affecting a Substantial Number of People</p> <p>Future development implemented under the proposed plan would introduce construction-related sources of odors; however, these sources would be intermittent and would disperse rapidly from the source. The proposed land uses under the proposed plan could support odor-generating processes; however, these sources would be subject to SJVAPCD’s Rule 4102 which would reduce the potential for receptors to be exposed to odors. This impact would be less than significant.</p>	LTS	No mitigation is required.	LTS
<p>Cumulative Impact 5.4-3: Cumulative impacts to air quality in the SJVAB</p>	PS	No mitigation is available.	SU
<p>4.4 Biological Resources</p>			
<p>Impact 4.4-1: Result in Substantial Adverse Effect, Either Directly or through Habitat Modification, 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</p> <p>Future development under the proposed plan may include ground disturbance, vegetation removal, and overall conversion of land cover, which could result in disturbance, injury, or mortality of several special-status plant and wildlife species, if present; reduced reproductive productivity of these species; and contribute to loss of species habitat. This impact would be potentially significant.</p>	PS	<p>Mitigation Measure 4.4-1a: Conduct Project-Level Biological Reconnaissance Sensitive Species and Habitats Survey</p> <p>During the early planning stages of projects under the SCSP, the following measure shall apply:</p> <ul style="list-style-type: none"> ▶ If a project site has natural land cover and is not within existing development with an urban landscape, a data review and biological reconnaissance survey will be conducted within a project site by a qualified biologist prior to project activities (e.g., ground disturbance, vegetation removal, staging, construction). The survey will be conducted no more than one year prior to project implementation. The qualified biologist must be familiar with the life histories and ecology of species in the City of Fresno and must have experience conducting field surveys of relevant species or resources, including focused surveys for individual species, if applicable. The data reviewed will include the biological resources setting, species tables, and habitat information in this EIR. It will also include review of the best available, current data for the area, including vegetation mapping data, species distribution/range information, CNDDDB, CNPS Inventory of Rare and Endangered Plants of California, relevant Biogeographic Information and Observation System (BIOS) queries, and relevant general plans. BIOS is a web-based system that enables the management and visualization of biogeographic data collected by CDFW and partner organizations. The qualified biologist will assess the habitat suitability of the project site for all special-status plant and wildlife species as well as sensitive habitats identified as having potential to occur in the SCSP area 	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<p>(refer to Section 4.4.2, "Environmental Setting"), and will identify bat maternity roosts within the SCSP area. The qualified biologist will also assess the potential for aquatic resources (e.g., wetlands, streams, seeps) or sensitive natural communities to be present within the project site. The biologist will provide a report to the City of Fresno with evidence to support a conclusion as to whether special-status species and sensitive habitats are present or are likely to occur within the project site.</p> <ul style="list-style-type: none"> ▪ If the reconnaissance survey identifies no potential for special-status plant or wildlife species, and no potential sensitive habitats including riparian habitat or wetlands, the City of Fresno will not be required to apply any additional mitigation measures under Impact 4.4-1b through 4.4-1f, 4.4-2, or 4.4-3. ▪ If the qualified biologist determines that there is potential for special-status species or sensitive habitats to be present within the project site, the appropriate biological mitigation measures, identified herein shall be implemented. <p>Mitigation Measure 4.4-1b: Conduct Special-Status Plant Surveys, and Implement Avoidance Measures and Mitigation</p> <p>If it is determined through implementation of Mitigation Measure 4.4-1a that habitat suitable for special-status plant species is present within a particular project site, the following measures shall be implemented:</p> <ul style="list-style-type: none"> ▶ Before implementation of future project activities in the Plan Area that could affect grasslands suitable for California jewelflower (within natural annual grassland areas), or when projects are proposed that could affect aquatic habitat suitable for Sanford's arrowhead, a qualified botanist shall conduct protocol-level surveys of the project site following survey methods from CDFW's <i>Protocols for Surveying and Evaluating Impacts on Special-Status Native Plant Populations and Natural Communities</i> (CDFW 2018 or most recent version). The qualified botanist shall (1) be knowledgeable about plant taxonomy, (2) be familiar with plants of the Central Valley region, including special-status plants and sensitive natural communities, (3) have experience conducting floristic botanical field surveys as described in CDFW 2018, (4) be familiar with the <i>California Manual of Vegetation</i> (Sawyer et al. 2009 or current version, including updated natural communities data at http://vegetation.cnps.org/), and (5) be familiar with federal and state statutes and regulations related to plants and plant collecting. 	

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		<ul style="list-style-type: none"> ▪ If special-status plants are not found, the botanist shall document the findings in a report to the City of Fresno, and no further mitigation shall be required. ▪ If special-status plants are found during protocol surveys and cannot be avoided by project activities, the applicant shall, in consultation with CDFW or USFWS, as appropriate, depending on species status, develop and implement a site-specific mitigation strategy to compensate for loss of occupied habitat or individuals. Mitigation measures shall include, at a minimum, preserving and enhancing existing populations outside of the individual development area, establishing populations through seed collection or transplantation from the site that is to be affected, and/or restoring or creating habitat in sufficient quantities to offset loss of occupied habitat or individuals. Potential mitigation sites could include suitable locations within or outside of the project site. Habitat and individual plants lost shall be mitigated at a ratio agreed upon in consultation with CDFW or USFWS, considering acreage as well as function and value at a population scale. Success criteria for preserved and compensatory populations shall include: <ul style="list-style-type: none"> • The extent of occupied area and plant density (number of plants per unit area) in compensatory populations shall be equal to or greater than the affected occupied habitat. • Compensatory and preserved populations shall be self-producing. Populations would be considered self-producing when: <ul style="list-style-type: none"> - plants reestablish annually for a minimum of five years with no human intervention such as supplemental seeding; and - reestablished and preserved habitats contain an occupied area and flower density comparable to existing occupied habitat areas in similar habitat types in the project vicinity. - If off-site mitigation includes dedication of conservation easements, purchase of mitigation credits, or other off-site conservation measures, the details of these measures shall be included in the mitigation plan, including information on responsible parties for long-term management, conservation easement holders, long-term management requirements, success criteria such as those listed above and other details, as appropriate to target the preservation of long-term viable populations. 	

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		<p>Mitigation Measure 4.4-1c: Conduct Western Pond Turtle Preconstruction Surveys, Implement Avoidance Measures, and Relocate Individuals</p> <p>If it is determined through implementation of Mitigation Measure 4.4-1a that habitat suitable for western pond turtle is present within a particular project site, the following measures shall be implemented:</p> <ul style="list-style-type: none"> ▶ Within 24 hours of commencement of ground disturbing activities in aquatic habitat or in grasslands within 1,600 feet from aquatic habitat, a qualified biologist familiar with the life history of western pond turtle and experienced in performing surveys for western pond turtle shall conduct a focused survey of aquatic and upland habitat suitable for the species within the project site. The qualified biologist shall inspect the project site for western pond turtles as well as suitable burrow habitat. <ul style="list-style-type: none"> ▪ If western pond turtles are not detected during the focused survey, the qualified biologist shall submit a report summarizing the results of the survey to the applicant and the City of Fresno, and further mitigation shall not be required. ▪ If western pond turtles are detected, a no-disturbance buffer of at least 100 feet shall be established around any identified nest sites or overwintering sites until the nest is no longer active as determined by a qualified biologist, and no project activities would occur within the no-disturbance buffer. A qualified biologist with an appropriate CDFW Scientific Collecting Permit that allows handling of reptiles shall be present during initial ground disturbance activities and shall inspect the project site before initiation of project activities. If western pond turtles are detected, the qualified biologist shall move the turtles to an area that provides suitable aquatic habitat. <p>Mitigation Measure 4.4-1d: Conduct Burrowing Owl Survey, Implement Avoidance Measures, and Compensate for Loss of Occupied Burrows</p> <p>If it is determined through implementation of Mitigation Measure 4.4-1a that habitat suitable for burrowing owl is present within a particular project site, the following measures shall be implemented:</p> <ul style="list-style-type: none"> ▶ If proposed projects within the Plan Area are implemented in habitat suitable for burrowing owls, a qualified biologist shall conduct a focused survey for burrowing owls in areas of habitat suitable for the species on and within 1,640 feet (500 meters) of the Plan Area no less than 14 days before initiating ground disturbance activities using survey methods described in Appendix D 	

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		<p>of the 2012 Staff Report on Burrowing Owl Mitigation prepared by the California Department of Fish and Game (now CDFW) (CDFG 2012).</p> <ul style="list-style-type: none"> ▶ If no occupied burrows are found, the qualified biologist shall submit a report documenting the survey methods and results to the City of Fresno, and no further mitigation shall be required. ▶ If an active burrow is found within 1,640 feet of pending construction activities during the nonbreeding season (September 1 through January 31), the project proponent shall establish and maintain a minimum protection buffer of 164 feet (50 meters) around the occupied burrow throughout construction. The actual buffer size shall be determined by the qualified biologist based on the time of year and level of disturbance in accordance with guidance provided in the Staff Report on Burrowing Owl Mitigation (CDFG 2012). The protection buffer may be adjusted if, in consultation with CDFW, a qualified biologist determines that an alternative buffer shall not disturb burrowing owl use of the burrow because of particular site features or other buffering measures. If occupied burrows are present that cannot be avoided or adequately protected with a no-disturbance buffer, a burrowing owl exclusion plan shall be developed, as described in Appendix E of the 2012 Staff Report. Burrowing owls shall not be excluded from occupied burrows until the project burrowing owl exclusion plan is approved by CDFW. The exclusion plan shall include a compensatory habitat mitigation plan (see below). ▶ If an active burrow is found during the breeding season (February 1 through August 31), occupied burrows shall not be disturbed and shall be provided with a protective buffer at a minimum of 164 feet unless a qualified biologist verifies through noninvasive means that either: <ul style="list-style-type: none"> ▪ (1) the birds have not begun egg laying, or ▪ (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. ▶ The size of the buffer may be adjusted depending on the time of year and level of disturbance as outlined in the 2012 Staff Report. The size of the buffer may be reduced if a broad-scale, long-term, monitoring program acceptable to CDFW is implemented so that burrowing owls are not adversely affected. Once the fledglings are capable of independent survival, the owls can be evicted, and the burrow can be destroyed per the terms of a CDFW-approved 	

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		<p>burrowing owl exclusion plan developed in accordance with Appendix E of 2012 Staff Report.</p> <ul style="list-style-type: none"> ▶ If burrowing owls are evicted from burrows and the burrows are destroyed by implementation of project activities, the project proponent shall mitigate the loss of occupied habitat in accordance with guidance provided in the 2012 Staff Report, which states that permanent impacts on nesting, occupied, and satellite burrows, and burrowing owl habitat (i.e., grassland habitat with suitable burrows) shall be mitigated such that habitat acreage and number of burrows are replaced through permanent conservation of comparable or better habitat with similar vegetation communities and burrowing mammals (e.g., ground squirrels) present to provide for nesting, foraging, wintering, and dispersal. The project proponent shall retain a qualified biologist to develop a burrowing owl mitigation and management plan that incorporates the following goals and standards: <ul style="list-style-type: none"> ▪ Mitigation lands shall be selected based on comparison of the habitat lost to the compensatory habitat, including type and structure of habitat, disturbance levels, potential for conflicts with humans, pets, and other wildlife, density of burrowing owls, and relative importance of the habitat to the species throughout its range. ▶ If feasible, mitigation lands shall be provided adjacent or proximate to the project site so that displaced owls can relocate with reduced risk of injury or mortality. Feasibility of providing mitigation adjacent or proximate to the project site depends on availability of sufficient habitat to support displaced owls that may be preserved in perpetuity. ▶ If habitat suitable for burrowing owl is not available for conservation adjacent or proximate to the project site, mitigation lands can be secured offsite and shall aim to consolidate and enlarge conservation areas outside of planned development areas and within foraging distance of other conservation lands. Mitigation may be also accomplished through purchase of mitigation credits at a CDFW-approved mitigation bank, if available. Alternative mitigation sites and acreages may also be determined in consultation with CDFW. ▶ If burrowing owl habitat mitigation is completed through permittee-responsible conservation lands, the mitigation plan shall include mitigation objectives, site selection factors, site management roles and responsibilities, vegetation management goals, financial assurances and funding mechanisms, performance standards and success criteria, monitoring and reporting 	

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		<p>protocols, and adaptive management measures. Success shall be based on the number of adult burrowing owls and pairs using the site and if the numbers are maintained over time. Measures of success, as suggested in the 2012 Staff Report, shall include site tenacity, number of adult owls present and reproducing, colonization by burrowing owls from elsewhere, changes in distribution, and trends in stressors.</p> <p>Mitigation Measure 4.4-1e: Conduct Focused Surveys for Special-Status Birds, Nesting Raptors, and Other Native Nesting Birds, and Implement Protective Buffers</p> <p>If it is determined through implementation of Mitigation Measure 4.4-1a that habitat for special-status birds, nesting raptors, or other native nesting birds is present within a particular project site, the following measures shall be implemented:</p> <ul style="list-style-type: none"> ▶ To minimize the potential for loss of special-status bird species, raptors, and other native birds (including Swainson’s hawk, tricolored blackbird, and white-tailed kite), project activities (e.g., tree removal, vegetation clearing, ground disturbance, staging) shall be conducted during the nonbreeding season (approximately September 1-January 31, as determined by a qualified biologist), if feasible. If project activities are conducted during the nonbreeding season, no further mitigation shall be required. This measure applies to project activities that occur where habitat suitable for nesting is present, as determined by a qualified biologist. Birds may nest on the ground, in bushes, in trees, in structures, and in cavities; therefore, habitat suitable for bird nesting may include portions of the Plan Area that qualify as annual grassland, agricultural land, or riparian habitat. ▪ Within 14 days before the onset of project activities during the breeding season (approximately February 1 through September 15, as determined by a qualified biologist), a qualified biologist familiar with birds of California and with experience conducting nesting bird surveys shall conduct focused surveys for special-status birds, other nesting raptors, and other native birds. Surveys shall be conducted in accessible areas within 0.5 mile of the project site for Swainson’s hawk, within 500 feet of the project site for other raptor species (white-tailed kite) and special-status birds (tricolored blackbird), and within 50 feet of the project site for non-raptor common native bird nests, unless determined otherwise by a qualified biologist. 	

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		<ul style="list-style-type: none"> ▪ If no active nests are found, the qualified biologist shall submit a report documenting the survey methods and results to the applicant and the City of Fresno, and no further mitigation shall be required. ▪ If active nests are found, impacts on nesting birds shall be avoided by establishing appropriate buffers around active nest sites identified during focused surveys to prevent disturbance to the nest. Project activity shall not commence within the buffer areas until a qualified biologist has determined that the young have fledged, the nest is no longer active, or reducing the buffer would not likely result in nest abandonment. ▪ Buffers typically shall be 0.25 mile (or increased to 0.5 mile in areas away from urban development) for Swainson’s hawk, and 500 feet for other raptors. Buffer size for non-raptor bird species shall be determined by a qualified biologist. Factors to be considered for determining buffer size shall include presence of natural buffers provided by vegetation or topography, nest height above ground, baseline levels of noise and human activity, species sensitivity, and proposed project activities. Generally, buffer size for these species shall be at least 20 feet. The size of the buffer may be adjusted if a qualified biologist determines that such an adjustment shall not be likely to adversely affect the nest. Any buffer reduction for a special-status species shall require consultation with CDFW. ▪ Periodic monitoring of the nest by a qualified biologist during project activities shall be required if the activity has potential to adversely affect the nest, the buffer has been reduced, or if birds within active nests are showing behavioral signs of agitation (e.g., standing up from a brooding position, flying off the nest) during project activities, as determined by the qualified biologist. <p>Mitigation Measure 4.4-1f: Conduct Pallid Bat Focused Surveys, and Implement Avoidance Measures</p> <p>If it is determined through implementation of Mitigation Measure 4.4-1a that habitat suitable for pallid bat is present within a particular project site, the following measures shall be implemented:</p> <ul style="list-style-type: none"> ▶ For project activities in habitat suitable for pallid bat roosting (i.e., existing unused or abandoned buildings, large diameter trees), the following measure will apply. Before the start of project activities, a qualified biologist familiar with bats and bat ecology, and experienced in conducting bat surveys, shall 	

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		<p>conduct surveys for bat roosts in suitable habitat (e.g., abandoned buildings, large tree crevices, tree cavities) within and adjacent to the project site.</p> <ul style="list-style-type: none"> ▪ If no evidence of bat roosts is found, the qualified biologist shall submit a report summarizing the results of the survey to the City of Fresno, and no further study shall be required. ▪ If evidence of bat roosts is observed, the species and number of bats using the roost shall be determined by a qualified biologist. Bat detectors shall be used if deemed necessary to supplement survey efforts by the qualified biologist. ▪ A no-disturbance buffer of 250 feet shall be established around active pallid bat roosts, and project activities shall not occur within this buffer until after the roosts are unoccupied. ▪ If roosts of pallid bat are determined to be present and must be removed, the bats shall be excluded from the roosting site before the building is removed. A program addressing compensation, exclusion methods, and roost removal procedures shall be developed in consultation with CDFW before implementation. Exclusion methods may include use of one-way doors at roost entrances (bats may leave but not reenter) or sealing roost entrances when the site can be confirmed to contain no bats. Exclusion efforts may be restricted during periods of sensitive activity (e.g., during hibernation or while females in maternity colonies are nursing young). The loss of each roost (if any) shall be replaced in consultation with CDFW and may require construction and installation of bat boxes suitable to the bat species and colony size excluded from the original roosting site. If determined necessary during consultation with CDFW, replacement roosts shall be implemented before bats are excluded from the original roost sites. Once the replacement roosts are constructed and it is confirmed that bats are not present in the original roost site by a qualified biologist, the roost structure may be removed. 	
<p>Impact 4.4-2: Result in a Substantial Adverse Effect on Any Riparian Habitat or Other Sensitive Natural Community Identified in Local or Regional Plans, Policies, or Regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service</p> <p>Although aquatic habitat is relatively rare in the Plan Area, development under the proposed plan could affect these areas. Implementation of such projects would</p>	<p>PS</p>	<p>Mitigation Measure 4.4-2: Conduct Surveys for Riparian Habitat and Implement Avoidance Measures</p> <p>If it is determined through implementation of Mitigation Measure 4.4-1a that riparian habitat is present within a particular project site, the following measures shall be implemented before implementation of project activities:</p>	<p>LTS</p>

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<p>result in land conversion and development activities that may include ground disturbance, vegetation removal, and construction, which could result in the degradation or loss of riparian habitat (e.g., reduction of vegetation cover, trampling, alteration of root structure), if it is present on a particular project site. This impact would be potentially significant. No other sensitive natural communities have been identified in the Plan Area, and therefore, there is no potential for impacts to other sensitive natural communities.</p>		<ul style="list-style-type: none"> ▶ If it is determined that disturbance or fill of state protected streams or riparian habitat cannot be avoided, the project proponent will notify CDFW before commencing activity that may divert the natural flow or otherwise alter or use materials from the bed, bank, or riparian corridor of any waterway that supports fish or wildlife resources. If project activities trigger the need for a Streambed Alteration Agreement, the proponent will obtain an agreement from CDFW before the activity commences. The applicant will conduct project construction activities in accordance with the agreement, including implementing reasonable measures in the agreement necessary to protect fish and wildlife resources, when working within the bed or bank of waterways or in riparian habitats associated with those waterways. These measures may include demarcation of the construction area, biological monitoring, environmental awareness training for construction crews, and compensatory measures (e.g., restoration, long-term habitat management). If riparian habitat is determined to be present within a particular project site and the habitat cannot be avoided, the following measures shall be implemented: A Streambed Alteration Notification will be submitted to CDFW, pursuant to Section 1602 of the California Fish and Game Code. If proposed project activities are determined to be subject to CDFW jurisdiction, the project proponent will abide by the measures to protect fish and wildlife resources required by any executed agreement prior to any vegetation removal or activity that may affect the resource. Measures to protect fish and wildlife resources shall include, at a minimum, a combination of the following mitigation. <ul style="list-style-type: none"> ▶ The project proponent will compensate for the loss of riparian habitat such that no net loss of habitat function and values occurs by: <ul style="list-style-type: none"> ▪ restoring riparian habitat function and value within the project site; ▪ restoring degraded riparian habitat outside of the project site; ▪ purchasing riparian habitat credits at a CDFW-approved mitigation bank; or ▪ preserving existing riparian habitat of equal or better value to the affected riparian habitat through a conservation easement at a sufficient ratio to offset the loss of riparian habitat function (at least 1:1). ▶ The project proponent will prepare and implement a Compensatory Mitigation Plan that will include the following: 	

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		<ul style="list-style-type: none"> ▪ For preserving existing riparian habitat outside of the project site in perpetuity, the Compensatory Mitigation Plan will include a summary of the proposed compensation lands (e.g., the number and type of credits, location of mitigation bank or easement), parties responsible for the long-term management of the land, and the legal and funding mechanism for long-term conservation (e.g., holder of conservation easement or fee title). The project proponent will provide evidence in the plan that the necessary mitigation has been implemented or that the project proponent has entered into a legal agreement to implement it and that compensatory habitat will be preserved in perpetuity. ▪ For restoring or enhancing riparian habitat within the project site or outside of the project site, the Compensatory Mitigation Plan will include a description of the proposed habitat improvements, success criteria that demonstrate the performance standard of maintained habitat function has been met, legal and funding mechanisms, and parties responsible for long-term management and monitoring of the restored or enhanced habitat. ▪ Compensatory mitigation may be satisfied through compliance with permit conditions, or other authorizations obtained by the project proponent (e.g., Lake and Streambed Alteration Agreement), if these requirements are equally or more effective than the mitigation identified above. 	
<p>Impact 4.4-3: Result in a Substantial Adverse Effect on State or Federally Protected Wetlands (e.g., Emergent Wetlands etc.) through Direct Removal, Filling, Hydrological Interruption, or Other Means</p> <p>Project implementation may include activities resulting in ground disturbance, vegetation removal, and land development, which could result in the loss of state or federally protected wetland habitat, which includes seasonal wetlands. Any project-related loss or alteration or fill of state or federally protected wetlands would be potentially significant.</p>	PS	<p>Mitigation Measure 4.4-3: Identify State or Federally Protected Wetlands, Implement Avoidance Measures, and Obtain Permits for Unavoidable Impacts on Wetlands</p> <p>If it is determined through implementation of Mitigation Measure 4.4-1a that state or federally protected wetlands may be present within a particular project site, the following measures shall be implemented:</p> <ul style="list-style-type: none"> ▶ The project proponent will retain a qualified biologist, hydrologist, or wetland ecologist to prepare a formal delineation of the boundaries of aquatic resources within the project site according to methods established in the USACE wetlands delineation manual (Environmental Laboratory 1987) and the Arid West regional supplement (U.S. Army Corps of Engineers 2008). The qualified biologist will also delineate the boundaries of wetlands that may not meet the definition of waters of the United States but that would qualify as waters of the state, according to the state wetland procedures (SWRCB 2021). This delineation report will be submitted by the City of Fresno to USACE and a 	LTS

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		<p>preliminary jurisdictional determination will be requested. If state or federally protected wetlands are found to be present within a particular project site, the following measures shall be implemented before implementation of project activities:</p> <ul style="list-style-type: none"> ▪ If state or federally protected wetlands are determined to be present within a project site that can be avoided, the qualified biologist will establish a buffer around wetlands and mark the buffer boundary with high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway). The buffer will be a minimum width of 25 feet but may be larger if deemed necessary. The appropriate size and shape of the buffer zone will be determined in coordination with the qualified biologist and will depend on the type of wetland present (e.g., stream, seep, pond), the timing of project activities (e.g., wet or dry time of year), whether any special-status species may occupy the wetland and the species' vulnerability to the project activities, environmental conditions and terrain, and the project activity being implemented. ▪ Project activities (e.g., ground disturbance, vegetation removal, staging) will be prohibited within the established buffer. The qualified biologist will periodically inspect the materials demarcating the buffer to confirm that they are intact and visible, and wetland impacts are being avoided. ▪ If it is determined that fill of waters of the United States would result from project implementation, the project applicant will submit an aquatic resources delineation report to USACE and the RWQCB and request an approved or preliminary jurisdictional determination. Based on the jurisdictional determination, the project applicant will determine the exact acreage of waters of the United States and waters of the state that would be dredged or filled as a result of project implementation. ▪ Authorization for dredge or fill activities will be secured from USACE through the Section 404 permitting process. In association with the Section 404 permit (if applicable) and prior to the issuance of any grading permit, Section 401 Water Quality Certification from the Central Coast RWQCB will be obtained. For impacts on waters of the state that may not be covered by the 401 Water Quality Certification, the project proponent will secure Waste Discharge Requirements, which are described in Section 4.10, "Hydrology and Water Quality." 	

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		<ul style="list-style-type: none"> The project applicant will replace on a “no-net-loss” basis (minimum 1:1 ratio) (in coordination with USACE and/or RWQCB) the acreage and function of all wetlands and other waters that would be removed, lost, or degraded as a result of project implementation. Wetland habitat will be replaced at an acreage and location agreeable to USACE and the RWQCB, and as determined during the CWA Section 401 and Section 404 permitting processes or the waste discharge report. 	
<p>Impact 4.4-4: Result in Substantial Interference 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</p> <p>The majority of the Plan Area is urban and agricultural land cover types, with limited areas of natural vegetation. No known wildlife movement corridors or native wildlife nurseries occur within the Plan Area. Project activities under the proposed plan are not likely to substantially interfere with wildlife movement or impede the use of nursery sites. This would be a less-than-significant impact.</p>	LTS	No mitigation is required for this impact.	LTS
<p>Impact 4.4-5: Conflict with Any Local Policies or Ordinances Protecting Biological Resources, Such as a Tree Preservation Policy or Ordinance</p> <p>The City of Fresno Municipal Code, Chapter 13, Article 3, Streets Trees and Parkways, applies to trees in the Plan Area. Future project activities under the proposed plan associated with the proposed plan would comply with the Municipal Code Section 13-305, Tree Preservation, and Section 13-306, Special Tree List. Compliance with Article 3 of Chapter 13 of the City of Fresno Municipal Code would reduce any impacts related to conflicts with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. Therefore, potential impacts to local policies and ordinances protecting biological resources, including the City’s public tree ordinance would be less than significant.</p>	LTS	No mitigation is required for this impact.	LTS
<p>Impact 4.4-6: Conflict with the Provisions of an Adopted Habitat Conservation Plan, Natural Community Conservation Plan, or Other Approved Local, Regional, or State Habitat Conservation Plan</p> <p>The Plan Area is not located within the boundaries of any approved or draft Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other adopted local, regional or state HCP that applies to projects covered under the proposed plan. Therefore, the impact related to conflict with the provisions of an adopted HCP or NCCP would be less than significant.</p>	LTS	No mitigation is required for this impact.	LTS

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<p>Cumulative Impact 5.4.4: Contribution to cumulative impacts on biological resources</p>	<p>LTS</p>	<p>Mitigation Measures 4.4-1a through 4.4-1e, 4.4-2, and 4.4-3.</p>	<p>LTS</p>
<p>4.5 Cultural and Tribal Cultural Resources</p>			
<p>Impact 4.5-1: Cause a Substantial Adverse Change in the Significance of a Historical Resource</p> <p>Under the proposed plan, land use designations in the Plan Area would be revised. Development associated with implementation of the proposed plan could result in damage to or destruction of historic buildings and structures, thereby resulting in a substantial adverse change in the significance of a historical resource as defined in Section 15064.5. This impact would be potentially significant.</p>	<p>PS</p>	<p>Mitigation Measure 4.5-1: Conduct Project-Specific Surveys and Identify and Implement Measures to Protect Identified Historic Resources</p> <p>During project-specific environmental review of development under the proposed plan, before altering or otherwise affecting a building or structure that is 50 years old or older, the City shall require project applicants to retain a qualified architectural historian meeting the Secretary of Interior's Professional Qualifications Standards to record the building or structure on a California Department of Parks and Recreation DPR 523 form or equivalent documentation, if the building has not previously been evaluated. Its significance shall be assessed and documented by a qualified architectural historian in accordance with the significance criteria set forth for historic resources under CEQA Guidelines Section 15064.5. The evaluation process shall include the development of appropriate historical background research as context for the assessment of the significance of the structure in the history of the City and the region. For buildings, structures, and other resources determined through this evaluation process not to meet the CEQA historical resource criteria, no further mitigation is required.</p> <p>For any building, structure, and or other resource that qualifies as a historic resource, the architectural historian and the future project-specific applicant shall consult to consider measures that would enable projects under the proposed plan to avoid direct or indirect impacts to the historic building or structure. These could include preserving the building on site, using it "as is," or other measures that would not materially alter the historically significant components of the building or structure. If the project cannot feasibly avoid modifications to the historically significant features of the historic building or structure, the following measures shall be undertaken as appropriate:</p> <ol style="list-style-type: none"> 1) If the building or structure can be preserved on-site, but remodeling, renovation or other alterations are required, this work shall be conducted in compliance with <i>The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings</i> (NPS 2017). 	<p>SU</p>

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		2) If a significant historic building or structure is proposed for major alteration or renovation, or to be moved and/or demolished, the City shall ensure that a qualified architectural historian thoroughly documents the building and associated landscaping and setting. Documentation shall include still and video photography and a written documentary record of the building to the standards of the Historic American Building Survey or Historic American Engineering Record, including accurate scaled mapping, architectural descriptions, and scaled architectural plans, if available. A copy of the record shall be provided to the City. The record shall be accompanied by a report containing site-specific history and appropriate contextual information. This information shall be gathered through site specific and comparative archival research, and oral history collection as appropriate. 3) If preservation and reuse at the site are not feasible, the historical building shall be documented as described in item (2) and, when physically and financially feasible, be moved and preserved or reused.	
<p>Impact 4.5-2: Cause a Substantial Adverse Change in the Significance of an Archaeological Resources</p> <p>Future development under the proposed plan could be located in areas that contain known or unknown archaeological resources and ground-disturbing activities could result in discovery or damage of yet undiscovered archaeological resources as defined in State CEQA Guidelines Section 15064.5. This impact would be potentially significant.</p>	<p>PS</p>	<p>Mitigation Measure 4.5-2a: Identify and Protect Unknown Archaeological Resources</p> <p>During project-specific environmental review of development under the proposed plan, the developer shall define each project’s area of effect for archaeological resources in consultation with a qualified archaeologist, as defined by the Secretary of Interior. Once the exact locations of project-specific areas have been determined and before commencement of earth-disturbing activities, a records search shall be conducted to determine if there are any known archaeological resources located in the disturbance area. A pedestrian survey shall also be conducted for archaeological resources. In the event of a surface find, materials will be evaluated and recorded on standard Department of Parks and Recreation primary record forms (DPR 523) in accordance with national and state criteria. Avoidance of archaeological resources would be the preferred alternative to reduce impacts to unknown archaeological resources. A recommendation of eligibility/ineligibility to the NRHP and CRHR shall be completed for any surface finds and for any resources identified by the records search. The survey and report shall be completed by a qualified archaeologist who meets the Secretary of the Interior’s professional qualifications for Archaeology. The report will include recommendations for minimizing potential adverse effects to any significant resources identified.</p> <p>The developer shall follow recommendations identified in the report, which may include activities such as subsurface testing, implementing a Worker Environmental</p>	<p>LTS</p>

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		<p>Awareness Program, avoidance of sites, construction monitoring by a qualified archaeologist, or notification of the geographically and culturally affiliated Native American tribe to extend an invitation for construction monitoring.</p> <p>Mitigation Measure 4.5-2b: Protect Known Unique Archaeological Resources</p> <p>For an archaeological site that has been determined by a qualified archaeologist to qualify as a unique archaeological resource through the process set forth under Mitigation Measure 4.5-2a, and where it has been determined under Mitigation Measure 4.5-2a that avoidance or preservation in place is not feasible, a qualified archaeologist, in consultation with the City, and Native American tribes as applicable, shall:</p> <ol style="list-style-type: none"> 1) Prepare a research design and archaeological data recovery plan for the recovery that shall capture those categories of data for which the site is significant and implement the data recovery plan before or during development of the site. 2) Perform appropriate technical analyses, prepare a full written report and file it with the appropriate information center, and provide for the permanent curation of recovered materials. 3) If, in the opinion of the qualified archaeologist and in light of the data available, the significance of the site is such that data recovery cannot capture the values that qualify the site for inclusion on the CRHR, the applicant shall reconsider project plans in light of the high value of the resource, and implement more substantial modifications to the project that would allow the site to be preserved intact, such as project redesign, placement of fill, or project relocation or abandonment. If no such measures are feasible, the City shall implement Mitigation Measure 4.5-2c. <p>Mitigation Measure 4.5-2c: For All Ground-Disturbing Construction Activities, Halt Ground Disturbance upon Discovery of Subsurface Archaeological Features</p> <p>If any precontact or historic-era subsurface archaeological features or deposits, including locally darkened soil ("midden"), that could conceal cultural deposits are discovered during construction, all ground-disturbing activity within 30 meters (approximately 100 feet) of the resources shall be halted and a qualified professional archaeologist shall be retained to assess the significance of the find. If the qualified archaeologist determines the archaeological material to be Native American in nature, the City shall contact the appropriate Native American tribe for their input on the preferred treatment of the find. If the find is determined to be significant by the</p>	

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		archaeologist (i.e., because it is determined to constitute a unique archaeological resource), the archaeologist shall develop, and the City shall implement, appropriate procedures to protect the integrity of the resource and ensure that no additional resources are affected. Procedures could include but would not necessarily be limited to preservation in place (which shall be the preferred manner of mitigating impacts to archaeological sites), archival research, subsurface testing, or contiguous block unit excavation and data recovery (when it is the only feasible mitigation, and pursuant to a data recovery plan). No further grading shall occur in the area of the discovery until the City approves the measures to protect these resources. Any precontact archaeological artifacts recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study.	
<p>Impact 4.5-3: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource</p> <p>Pursuant to AB 52, the City sent letters inviting tribal consultation to the tribal contacts identified by NAHC. Table Mountain Rancheria responded. Although no tribal cultural resources, defined by CEQA Section 21074, have been identified within the Plan Area, it is possible that tribal cultural resources could be identified during analysis of subsequent projects. Compliance with CEQA Section 21080.3.2 and Section 21084.3(a) would render this impact less than significant.</p>	LTS	No mitigation is required for this impact.	LTS
<p>Impact 4.5-4: Disturb Human Remains</p> <p>Based on the records research, no evidence suggests that any precontact or historic-era marked or un-marked human interments are present within or in the immediate vicinity of the Plan Area. However, ground-disturbing construction activities could uncover previously unknown human remains. In the event that human remains are encountered, the impact would be potentially significant.</p>	PS	<p>Mitigation Measure 4.5-4: Protect Known and Unknown Human Remains</p> <p>If any human remains are unearthed during excavation and grading activities of any future project developed under the proposed plan, all activity shall cease immediately within 50 meters (165) feet of the discovery. Pursuant to Health and Safety Code Section 7050.5, no further disturbance shall occur until the county coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98(a). If the remains are determined to be of Native American descent, the coroner shall notify NAHC within 24 hours. NAHC shall then contact the most likely descendent of the deceased Native American, who shall then serve as the consultant on how to proceed with the remains. Pursuant to PRC Section 5097.98(b), upon the discovery of Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendants regarding</p>	LTS

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		their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment.	
Cumulative Impact 5.4-5: Contribution to cumulative impacts to cultural and tribal cultural resources	PS	No mitigation is available.	SU
4.6 Energy			
<p>Impact 4.6-1: Result in Wasteful, Inefficient, or Unnecessary Consumption of Energy during Project Construction or Operation</p> <p>Construction and operation of development under the proposed plan would result in an increase in energy demand, short-term during construction and long-term during individual project operations. Regarding construction, development of individual projects would involve typical construction methods and approaches. Only the necessary amount of energy needed to complete individual projects would be used and there is no evidence to suggest any project would result in wasteful, inefficient, or unnecessary consumption. Operation of projects under the proposed plan would involve a mix of land uses (primarily industrial, retail, and office, with smaller amounts of residential) which would contribute to the local economy, create new jobs, and reduce VMT, and therefore fuel consumption, within the Plan Area compared to existing conditions, all of which are goals of the General Plan. Nevertheless, the proposed plan would allow for development that is not inherently energy efficient (i.e., decarbonized development, EV charging infrastructure to support use of EVs); therefore, operation of the proposed plan would result in the wasteful, inefficient, or unnecessary use of energy. This impact would be significant.</p>	S	<p>Implement Mitigation Measures 4.3-1b, 4.3-1c, 4.3-1g, 4.3-1h, 4.3-1i, 4.3-1j, 4.3-1k, and 4.3-1l.</p> <p>Mitigation Measure 4.6-1a: Require Electric Vehicle Infrastructure</p> <p>To reduce criteria air pollution and GHG emissions, all future commercial and residential development shall be designed to meet the most ambitious electric vehicle infrastructure voluntary requirements of the most recent version of the CALGreen Code in effect at the time of project approval. This measure is subject to change depending on future updates to the CALGreen Code. Compliance with this measure shall be demonstrated to the City prior to the issuance of building permits to construct and shall be subject to City approval.</p> <p>Mitigation Measure 4.6-1b: Incorporate Cool Communities Strategies</p> <p>Development under the proposed plan shall incorporate strategies to cool the urban heat island, reduce energy use and ozone formation, and maximize air quality benefits by requiring new development to implement four key strategies: plant trees, selective use of vegetation for landscaping, install cool roofing, and install cool pavements.</p> <p>Mitigation Measure 4.6-1c: Use Renewable Natural Gas</p> <p>To reduce upstream GHG emissions and promote renewable energy resources, require proposed industrial land uses that are determined to require natural gas, to source renewable natural gas. Use of renewable natural gas reduces upstream GHG emissions by avoiding the potential for fugitive methane to be released from methane producing facilities and actions. Consistency with this measure requires a site-specific feasibility assessment to demonstrate that natural gas is required, and to determine availability of renewable gas sources, subject to City review and approval. Renewable natural gas is captured from wastewater treatment plants, dairies, and landfills and may be processed for uses that typically rely on fossil fuel</p>	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		natural gas, thus avoiding the global warming potential of fugitive methane emissions from these sources. Mitigation Measure 4.6-1d: Require On-Site Clean Energy Prior to future discretionary project approval, new developments shall demonstrate their capacity to include energy production and storage features on-site, including but not limited to, on-site solar, parking canopies with solar, and battery storage. The amount of on-site renewable energy that is needed for future development shall be based on the energy needs of the proposed development, and shall be capable of serving, at a minimum, 50 percent of the energy demand needed to operate the proposed project. Consistency with this measure shall be determined based on a site-specific study required at the time of development approval that demonstrates available and feasible technology appropriate for the specific proposed used, or cannot be met, subject to City approval.	
Impact 4.6-2: Conflict with or Obstruct a State or Local Plan for Renewable Energy or Energy Efficiency The proposed plan would result in a reduction in VMT per service population relative to existing conditions and 2040 no project conditions through the implementation of policies that would improve conditions for the use of alternative modes of transportation and, therefore, promote the reduction of VMT. Additionally, the proposed plan would meet the mandatory EV charging requirements of the CALGreen Code and therefore promote the use of EVs. Implementing the proposed plan would also result in new development that would, at minimum, comply with 2022 California Energy Code Standards, and with the progressively more stringent requirements of future Energy Code standards. However, the proposed plan does not include any policies that address building zero net energy (ZNE) for future land uses. Because the proposed plan does not include policies pertaining to ZNE for residential and nonresidential development, the proposed plan would conflict with the energy-related measures of the City's GHGRP, which requires that commercial projects achieve ZNE electricity. Therefore, the proposed plan would not be consistent with the GHGRP. This impact would be significant.	S	Implement Mitigation Measures 4.3-1b, 4.3-1c, 4.3-1g, 4.3-1h, 4.3-1i, 4.3-1j, 4.3-1k, 4.3-1l, 4.6-1a, 4.6-1b, 4.6-1c, and 4.6-1d.	LTS
Cumulative Impact 5.4.6: Contribution to cumulative energy impacts	LTS	No mitigation is required.	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
4.7 Geology and Soils			
<p>Impact 4.7-1: Directly or Indirectly Cause Potential Substantial Adverse Effects Involving Fault Rupture, Strong Seismic Ground Shaking, or Seismic Related Ground Failure</p> <p>The Plan Area is not susceptible to surface fault rupture and landslides. Development under the proposed plan would be required to comply with CBC and the City of Fresno’s Municipal Code requirements, which include preparing and incorporating the recommendations of site-specific geotechnical and engineering reports. Compliance with the CBC and the City of Fresno’s Municipal Code would minimize hazards from seismic ground shaking and seismic-related ground failure. Therefore, the impact related to the potential to expose people or structures to substantial adverse impacts from seismic ground-shaking or related ground failure would be less than significant.</p>	LTS	No mitigation is required for this impact.	LTS
<p>Impact 4.7-2: Result in Substantial Soil Erosion or the Loss of Topsoil</p> <p>Development associated with implementation of the proposed plan could result in soil erosion. For any construction activities that disturb greater than one acre of soil, project proponents would be required to prepare a SWPPP and implement BMPs designed to control stormwater runoff and reduce erosion from construction sites. In addition, construction activities would be subject to SJVAPCD rules regarding dust control, which would reduce the potential for erosion and sedimentation. Further, individual projects meeting specific criteria would be required to incorporate post-construction stormwater management strategies to reduce the potential for erosion from new development and redevelopment. Therefore, the impact related to substantial soil erosion or the loss of topsoil would be less than significant.</p>	LTS	No mitigation is required for this impact.	LTS
<p>Impact 4.7-3: Be Located on a Geologic Unit or Soil That Is Unstable, or That Would Become Unstable as a Result of Specific Plan Development Resulting in Landslide, Lateral Spreading, Subsidence, Liquefaction, or Collapse</p> <p>Based on its topography and soil characteristics, the Plan Area is not susceptible to landslides, lateral spreading, subsidence, or collapse. Development under the proposed plan would be required to comply with CBC and the City of Fresno’s Municipal Code requirements, which include preparing and incorporating the recommendations of site-specific geotechnical and engineering reports. Compliance with the CBC and the City of Fresno’s Municipal Code, enforced</p>	LTS	No mitigation is required for this impact.	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
<p>through the City’s building permit process, would minimize potential hazards related to liquefaction. Therefore, the impact related to the potential for these hazards would be less than significant.</p>			
<p>Impact 4.7-4: Be Located on Expansive Soil, Creating Substantial Direct or Indirect Risks to Life or Property</p> <p>Based on source materials reviewed, there is no evidence that the Plan Area contains soils with moderately high to high expansion potential. Regardless, future development implemented in accordance with the proposed plan would comply with CBC and the City of Fresno’s Municipal Code requirements, which include preparing and incorporating the recommendations of a site-specific geotechnical and engineering report. Compliance with the CBC and the City of Fresno’s Municipal Code, enforced through the City’s building permit process, would minimize hazards related to expansive soils, if found to be present. Therefore, the potential to create substantial direct or indirect risks to life or property from locating project facilities on expansive soils would be less than significant.</p>	LTS	No mitigation is required for this impact.	LTS
<p>Impact 4.7-5: Directly or Indirectly Destroy a Unique Paleontological Resource or Site or Unique Geologic Feature</p> <p>Construction of future development projects under the proposed plan could require ground disturbance within previously undisturbed soils and in areas of high sensitivity for paleontological resources. Such development has the potential to destroy a unique paleontological resource or site or unique geologic feature. This impact would be potentially significant.</p>	PS	<p>Mitigation Measure 4.7-5: Follow Procedures to Protect Paleontological Resources</p> <p>After preliminary review by the City of grading plans for development within the Plan Area, if there is evidence that a project will include excavation or construction activities within previously undisturbed soils, a field survey and literature search for unique paleontological resources and unique geologic features shall be conducted. The following procedures shall be followed:</p> <ul style="list-style-type: none"> ▶ If paleontological resources and unique geologic features are not found during either the field survey or literature search, excavation and/or construction activities can commence. In the event that paleontological resources or unique geologic features are discovered during excavation and/or construction activities, construction shall stop in the immediate vicinity of the find and a qualified paleontologist shall be consulted to determine whether the resource requires further study. The qualified paleontologist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including excavation of the finds and evaluation of the finds. If the resources are determined to be significant, mitigation measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the 	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<p>finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any paleontological resources and unique geologic features recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study.</p> <ul style="list-style-type: none"> ▶ If paleontological resources or unique geologic features are found during the field survey or literature review, the resources shall be inventoried and evaluated for significance. If the resources are found to be significant, the qualified paleontologist shall identify mitigation measures. Such measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. In addition, appropriate mitigation for excavation and construction activities in the vicinity of the resources found during the field survey or literature review shall include a paleontological monitor. The qualified paleontologist shall determine the monitoring period. If additional paleontological/geological resources are found during excavation and/or construction activities, the procedure identified above for the discovery of unknown resources shall be followed. 	
<p>Cumulative Impact 5.4.7: Contribution to cumulative geology, soils, and mineral resources impacts</p>	<p>LTS</p>	<p>No mitigation is required.</p>	<p>LTS</p>
<p>4.8 Greenhouse Gas Emissions and Climate Change</p>			
<p>Impact 4.8-1: Generate GHG Emissions, Either Directly or Indirectly, That May Have a Significant Impact on the Environment</p> <p>The proposed plan would result in GHG emissions during both construction and operation of plan development implemented over the planning period. It would result in a less-than-significant VMT impact (i.e., 33 percent below a 2015 baseline), which would align with CARB’s direction in Appendix D of the 2022 Scoping Plan to reduce VMT statewide. However, the proposed plan would allow for natural gas usage for commercial, residential, and industrial land uses and does not provide a standard for future land uses to meet the Tier 2 voluntary requirements of the CALGreen Code. (Mitigation measures for air quality impacts [see section 4.3, “Air Quality] recommend prohibiting or severely reducing use of natural gas in plan development, but this analysis is based on potential effects prior to implementation of mitigation.) Therefore, the proposed plan would not align with</p>	<p>S</p>	<p>Implement Mitigation Measures 4.3-1b, 4.3-1c, 4.3-1g, 4.3-1h, 4.3-1i, 4.3-1j, 4.3-1k, 4.3-1l, 4.3-1m, 4.6-2a, 4.6-2b, 4.6-2c, and 4.6-2d.</p> <p>Mitigation Measure 4.8-1a: Use Low-Carbon Concrete</p> <p>Use low-carbon concrete, minimize the amount of concrete used and produce concrete on-site if it is more efficient and lower emitting than transporting ready-mix.</p> <p>Mitigation Measure 4.8-1b: Use Locally Sourced or Recycled Materials</p> <p>Use locally sourced or recycled materials for construction materials (goal of at least 20 percent based on costs for building materials and based on volume for roadway, parking lot, sidewalk and curb materials). Wood products used should be certified through a sustainable forestry program.</p>	<p>SU</p>

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
<p>CARB’s direction to decarbonize buildings or electrify the mobile source sector. Therefore, the proposed plan would not be consistent with the 2022 Scoping Plan and would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment or conflict with state GHG reduction goals. This impact would be significant.</p>			
<p>Impact 4.8-2: Conflict with Any Applicable Plan, Policy or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of GHGs</p> <p>The proposed plan would have a less-than-significant VMT impact, thus aligning with CARB’s direction to reduce statewide VMT. However, it would not prohibit natural gas usage for commercial and residential land uses and would not provide a standard for future land uses to meet the Tier 2 voluntary requirements of the CALGreen Code. Therefore, the proposed plan would not align with CARB’s direction to decarbonization buildings or electrify the mobile source sector. Therefore, the proposed plan would not be consistent with the 2022 Scoping Plan. This impact would be significant.</p>	S	<p>Implement Mitigation Measure 4.3-1b, 4.3-1c, 4.3-1g, 4.3-1h, 4.3-1i, 4.3-1l, 4.3-1m, 4.6-2a, 4.6-2b, 4.6-2c, 4.6-2d, 4.8-1a, and 4.8-1b.</p>	SU
<p>Cumulative Impact 5.4.8: Contribution to cumulative GHG impacts</p>	PS	<p>No mitigation is available.</p>	SU

4.9 Hazards and Hazardous Materials

<p>Impact 4.9-1: Create a Significant Hazard to the Public or the Environment through the Routine Transport, Use, or Disposal of Hazardous Materials or through the Reasonably Foreseeable Upset and Accident Conditions Involving the Release of Hazardous Materials into the Environment</p> <p>Construction and operation of development under the proposed plan would involve the use, storage, and transport of hazardous materials. All such hazardous materials and activities would be typical for such uses, and would occur in compliance with local, state, and federal regulations, which would minimize but not eliminate the potential for upset or accident conditions. Site-specific studies for future projects under the plan could reveal as-yet unknown environmental conditions during construction or operation. The impact to the public and the environment from exposure to these unknown hazardous materials and other hazards during construction, and/or from accidental release of hazardous materials during the routine transport, use, or disposal of hazardous materials would be potentially significant.</p>	PS	<p>Mitigation Measure 4.9-1a: Submit Hazardous Materials Business Plan</p> <p>Before issuance of grading permits or improvement plans, project applicants for all future development projects within the Plan Area shall submit an HMBP to Fresno County Environmental Health Division (CUPA) for review and approval. If during the construction process the applicant or their subcontractors generates hazardous waste, the applicant must register with the CUPA as a generator of hazardous waste, obtain an EPA ID# and accumulate, ship, and dispose of the hazardous waste per Health and Safety Code Ch. 6.5. (California Hazardous Waste Control Law).</p> <p>Mitigation Measure 4.9-1b: Conduct a Phase I ESA</p> <p>Prior to the issuance of a grading permit, project applicants for all future development projects within the Plan Area shall complete a Phase I ESA (performed in accordance with the current ASTM Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process [E 1527]) for each individual property prior to development or redevelopment to ascertain the presence or absence of Recognized Environmental Conditions (RECs), Historical Recognized Environmental Condition (HRECs), and Potential Environmental</p>	LTS
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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<p>Concerns (PECs). The findings and conclusions of the Phase I ESA shall become the basis for potential recommendations for follow-up investigation, if found to be warranted.</p> <p>Mitigation Measure 4.9-1c: Conduct a Phase II ESA</p> <p>If the findings and conclusions of the Phase I ESA for a property result in evidence of RECs, HRECs and/or PECs warranting further investigation, applicants for those projects shall complete a Phase II ESA. The Phase II ESA may include but may not be limited to the following: (1) Collection and laboratory analysis of soils and/or groundwater samples to ascertain the presence or absence of significant concentrations of constituents of concern; (2) Collection and laboratory analysis of soil vapors and/or indoor air to ascertain the presence or absence of significant concentrations of volatile constituents of concern; and/or (3) Geophysical surveys to ascertain the presence or absence of subsurface features of concern such as USTs, drywells, drains, plumbing, and septic systems. The findings and conclusions of the Phase II ESA shall become the basis for potential recommendations for follow-up investigation, site characterization, and/or remedial activities, if found to be warranted.</p> <p>Mitigation Measure 4.9-1d: Conduct a Site Characterization</p> <p>In the event the findings and conclusions of the Phase II ESA reveal the presence of significant concentrations of hazardous materials warranting further investigation, project applicants for all future development within the Plan Area shall ensure that site characterization shall be conducted in the form of additional Phase II ESAs in order to characterize the source and maximum extent of impacts from constituents of concern. The findings and conclusions of the site characterization shall become the basis for formation of a remedial action plan and/or risk assessment.</p> <p>Mitigation Measure 4.9-1e: Conduct a Site Remediation and Potential Risk Assessment</p> <p>If the findings and conclusions of the Phase II ESA(s), site characterization and/or risk assessment demonstrate the presence of concentrations of hazardous materials exceeding regulatory threshold levels, prior to the issuance of a grading permit, project applicants for such projects shall complete site remediation and potential risk assessment with oversight from the applicable regulatory agency including, but not limited to, CalEPA DTSC or RWQCB, and FCEHD. Potential remediation could include the removal or treatment of water and/or soil. If removal occurs, hazardous materials shall be transported and disposed of at a hazardous materials permitted facility.</p>	

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<p>Mitigation Measure 4.9-1f: Prepare Environmental Site Management Plan</p> <p>Prior to the issuance of a future building permit for an individual property within the Plan Area with residual environmental contamination, the agency with primary regulatory oversight of environmental conditions at such property ("Oversight Agency") shall have determined that the proposed land use for that property, including proposed development features and design, does not present an unacceptable risk to human health, if applicable, through the use of an environmental site management plan (ESMP) that could include institutional controls, site-specific mitigation measures, a risk management plan, and deed restrictions based upon applicable risk-based cleanup standards. Remedial action plans, risk management plans and health and safety plans shall be required as determined by the Oversight Agency for a given property under applicable environmental laws, if not already completed, to prevent an unacceptable risk to human health, including workers during and after construction, from exposure to residual contamination in soil and groundwater in connection with remediation and site development activities and the proposed land use.</p> <p>Mitigation Measure 4.9-1g: Conduct a Vapor Intrusion Assessment</p> <p>For those sites with potential residual volatile organic compounds (VOCs) in soil, soil gas, or groundwater that are planned for future redevelopment with an overlying occupied building, a vapor intrusion assessment shall be performed by a licensed environmental professional. If the results of the vapor intrusion assessment indicate the potential for significant vapor intrusion into the proposed building, the project design shall include vapor controls or source removal, as appropriate, in accordance with RWQCB, DTSC, or FCEHD requirements. Soil vapor mitigation measures or controls could include passive venting and/or active venting. The vapor intrusion assessment as associated vapor controls or source removal can be incorporated into the ESMP.</p> <p>Mitigation Measure 4.9-1h: Conduct Asbestos and Lead-Based Paint Surveys</p> <p>In the event of future planned renovation or demolition of structures in the Plan Area, prior to the issuance of demolition permits, asbestos and lead-based paint (LBP) surveys shall be conducted to determine the presence or absence of asbestos-containing materials (ACM) and/or LBP. Removal of friable ACM, and non-friable ACMs that have the potential to become friable during demolition and/or renovation shall conform to the standards set forth by the NESHAPs. SJVAPCD is the responsible agency on the local level to enforce the National</p>	

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<p>Emission Standards for Hazardous Air Pollutants (NESHAPs) and shall be notified by the property owners and/or developers of properties (or their designee(s)) prior to any demolition and/or renovation activities. If asbestos-containing materials are left in place, an Operations and Maintenance Program shall be developed for the management of asbestos containing materials.</p> <p>Mitigation Measure 4.9-1i: Conduct Soil Sampling</p> <p>Prior to the import of a soil to a particular property within the Plan Area as part of that property's site development, such soils shall be sampled for toxic or hazardous materials to determine if concentrations exceed applicable Environmental Screening Levels for the proposed land use at such a property, in accordance with RWQCB, DTSC, or FCEHD requirements.</p>	
<p>Impact 4.9-2: Emit Hazardous Emissions or Handle Hazardous or Acutely Hazardous Materials, Substances, or Waste within One-Quarter Mile of an Existing or Proposed School</p> <p>Orange Center School on S. Cherry Avenue is the only school located within the Plan Area, but three other schools, Calwa Elementary, Kirk Elementary, and Sequoia Middle School are located within a quarter mile of the Plan Area boundary. Although the nature and location of specific developments under the proposed plan are yet unknown, it is likely they would result in the routine transport, use, and storage of hazardous materials during construction and operation. Such use, though not expected to generate hazardous emissions or handle acutely hazardous materials our waste, could be proposed or could result through accident or upset conditions within one-quarter mile of a school. This impact would be potentially significant.</p>	PS	<p>Implementation of Mitigation Measures 4.9-1a through 4.9-1i as detailed under Impact 4.9-1 above would be required.</p>	LTS
<p>Impact 4.9-3: Be Located on a Site Which Is Included on a List of Hazardous Materials Sites Compiled Pursuant to Government Code Section 65962.5</p> <p>The Plan Area contains several hazardous materials sites that are listed in the Geographic Environmental Information Management System's GeoTracker and DTSC EnviroStor databases. Potential future development under the plan could be located on one or more of these sites. This would be a potentially significant impact.</p>	PS	<p>Implementation of Mitigation Measures 4.9-1c through 4.9-1i as detailed under Impact 4.9-1 above would be required.</p>	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
<p>Impact 4.9-4: Impair Implementation of or Physically Interfere with an Adopted Emergency Response Plan or Emergency Evacuation Plan</p> <p>The City’s Emergency Preparedness Officer (EPO) is responsible for ensuring that Fresno’s emergency response plans are up-to-date and implemented properly and communicating with other agencies for emergency response operations. The City’s Emergency Operations Plan and County Multi-Jurisdictional LHMP provides detailed guidance for mitigating hazard events and ensures a coordinated response provided in cooperation with the City’s departments and other local, State, and federal agencies. As part of project operation of future development of the proposed plan, adequate emergency access routes to and from the development area would be established and emergency response would not be impaired. However, construction activities associated with future development within the Plan Area would involve truck traffic and temporary land/shoulder closures in work zones that could result in temporary land closures on certain roads, increased traffic, and other roadway conditions that could interfere with or slow down emergency vehicle access and services. This could create a potentially significant impact with response to the implementation of an emergency response plan or emergency evacuation area.</p>	PS	<p>Mitigation Measure 4.9-4: Prepare and enforce a Construction Traffic Management Plan</p> <p>Before construction of any project within the Plan Area, the project proponent shall submit to the City for review and approval a Construction Traffic Management Plan to minimize traffic impacts on all roadways at and near the work site affected by construction activities. The plan shall include construction and public (if applicable) access points, procedures for notification of road closures, construction materials delivery plan, a description of emergency personnel access routes during road closures, This plan shall reduce potential traffic safety hazards and ensure adequate access for emergency responders.</p>	LTS
<p>Cumulative Impact 5.4.9: Contribution to cumulative impacts related to hazards and hazards materials</p>	LTS	No mitigation required.	LTS
<p>4.10 Hydrology and Water Quality</p>			
<p>Impact 4.10-1: Violate Any Water Quality Standards or Waste Discharge Requirements or Otherwise Substantially Degrade Surface or Ground Water Quality</p> <p>Construction activities associated with future development under the proposed plan could degrade the quality of stormwater flows and potentially degrade downstream surface water quality. Further, contaminants generated by urban development within the Plan Area could be carried in stormwater runoff and could reach surface waters and degrade water quality. Development under the proposed plan would be required to comply with applicable requirements related to water quality, including on-site stormwater detention/retention and materials handling, during construction and operation. Compliance with these regulations would reduce the potential for construction and operation of development associated with the proposed plan to violate water quality standards or waste discharge requirements or otherwise</p>	LTS	No mitigation is required for this impact.	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
<p>substantially degrade surface or groundwater quality. Therefore, the proposed plan would have a less-than-significant impact related to water quality.</p>			
<p>Impact 4.10-2: Substantially Decrease Groundwater Supplies or Interfere Substantially with Groundwater Recharge Such That the Project May Impede Sustainable Groundwater Management of the Basin</p> <p>The City overlays the Kings Subbasin, a high-priority and critically overdrafted basin managed by NKGSA. A GSP for the Kings Subbasin was adopted in 2023 and contains projects and management actions that would bring the subbasin into sustainability by 2040. Future development in the Plan Area would not impede implementation of projects or management actions included in the NKGSA GSP. Additionally, land uses included in the proposed plan would demand less water supply, including groundwater, than the land uses assumed in the 2014 General Plan, which was used to develop assumptions included within the NKGSA GSP. Therefore, this impact would be less than significant.</p>	LTS	No mitigation is required for this impact.	LTS
<p>Impact 4.10-3: Substantially Alter the Existing Drainage Pattern 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 Off-Site, Create or Contribute Runoff that would Exceed Capacity of Storm Drainage Systems, or Impede or Redirect Flood Flows</p> <p>Implementation of development under the proposed plan would increase impervious surfaces in the Plan Area, which could subsequently increase stormwater runoff volumes and velocities, exceed capacity of existing drainageways, and create downstream flooding. The protective General Plan policies and MS4 permit conditions would require any future development in the Plan Area to implement stormwater management measures to reduce stormwater runoff such that peak runoff flow rates are reduced; stormwater runoff is infiltrated, evapotranspired, and/or captured and used on-site to reduce site runoff for smaller storm events into municipal systems; and increases in volumetric runoff would be retained to prevent increased downstream flooding. Additionally, the SCSP storm drain system would be designed to accommodate buildout conditions, so that new development would not generate runoff that could exceed the capacity of the system. Therefore, future development under the proposed plan would not result in substantial erosion, siltation, flooding, polluted runoff, or redirect flood flows. This impact would be less than significant.</p>	LTS	No mitigation is required for this impact.	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
<p>Impact 4.10-4: Release Pollutants Due to Plan Area Inundation by Flood Hazard</p> <p>The Plan Area contains flood hazard and dam inundation areas. However, compliance with the Fresno Flood Plain Ordinance, General Plan policies, and existing safety regulations would be required for the implementation of development under the proposed plan, resulting in low-risk release of pollutants due to inundation. This impact would be less than significant.</p>	LTS	No mitigation is required for this impact.	LTS
<p>Impact 4.10-5: Conflict with or Obstruct Implementation of a Water Quality Control Plan or Sustainable Groundwater Management Plan</p> <p>Future development under the proposed plan would be required to comply with the Basin Plan (Water Quality Control Plan for the Tulare Lake Basin) groundwater sustainability plans, and stormwater best management practices. The proposed plan is also not anticipated to exceed the City's water supply. Therefore, this impact would be less than significant.</p>	LTS	No mitigation is required for this impact.	LTS
<p>Cumulative Impact 5.4.10: Contribution to cumulative impacts on hydrology and water quality</p>	LTS	No mitigation is required.	LTS
4.11 Land Use and Planning			
<p>Impact 4.11-1: Physically Divide an Established Community</p> <p>Development under the proposed plan would not physically divide an established community. Approximately 5 percent of the Plan Area is occupied by residential uses, and the residences are located primarily in pockets of development along the outer edges of the area. The locations and extent of residences in the Plan Area would not change substantially under the proposed plan. No major roadways or any other development that could divide a community is proposed under the plan. In addition, the network of bicycle paths and trails and the network of sidewalks would be expanded under the plan, providing greater connectivity throughout the Plan Area. This impact would be less than significant.</p>	LTS	No mitigation is required.	LTS
<p>Impact 4.11-2: Cause a Significant Environmental Impact Due to a Conflict with Any Land Use Plan, Policy, or Regulation Adopted for the Purpose of Avoiding or Mitigating an Environmental Effect</p> <p>Implementing the proposed plan would require a general plan amendment to allow for the proposed land use changes, as some of the proposed land uses differ from the general plan. With the approval of the amendment, the SCSP would be</p>	LTS	No mitigation is required.	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
<p>consistent with the City of Fresno General Plan. Also, the proposed plan includes policies, development regulations, and use regulations to reduce potential impacts on sensitive uses located adjacent to industrial areas. In addition, the SCSP would not conflict with a habitat conservation plan or natural community conservation plan. This impact would be less than significant.</p>			
<p>Cumulative Impact 5.4.11: Contribution to cumulative land use impacts</p>	<p>LTS</p>	<p>No mitigation is required.</p>	<p>LTS</p>
<p>4.12 Noise</p>			
<p>Impact 4.12-1: Substantial Temporary (Construction) Noise Levels That Exceed City Noise Control Ordinance Standards</p> <p>It is anticipated that development of the Plan Area would occur gradually over time and that various levels of construction could occur throughout the Plan Area at any given time. While specific construction intensity, duration, and locations are not currently known, reference noise levels for typical construction equipment associated with land development were used to assess peak construction noise. Based on those reference levels, construction noise could reach levels of up to 82.9 dBA L_{eq} and 88.0 dBA L_{max}. In addition, some construction work for utility installation. This impact would be significant.</p>	<p>S</p>	<p>Mitigation Measure 4.12-1: Implement Construction Noise Reduction Requirements</p> <p>The City shall require the following noise reduction measures to be implemented for all construction activities, as best management practices, that would be the responsibility of the construction contractors to implement:</p> <ul style="list-style-type: none"> ▶ All construction equipment and equipment staging areas shall be located as far as possible from nearby noise-sensitive land uses (residences, schools, playgrounds, child-care centers, churches, hospitals, retirement homes, and convalescent homes). ▶ Idling of construction equipment for extended periods (i.e., 5 minutes) of time shall be prohibited. ▶ All construction equipment shall be properly maintained and equipped with noise reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturers' recommendations. Equipment engine shrouds shall be closed during equipment operation. ▶ Noise-intensive construction operations and techniques that cause noise levels to exceed City Noise Control Ordinance standards at sensitive receptors during the more noise-sensitive times of day (10 p.m. to 7 a.m., Monday through Saturday and all day Sunday) shall be replaced with quieter procedures (e.g., using welding instead of riveting, mixing concrete off site instead of on site) where such technology exists and would accomplish the same desired outcome compared to traditional construction methods. ▶ For construction activities required to occur at night within 3,900 feet of residential uses, noise attenuating buffers such as structures, truck trailers, temporary noise curtains, or sound walls shall be located between noise sources and the receptor to shield sensitive receptors from construction noise to achieve a nighttime noise level of 45 dBA at the receptor. 	<p>SU</p>

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
<p>Impact 4.12-2: Substantial Permanent Stationary or Area Noise Sources That Exceed the City Residential Noise Control Ordinance Standards</p> <p>Future development in the Plan Area is assumed to be primarily industrial, commercial, and retail, with some additional residential in designated portions of the Plan Area. Noise sources associated with these land uses include mechanical equipment, such as HVAC units, backup emergency generators, vehicular and human activity, parking lots, loading dock and delivery activities at commercial/industrial land uses. The plan is designed to buffer residentially designated areas with less intensive land uses (e.g., Business Park) such that new industrial uses would not be located within distances that could expose existing sensitive receptors to excessive stationary noise levels. However, exact types of development, locations, building footprints, and building orientations are yet unknown; therefore, it is possible that new stationary noise sources could result in excessive noise levels at sensitive receptors and exceed applicable City of Fresno standards. This impact would be significant.</p>	<p>S</p>	<p>Mitigation Measure 4.12-2a: Conduct Acoustic Study</p> <p>In accordance with General Plan Policy NS-1-i, all new development applications that would include new stationary or mobile noise sources, significant remodels requiring discretionary review, and redevelopment adjacent to noise-sensitive land uses, will be required to prepare an acoustical analysis that evaluates potential noise impacts and recommends noise abatement mitigation to ensure compliance with the City’s General Plan and Noise Ordinance. The City will require acoustical analyses for the purpose of identifying project-specific noise effects and required noise abatement measures.</p> <p>Mitigation Measure 4.12-2b: Require Consistency with Noise Code</p> <p>For future noise-generating developments proposed in the Plan Area, the City will require findings of consistency with SCSIP noise policies and development standards; Fresno General Plan goals, objectives, policies, and implementation actions; Zoning Ordinance; Municipal Code; Building Code; and other local, federal, state, and regional regulations applicable to noise impacts as conditions of project approval and entitlement.</p> <p>Mitigation Measure 4.12-2c: Require Noise-Reducing Design Elements</p> <p>New non-residential projects adjacent to residential uses will be required to incorporate noise-reducing features (e.g., siting and orienting noise-intensive elements such as loading docks and HVAC units as far possible from sensitive receptors, use of soundproofing materials, noise barriers) into the project design to minimize impacts to nearby residential uses and other noise-sensitive land uses.</p> <p>Mitigation Measure 4.12-2d: Minimize Stationary Noise near Sensitive Uses</p> <p>New buildings proposed adjacent to existing and/or planned residential or other noise-sensitive land uses will be required to site and operate stationary equipment in a manner that limits adverse noise impacts and complies with adopted Municipal Code noise standards.</p> <p>Mitigation Measure 4.12-2e: Minimize Parking Lot Noise near Sensitive Uses</p> <p>Parking areas for new or redeveloped non-residential developments near sensitive receptors shall be buffered and shielded by noise-attenuating features and structures such as solid walls, solid fences, and/or adequate landscaping.</p>	<p>SU</p>

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
<p>Impact 4.12-3: Substantial Permanent Traffic Noise Levels That Exceed City Traffic Noise Standards</p> <p>Development of the Plan Area could result in new and expanded roadways to serve future development as well as increases in long-term truck and passenger vehicle traffic and associated noise increases on existing affected roadways. Existing and future development within and near the Plan Area could be exposed to substantial increases in traffic noise levels that exceed City residential noise standards of 65 dBA L_{dn}/CNEL. While the focus of the SCSP is industrial development, it is possible that future development could result in the construction of sensitive uses (e.g., houses, schools, churches) near existing or future roads that generate substantial traffic noise. In addition, while the potential is limited, new development of sensitive uses could occur near the existing UPRR and BNSF tracks, exposing these new receptors to noise levels that exceed applicable noise standards. This impact would be significant.</p>	<p>S</p>	<p>Implement Mitigation Measure 4.12-2b.</p> <p>Mitigation Measure 4.12-3a Reduce Transportation Noise Exposure All new transportation noise sources shall be evaluated for consistency with adopted transportation noise exposure levels (Table 15-2506-B of the City of Fresno Municipal Code).</p> <p>Mitigation Measure 4.12-3b: Reduce Noise Levels Associated with New, Expanded, or Extended Roads Before finalizing roadway design for any new or expanded roadway, along which sensitive land uses currently exist or could be allowed in the future based on proposed land use designation, a design-level acoustical study shall be prepared to identify specific noise-abating roadway design considerations, which shall be incorporated into final road design and approved by the City of Fresno. Design considerations may include, but are not limited to, minimum setback distances, the use of quiet pavement materials, sound barriers, and building/window retrofits for existing structures.</p>	<p>SU</p>
<p>Impact 4.12-4: Construction or Operational Vibration Levels That Exceed FTA's Recommended Standards with Respect to the Prevention of Structural Damage and Human Response</p> <p>Potential vibration impacts could occur when project-related construction activities are close (i.e., within 550 feet) to sensitive land uses. Because the nature and locations of future development in the Plan Area are unknown at this time, the vibration impacts of pile-driving and other vibration-causing activities are similarly unknown. Given the emphasis on industrial development, however, it is possible that pile-driving and other vibration-inducing construction activities could occur near sensitive land uses. Specifically, the potential exists for pile driving to occur within 100 feet of a structure, exceeding FTA-recommended levels for structural damage (i.e., 0.2 in/sec PPV), and within 550 feet of a sensitive land use, exceeding FTA-recommended levels for vibration annoyance (i.e., 72 VdB). In addition, while most of the land adjacent to existing railroad tracks is designated Heavy Industrial under the plan, there are three areas adjacent to railroad tracks with Business Park and Residential land use designations. If sensitive uses were to be constructed in these areas within 350 feet of the railroad tracks, new sensitive receptors could be exposed to levels of vibration that exceed FTA-recommended levels of 65 VdB for infrequent events, such as passing trains. This impact would be significant.</p>	<p>S</p>	<p>Mitigation Measure 4.12-4a: Reduce Construction Vibration For construction activities that would require high-impact equipment (e.g., pile-driving, vibratory equipment, jackhammers) occurring within 100 feet of any building, to reduce the potential for structural damage, and within 550 feet of an occupied residence/building, to minimize disturbance from impact equipment, a vibration control plan shall be developed by the project applicant and construction contractors to be submitted to and approved by Fresno prior to approval of issuance of grading permits for development under the proposed plan. The plan shall be developed to achieve recommended vibration limits for structural damage and human disturbance, depending on site-specific structure type and vibration source, in accordance with Federal Transit Administration's Transit Noise and Vibration Impact Assessment Manual methods and guidance, or more appropriate and available guidance at the time of development review. The plan may include measures such as, but not limited to, alternatives to impact pile driving and restrictions on pile driving activity.</p> <p>Mitigation Measure 4.12-4b: Reduce Rail Operations Vibration Exposure Construction of sensitive uses (e.g., residences, places of worship, day care centers) shall be prohibited within 350 feet of railroad tracks that are actively used or that could be used in the future. For sensitive uses proposed within 500 feet of an existing rail line, the City will require a project-level vibration assessment conducted</p>	<p>SU</p>

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<p>by a qualified acoustical engineer or noise specialist in accordance to determine vibration levels at specific building locations and recommend feasible structural mitigation measures (e.g., isolation strip foundations, insulated windows and walls, sound walls or barriers, distance setbacks, or other construction or design measures), if necessary, to reduce vibration-noise to acceptable levels.</p> <p>Mitigation Measure 4.12-4c: Reduce Truck Operation Vibration Exposure The City shall formally designate truck routes in the Plan Area that avoid streets with existing and future sensitive receptors. The City shall implement physical improvements (e.g., relative to turning radii, lane widths, access management), signage, enforcement and other appropriate measures to limit truck traffic to approved routes.</p> <p>Mitigation Measure 4.12-4d: Reduce Vibration Exposure from Operational Stationary Equipment New industrial uses that would include vibration-generating stationary equipment within 550 feet of sensitive land uses shall be required to conduct site-specific noise and vibration assessments to determine potential vibration levels at sensitive receptors. If vibration levels are found to exceed FTA thresholds at any such receptor, the vibration-generating equipment shall be relocated such that the standard is achieved at the receptor, or the use shall be prohibited.</p>	
Cumulative Impact 5.4.12: Contribution to cumulative noise impacts	PS	No mitigation is available.	SU
4.13 Population, Employment, and Housing			
<p>Impact 4.13-1: Directly or Indirectly Induce Substantial Unplanned Population Growth and Housing Demand</p> <p>The proposed plan has the potential to generate future development of approximately 12,021,744 square feet (sf) of non-residential uses (including industrial, retail, and office) and 91 new residential dwelling units. Resulting in a minimal population increase of approximately 313 net new persons by 2040. Consistent with the General Plan, the purpose of the proposed plan is to create jobs for the City. The City is projected to add nearly 70,000 employees between 2022 and 2040. Therefore, implementation of the proposed plan will create jobs for the City's projected growth in population and employment. The proposed plan would not induce substantial unplanned population growth, either directly (i.e., by proposed new unplanned homes) or indirectly (i.e., by the extension of roads or other infrastructure). Therefore, this impact would be less than significant.</p>	LTS	No mitigation is required.	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
<p>Impact 4.13-2: Displace Substantial Numbers of People or Existing Housing</p> <p>Although some existing housing may be demolished and/or renovated as a result of the proposed plan, the addition of 91 new dwelling units would offset the potential loss of existing housing. Additionally, the proposed plan does not involve any actions that would permanently displace substantial numbers of people. Therefore, implementing the proposed plan would not displace substantial numbers of people or housing. As a result, there would be no new significant effect, and the impact would not be more severe than the impact identified in the General Plan EIR. This impact would be less than significant.</p>	LTS	No mitigation is required.	LTS
<p>Cumulative Impact 5.4.13: Contribution to cumulative impacts to population and housing</p>	LTS	No mitigation is required.	LTS
<p>4.14 Public Services and Recreation</p>			
<p>Impact 4.14-1: Result in Substantial Adverse Physical Impacts Associated with the Provision of New or Physically Altered Fire Facilities</p> <p>Under the proposed plan, development would be intensified within the Plan Area and may increase demand for fire protection services that could require new or expanded facilities. Expansion of an existing fire station or construction of a new facility would involve minor land clearing, grading, installation of utilities, and building construction, generally on a modest-sized lot (approximately 2.5 acres). Construction activities and duration would be typical of such facilities and would be required to comply with applicable City policies and regulatory requirements to reduce adverse environmental effects. For these reasons, there is no evidence to suggest that such construction would result in unmitigable, adverse effects on the environment. Therefore, this impact would be less than significant.</p>	LTS	No mitigation is required.	LTS
<p>Impact 4.14-2: Result in Substantial Adverse Physical Impacts Associated with the Provision of New or Physically Altered Police Facilities</p> <p>Development under the SCSP (e.g., industrial, retail, office uses), would result in an increased demand for law enforcement services. A new centralized police headquarters and communications center building, two new police substations, and a new 911 emergency operations dispatch center are proposed in the city, but it is not clear if these would be sufficient to meet the demand for law enforcement services associated with the proposed plan. If new or physically altered police facilities are required to adequately serve development within the Plan Area,</p>	LTS	No mitigation is required.	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
<p>expansion of an existing police station or construction of a new facility could involve minor land clearing, grading, installation of utilities, and building construction, generally on a modest-sized parcel. Construction activities and duration would be typical of such facilities and would be required to comply with applicable City policies and regulatory requirements to reduce adverse environmental effects. For these reasons, there is no evidence to suggest that such construction would result in unmitigable, adverse effects on the environment. Therefore, this impact would be less than significant.</p>			
<p>Cumulative Impact 5.4.14: Contribution to cumulative impacts to public services and recreation</p>	LTS	No mitigation is required.	LTS
<p>4.15 Transportation and Circulation</p>			
<p>Impact 4.15-1: Conflict with a Program, Plan, Ordinance, or Policy Addressing the Circulation System, Including Transit, Roadway, Bicycle, and Pedestrian Facilities</p> <p>The proposed plan is estimated to result in the future development of approximately 12 million square feet (sf) of non-residential (industrial, retail, and office) uses and approximately 91 new residential dwelling units by 2040. While no specific developments are currently proposed, individual projects would be reviewed for consistency with the City’s General Plan, ATP, and Municipal Code, and requirements established within those regulatory documents would be implemented, as applicable. Proposed SCSP policies would encourage the construction of bicycle and pedestrian safety improvements and transportation demand management strategies for employees to support the use of alternative modes of transportation. There is no evidence to suggest that the SCSP or future development under the plan would conflict with any applicable program, plan, ordinance, or policy addressing the circulation system. The impact would be less than significant.</p>	LTS	No mitigation is required for this impact.	LTS
<p>Impact 4.15-2: Conflict or Be Inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b) Regarding Vehicle Miles Traveled</p> <p>The proposed plan would substantially increase industrial uses within the Plan Area and some commercial and minor residential development. The industrial and commercial uses would increase employment opportunities, likely improving proximity between new jobs within the Plan Area and surrounding housing by reducing commute distances between them. The SCSP TIA found that under horizon year with project conditions, the proposed plan would result in a VMT per service population of 29.87 as compared to 44.88 VMT per service population</p>	LTS	No mitigation is required for this impact.	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
<p>under existing conditions. Because the proposed plan would result in a 33 percent decrease in VMT, the proposed plan would not conflict or be inconsistent with CEQA Guidelines Section 15064.3. The impact would be less than significant.</p>			
<p>Impact 4.15-3: Substantially Increase Hazards Due to a Geometric Design Feature (e.g., Sharp Curves or Dangerous Intersections) or Incompatible Uses (e.g., Farm Equipment)</p> <p>Although the nature and location of specific development projects under the proposed plan cannot be known, the plan would substantially increase industrial uses in the Plan Area and implement commercial and minor residential development. Thus, the industrial and other uses would substantially increase traffic, including truck traffic, in the Plan Area. Subsequent projects under the plan would be required to comply with all applicable design standards and would be subject to review by City staff to ensure these requirements are met. Individual project contractors would be required to develop and implement a TCP in accordance with policy 210.01 (“Traffic Control Policies and Procedures”) of the City of Fresno Public Works Department Policies and Procedures to minimize hazards during construction. Chapter 5 of the SCSIP identifies development standards with which individual projects would be required to comply. These include provisions for truck routing, parking, and internal project site signage and wayfinding. Finally, the City is engaged in a truck reroute study for the portion of Fresno subject to AB 617, which includes the Plan Area. The study is designed to address, among other things, truck transportation conflicts, accidents, and residential and school impacts. With implementation of existing requirements, there is no evidence to suggest that implementation of the proposed plan would substantially increase transportation hazards from design features or incompatible uses. While the truck reroute study is not yet complete, it is anticipated that its recommendations will be implemented by the City and would further reduce the potential for such hazards. This impact would be less than significant.</p>	LTS	No mitigation is required for this impact.	LTS
<p>Impact 4.15-4: Result in Inadequate Emergency Access</p> <p>Subsequent projects and transportation improvements that would be developed under the proposed plan would be required to meet State and local standards pertaining to emergency access including design and safety regulations provided in the 2022 California Fire Code and City Municipal Code. Additionally, individual projects associated with the proposed plan would be subject to review by City and responsible emergency service staff ensuring all standards are met during</p>	LTS	No mitigation is required for this impact.	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
<p>construction and operations. There is no evidence to suggest that development under the proposed plan would result in inadequate emergency access. This impact would be less than significant.</p>			
<p>Cumulative Impact 5.4.15: Contribution to cumulative transportation impacts</p>	LTS	No mitigation is required.	LTS
<p>4.16 Utilities and Service Systems</p>			
<p>Impact 4.16-1: Require or Result in the Relocation or Construction of New or Expanded Water, Wastewater Treatment or Storm Water Drainage, Electric Power, Natural Gas, or Telecommunications Facilities, the Construction or Relocation of Which Could Cause Significant Environmental Effects</p> <p>Implementation of the proposed plan would require relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, and telecommunications facilities. New infrastructure would generally be constructed within existing roadways or would consist of short connections to existing pipelines and would be developed as part of buildout of the proposed plan. The impacts associated with such infrastructure connections would be typical of such construction and would result in are generally assessed as part of the proposed development under the SCSP (e.g., construction-related air, noise, GHG, and transportation effects), within the context of this EIR, and there is no evidence to suggest that such construction would result in additional significant environmental effects. This impact would be less than significant.</p>	LTS	No mitigation is required for this impact.	LTS
<p>Impact 4.16-2: Have Insufficient Water Supplies Available to Serve the Project and Reasonably Foreseeable Future Development During Normal, Dry, and Multiple Dry Years</p> <p>As discussed in the Water Supply Assessment (Appendix E) prepared for the proposed plan, the City’s 2020 UWMP relied upon the City’s General Plan to project future water supply and demand and indicates that there would be surplus water during normal, dry, and multiple dry years through 2045. Future development of the proposed plan would demand less water than the currently approved General Plan land uses within the Plan Area. As such, there would be a greater surplus of water supply for the City during normal, dry, and multiple-dry years through 2045 with implementation of the proposed plan compared with the existing approved land uses considered in the 2020 UWMP. Thus, this impact would be less than significant.</p>	LTS	No mitigation is required for this impact.	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
<p>Impact 4.16-3: Result in a Determination by the Wastewater Treatment Provider That Serves or May Serve the Project That It Has Inadequate Capacity to Serve the Project’s Projected Demand, in Addition to the Provider’s Existing Commitments</p> <p>Wastewater generation from development anticipated under the proposed plan would be approximately 11.6 mgd average annual flows (AAF), 13.4 mgd peak day dry weather flows, and 15.1 mgd for peak month wet weather flows. The RWRF, which has a remaining capacity of 23.5 mgd, would be able to accommodate these wastewater flow rates in addition to existing commitments. Furthermore, wastewater flows from the Plan Area would be less than those estimated for the currently approved land uses under the General Plan, which would contribute 12.8 mgd for AAF, 14.7 mgd for peak day dry weather flows, and 16.6 mgd for peak month wet weather flows. Thus, this impact would be less than significant.</p>	LTS	No mitigation is required for this impact.	LTS
<p>Impact 4.16-4: 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; or Fail to Comply with Federal, State, and Local Management and Reduction Statutes and Regulations Related to Solid Waste</p> <p>Implementation of the proposed plan would allow for development of industrial, commercial office, retail, and residential uses, which would generate solid waste. Development related to the proposed plan would implement programs to reduce landfill contributions, consistent with CIWMA, AB 341, SB 1374, AB 1826, and SB 1383. While General Plan Policy RC-11-b requires the City to develop a strategic and operations plan for fulfilling the City Council resolution committing the City to a Zero Waste goal, it is not clear if zero waste goals will be met. Without attainment of zero waste goals, development under the proposed plan may generate waste in excess of capacity at the American Avenue Landfill, which is planned for closure in 2031. This impact would be potentially significant.</p>	PS	<p>Mitigation Measure 4.16-4: Verify Landfill Capacity on a Project-by-Project Basis and Restrict Development Accordingly</p> <p>Consistent with the Fresno General Plan, the City shall evaluate additional landfill locations at the time individual projects are submitted within the Plan Area and shall not approve development that could contribute to solid waste to a landfill that is at capacity until additional capacity is identified.</p>	LTS
<p>Cumulative Impact 5.4.16: Contribution to cumulative utilities and service systems impacts</p>	LTS	No mitigation is required.	LTS

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3 PROJECT DESCRIPTION

3.1 OVERVIEW

The City of Fresno is proposing to adopt the South Central Specific Plan (proposed plan or SCSP). The SCSP would facilitate opportunities for economic growth and job creation and promote development of underutilized lands within the planning area. The purpose of the proposed plan is to serve as a policy and regulatory document that seeks to balance economic benefit, environmental impacts, and quality of life. The Plan Area has ample land for development and is prime for growth due to its central location in California and the San Joaquin Valley as well as its proximity to Fresno's downtown, railway lines, and State Routes 41 and 99. Fresno is the 5th largest City in California, and the primary goal of the proposed plan is to improve Fresno's economic competitiveness and support employment opportunities for residents. The proposed plan, including necessary entitlements and other approvals, is described below.

3.2 PROJECT LOCATION

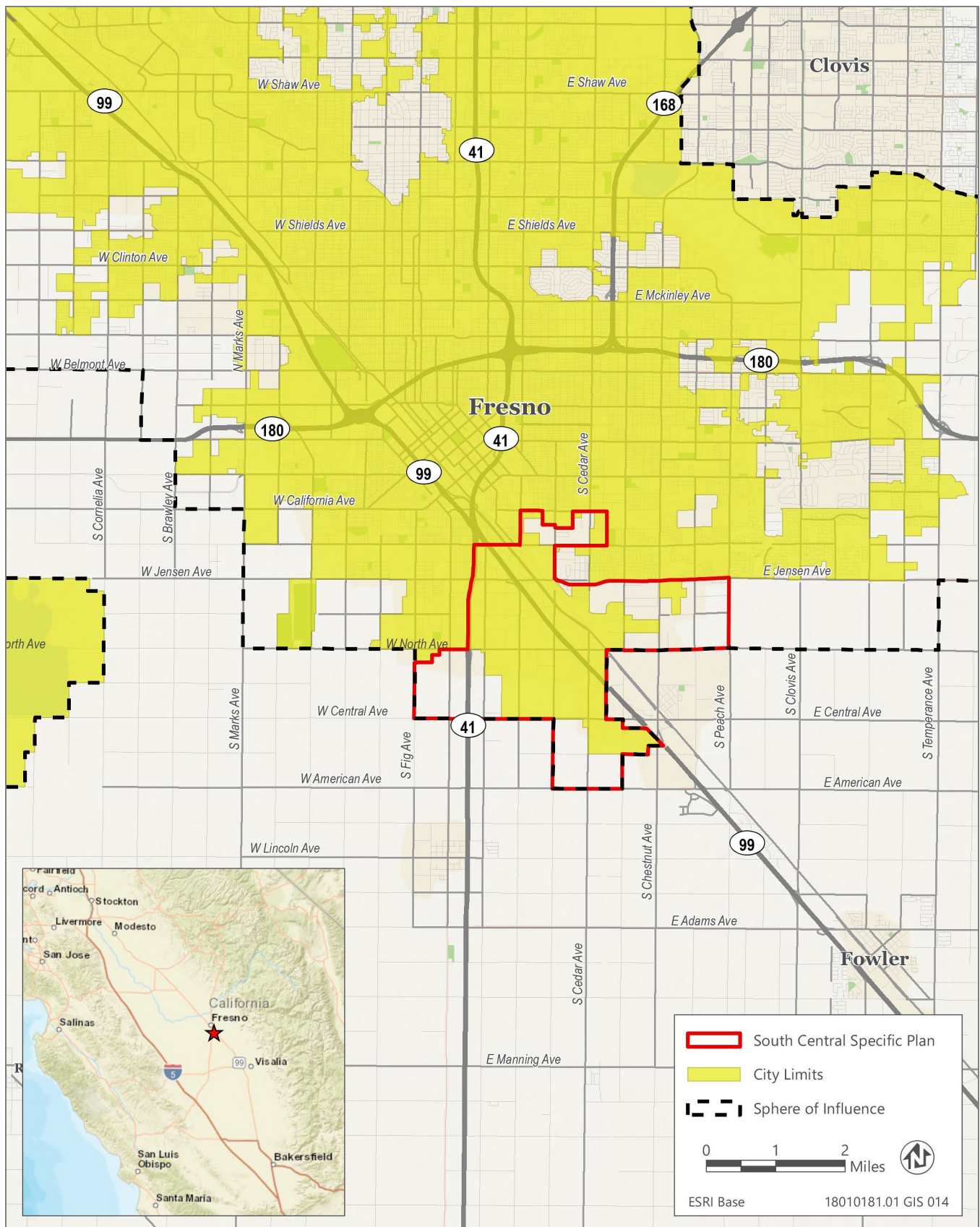
The SCSP Area is approximately 5,567 acres located in the southern portion of the City of Fresno (Figures 3-1 and 3-2). Of the 5,567 acres, approximately 627 acres consists of roadways and infrastructure, leaving 4,940 acres of developed and developable land area. The Plan Area is generally located south of California Avenue, north of American Avenue, and between Fig and Peach Avenues. It is largely within the Fresno city limits and includes areas in unincorporated Fresno County within Fresno's planning sphere of influence (SOI) (Figure 3-3). Land within the SOI is anticipated to become part of the city of Fresno in the future, but no annexation is currently proposed, nor would any of these areas be rezoned as part of the project. Instead, upon a proposal to annex unincorporated land into the city, the City of Fresno would prezone the land in a manner consistent with the General Plan land use designation. Once annexation occurs, County zoning would no longer apply, and the zoning established in the prezone would take effect.

The Plan Area includes a mix of land uses including industrial, warehouse, commercial, residential, religious, educational, and public. Major transportation networks such as State Route (SR) 41, SR 99, and Burlington Northern Santa Fe (BNSF) and Union Pacific (UP) rail lines traverse the Plan Area, and land has been cleared and construction is underway for the future state high speed rail line.

3.3 BACKGROUND

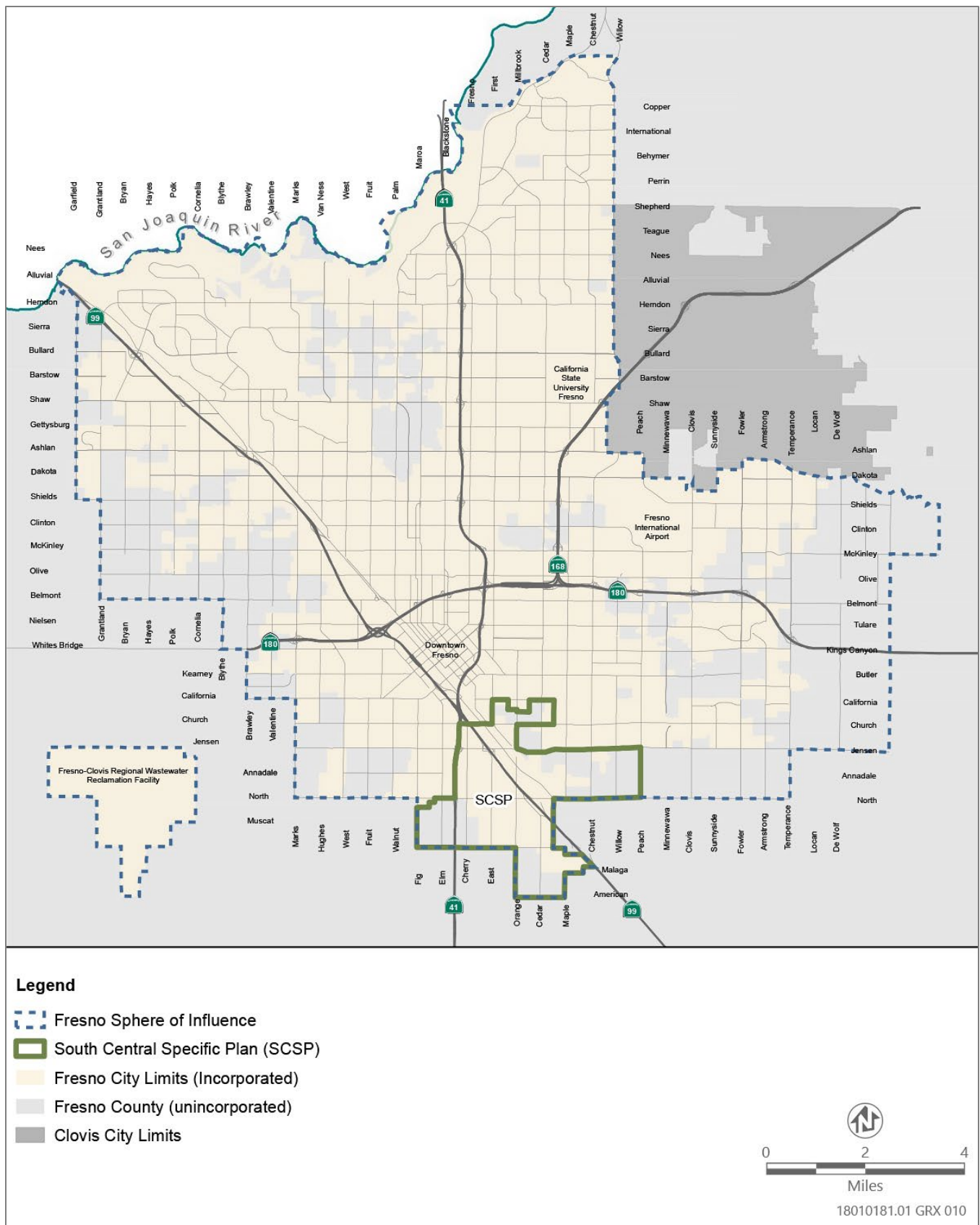
Specific plans are planning documents that implement the goals and policies of the General Plan. They contain detailed development standards and implementation measures to which future projects located within a specified geographic area must adhere. Every county and city in California is required by state law to prepare and maintain a general plan. A general plan serves as the jurisdiction's "constitution" or "blueprint" for future decisions concerning land use and resource conservation. All specific plans, subdivisions, public works projects, and zoning decisions must be consistent with the general plan. A specific plan addresses many of the same topics as a general plan, but it focuses on a smaller area, allowing communities to comprehensively address issues and opportunities in distinct areas.

The City of Fresno's General Plan, adopted in 2014, outlines a long-range vision for the physical development of the City and provides a blueprint to guide economic development initiatives, as well as needed improvements to increase competitiveness and promote economic growth. Industries well-suited to Fresno's location and workforce include agricultural technologies, supply chain management, agricultural services (brokering and export), food innovation and processing facilities, water technology, and other precision manufacturers. Other markets include medical industries and green industries such as solar, biofuels, recycling, and other forms of alternative energy. One way to support job creation in Fresno is to identify and reserve large areas of land with state route and railroad access for industrial development and provide infrastructure with access to water, sewer, roads, and Information Technology (IT) capability, including fiber connectivity.



Source: Data received from the City of Fresno in 2023.

Figure 3-1 Regional Location



Source: Adapted by Ascent in 2023.

Figure 3-2 South Central Specific Plan Area

Most of the land within the Plan Area was included in the South Industrial Priority Area (SIPA) Specific Plan Area, for which a planning process for which was initiated by the City in 2019. The City's 2014 General Plan and SIPA Specific Plan envisioned that the area would be prioritized for industrial development, fulfilling several General Plan goals related to attracting and retaining industrial firms needed to implement the City's economic development strategy. Land uses identified in the SIPA Specific Plan were consistent with the land use plan adopted as part of the 2014 General Plan Update. In response to community feedback received on the initial concept for the SIPA Specific Plan, the City initiated a new planning process and retitled the Plan Area the South Central Specific Plan. A community outreach and engagement process was conducted for the plan in 2020 to produce a vision and guiding principles centered around balancing the needs of industrial users, ensuring a diverse employment base, and minimizing impacts on the environment and neighborhoods. The outcome of the engagement process was development of three alternative land use maps: one reflecting a plan focused on residential and community-serving development (Community Alternative), a second focused almost exclusively on industrial development (Business Alternative), and a third that represents a blending of the Community and Business alternatives (Blended Alternative and SCSP, the proposed plan). (See Section 6, "Alternatives," for discussion and assessment of the Community and Business Alternatives.) The Blended Alternative is considered the proposed plan and is described below and analyzed in the forthcoming sections of this EIR.

Buildout of the SCSP would result in approximately 18.6 million square feet of industrial uses (less than the General Plan), 10 million square feet of commercial/office uses, and 1.2 million square feet of retail and public facilities (EPS 2022). Economic analysis projects that, based on market demand and absorption rates, this level of development would not occur in the near term, and may not occur for many decades. To ensure a meaningful assessment, the City determined—based on a market study prepared by Economic & Planning Systems, Inc. (EPS)—that 2040 represents a reasonable planning horizon for EIR analysis. To estimate the level of development that could occur by 2040, buildout numbers were recalibrated to conservatively reflect twice the nonresidential market demand estimated by EPS. Therefore, while development levels considered in this EIR may be higher than what may actually occur by 2040, they are reasonable for purposes of environmental evaluation and to ensure that the analysis is appropriately conservative.

3.4 SPECIFIC PLAN OBJECTIVES

The overarching vision of the SCSP is to improve the City's overall economic competitiveness, support employment opportunities for residents, and maintain and improve community livability. The objectives that would help realize this vision are as follows:

- ▶ **Stimulate economic development.** Promote inclusive and sustainable economic growth and attract development that focuses on emerging markets and new technologies.
- ▶ **Provide diverse employment.** Create diverse employment opportunities, including an accessible and resilient employment zone.
- ▶ **Minimize environmental and neighborhood impacts.** Consider project-specific environmental effects (e.g., truck traffic, air emissions, noise and vibration) on existing and potential future sensitive receptors and impose measures to minimize such impacts.
- ▶ **Preserve existing operations:** Preserve the viability of existing industrial and manufacturing operations in the Plan Area.
- ▶ **Protect against incompatible uses.** Protect existing and future development from adverse impacts associated with incompatible uses.
- ▶ **Implement infrastructure improvement:** Improve Plan Area infrastructure (e.g., transportation, sewer, water) to expand the supply of "shovel-ready" sites.
- ▶ **Be a good neighbor.** Participate in "good neighbor" policies to provide residents with clear and transparent access to information regarding community development and assist in addressing disputes and concerns.

- **State Routes 99 and 41 as Gateways.** Transform State Routes 99 and 41 as gateways into the City. Utilize landscaping and architectural design to improve the visual quality when entering the Plan Area.

3.5 LAND USE

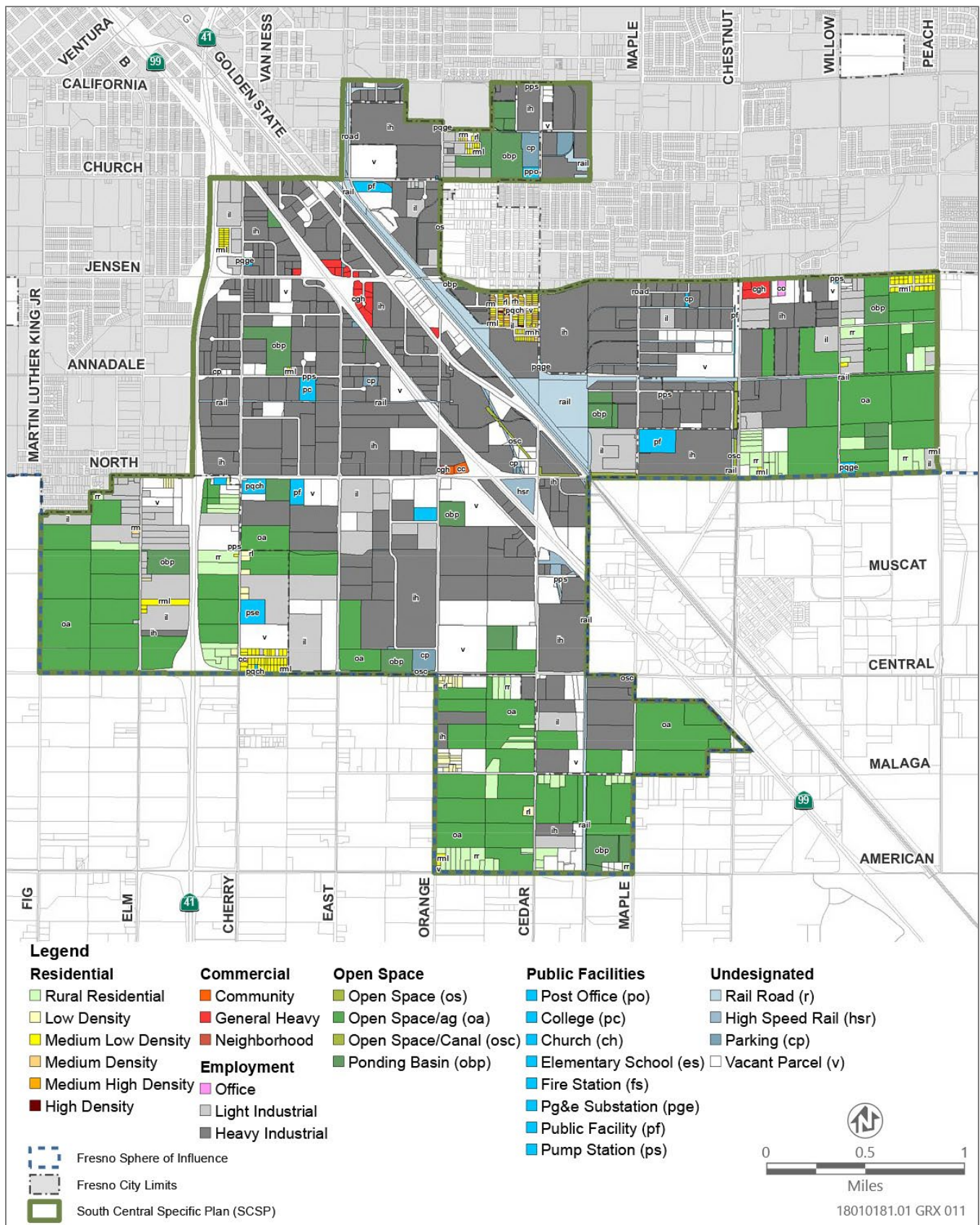
3.5.1 Existing Land Use

Existing land uses and land use acreages in the Plan Area are shown in Table 3-1 and Figure 3-4, respectively. Heavy industrial (42 percent), open space (27 percent), vacant land (11 percent), and light industrial (9 percent) are the predominant existing land uses in the Plan Area. Agriculture makes up most of the open space area with the remainder consisting of canals and ponding basins for surface water runoff detention and groundwater recharge. The remainder of the Plan Area is composed of residential, commercial, and public facilities land uses.

Table 3-1 Existing Land Use Acreages in the Plan Area

Existing Land Use	Approximate Acres	Approximate Percent of Total
Heavy Industrial	2,056	37
Open Space	1,308	23
Roadways and Infrastructure	627	11
Vacant	566	10
Light Industrial	427	8
Other	242	4
Rural Residential	160	3
Residential	82	1
Public Facilities	66	1
Commercial	29	<1
Streets	4	<1
Total	5567	100

Source: City of Fresno 2023.



Source: 2023 City of Fresno South Central Specific Plan, adapted by Ascent in 2023.

Figure 3-4 Existing Land Use

3.5.2 Adopted Land Use Designations

Existing General Plan land use designations within the Plan Area are shown in Figure 3-5, and the acreage and proportion of each is shown in Table 3-2. This area of the City was primarily devoted to employment-generating land uses, such as agriculture, industrial, and commercial given its proximity to rail service and highways.

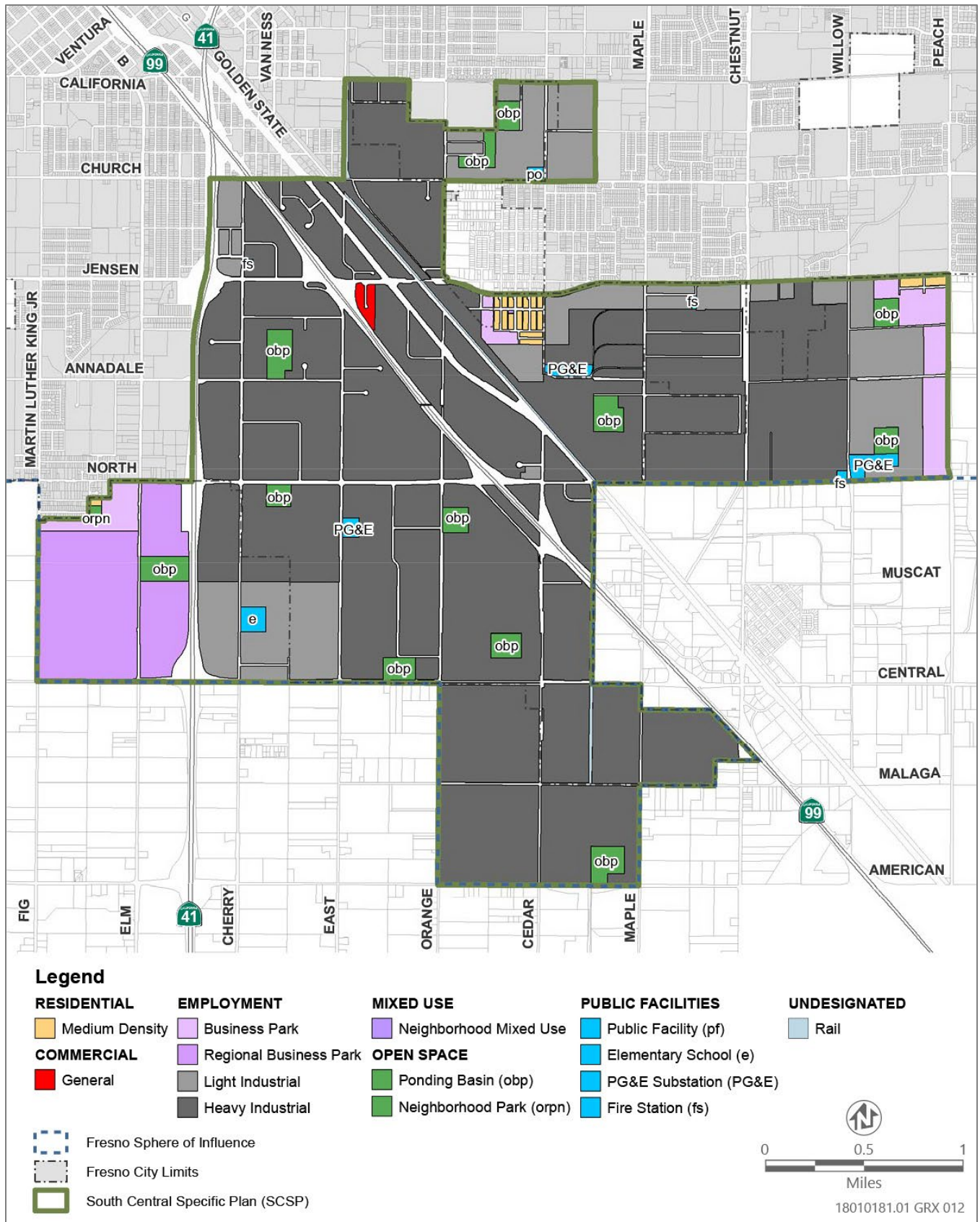
Table 3-2 General Plan Land Use Designations

General Plan Land Use	Approximate Acreage	Approximate Percent of Total
Heavy Industrial	3,486	63
Roadways and Infrastructure	627	11
Light Industrial	685	12
Regional Business Park	350	6
Open Space – Ponding Basin	158	3
Business Park	144	3
Public	42	<1
Rail	32	<1
Single Family Residential	30	<1
General Commercial	10	<1
Open Space – Neighborhood Park	3	<1
Neighborhood Mixed-Use	0.25	<1
Total	5,567	100

Source: City of Fresno 2023.

Chapter 15, “Citywide Development Code,” of the City’s Municipal Code contains the City’s zoning and establishes development standards and regulations for each land use designation. Consistent with the City’s General Plan land use map the planning area includes the following zoning districts:

- ▶ CG – Commercial - General
- ▶ IL – Industrial - Light
- ▶ IH – Industrial - Heavy
- ▶ OS – Open Space
- ▶ PI – Public and Institutional
- ▶ RS – Residential Single-Family
- ▶ NMX – Neighborhood Mixed-Use Districts
- ▶ BP – Business Park
- ▶ RBP – Regional Business Park



Source: 2023 City of Fresno South Central Specific Plan, adapted by Ascent in 2023.

Figure 3-5 Adopted General Plan Planned Land Use

3.5.3 Population

The Plan Area contains a small residential population comprised of approximately 400 housing units and an estimated 1,130 residents. Residential uses are largely characterized by rural residential and small subdivisions. Rural and low-density residential land uses are scattered throughout the Plan Area, and isolated medium-low residential areas are located in the northern portion of the Plan Area generally southwest of S. Peach and E. Jensen Avenues and northeast of E. Jensen Avenue and SR 41, and in the southern portion generally northeast of E. Central Avenue and S. Cherry Avenue (Daleville), and a small area between S. Elm Avenue and SR 41, less than one-half mile north of W. Central Avenue. In addition, the planning area is near or adjacent to two census-designated places in the unincorporated County, Calwa and Malaga, comprising approximately 720 dwelling units and 2,660 residents. The southern portion of Calwa community is within the City limits and within the Plan Area, and comprises 172 residential units, which is part of the existing 400 units within the Plan Area.

3.6 SPECIFIC PLAN CHARACTERISTICS

3.6.1 Organization of the Plan

The SCSP is a planning and regulatory document that would guide development activity within the 5,567-acre planning area over the long term. It is intended—to build upon the policy framework established by the following previously adopted plans:

- ▶ Fresno General Plan (2014): long range plan that recommends strategies to support the community's vision of Fresno as a vibrant, growing city, infused with a sense of heritage and community;
- ▶ exposure in disadvantaged communities;
- ▶ Fresno Active Transportation Plan (2016): comprehensive guide to outlining the vision for active transportation in the City of Fresno, and a roadmap for achieving that vision;
- ▶ Roosevelt Community Plan (1992): provides high level goals and policies for the Roosevelt Community to promote well-balanced, cohesive development; and,
- ▶ North Avenue Industrial Triangle Specific Plan (1973): a multiphase plan to develop agricultural land south of Jensen Avenue and north of the Central Canal between State Routes 41 and 99 into a heavy industrial district; and
- ▶ Fresno Parks Master Plan (2017): a community-based vision and road map for planning a complete and functional parks system.

Plans that contain recommendations for the SCSP area but were developed and adopted by other agencies include:

- ▶ Reverse Triangle Transportation Area Plan (2021, Fresno Council of Governments): explores opportunities to improve access and mitigate potential adverse effects from planned industrial development within the study area. The Plan identifies transportation infrastructure improvements and mobility service programs and strategies so that future anticipated growth within the study area will provide opportunities to improve connectivity and accessibility; and
- ▶ Community Emissions Reduction Program: South Central Fresno (2019, San Joaquin Valley Air Pollution Control District): an emissions reporting, monitoring, and reduction plan that was developed under AB 617 to reduce air pollution exposure in disadvantaged communities.

The SCSP document consists of eight chapters:

- ▶ **Introduction**, provides an overview of the proposed plan, plan purpose, structure and organization of the document, background information of the Plan Area, and plan requirements.
- ▶ **Planning Process & Community Engagement**, summarizes the public participation process for the plan.
- ▶ **Vision, Guiding Principles and Policies**, describes the vision, guiding principles, and proposed policies of the plan.
- ▶ **Land Use**, provides the basis for planning in the Plan Area, existing land use conditions, proposed land use plan and alternatives, use regulations, and development standards to achieve the Plan’s vision.
- ▶ **Development Standards**, describes the regulations, requirements, and standards proposed for the SCSP.
- ▶ **Circulation**, describes the existing transportation network within the Plan Area as well as planned and recommended improvements.
- ▶ **Public Facilities and Infrastructure**, describes the existing and planned public facilities and infrastructure in the Plan Area, including parks and open space, schools, police and fire, and wet and dry utilities.
- ▶ **Implementation**, provides the implementation strategies for the proposed plan.

3.6.2 Features of the Plan

LAND USE DESIGNATIONS

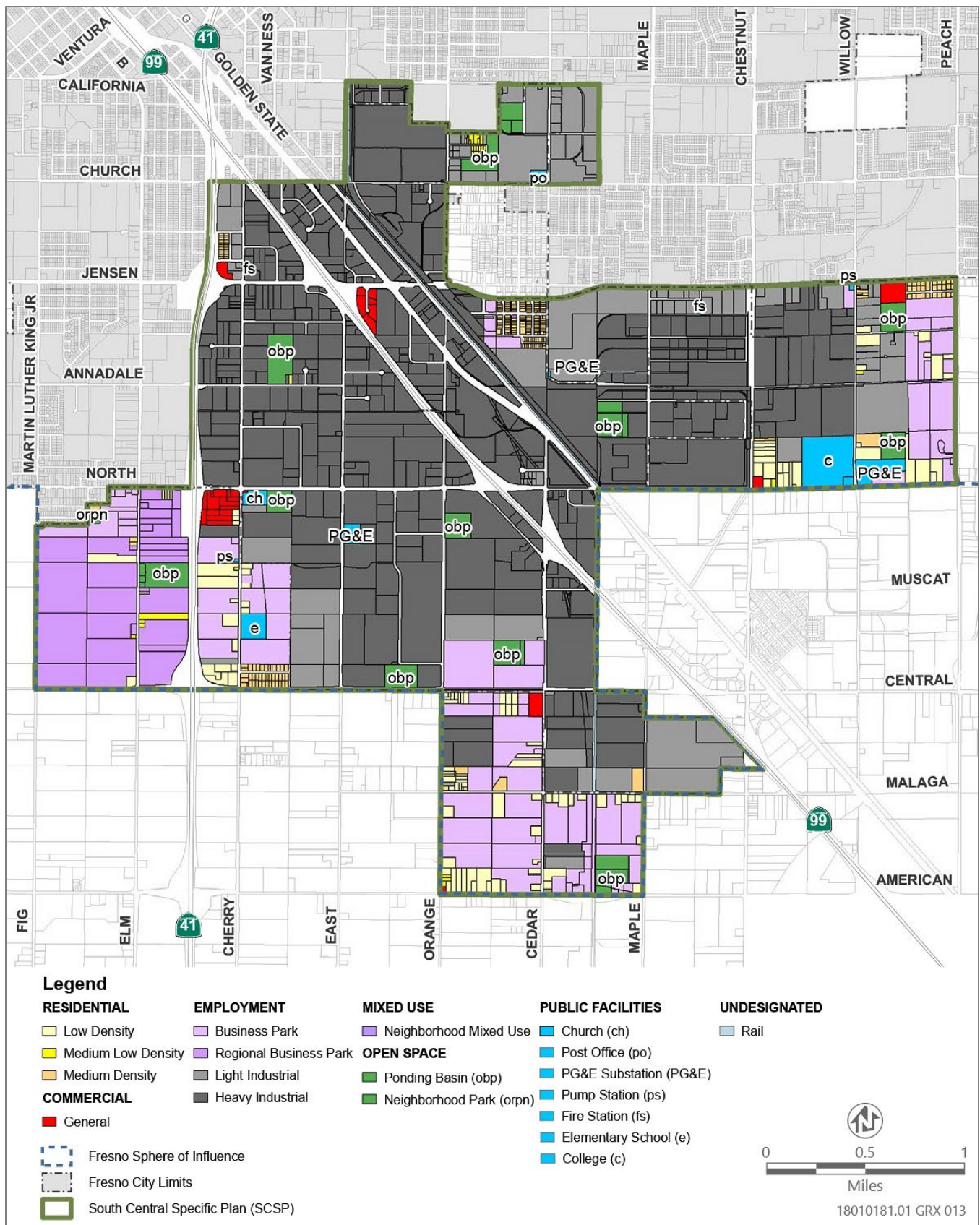
The SCSP proposes uses within several land use designations as defined in the General Plan. Land use designations, descriptions, and allowable densities are shown in Table 3-3.

Table 3-3 General Plan Land Use Designations within the Plan Area

General Plan Designation	Density/ Intensity	Description
Residential - Low Density	1 – 3.5 DU/Acre	The Low Density Residential designation is intended to provide for large-lot residential development. Low Density Residential allows one to 3.5 housing units per acre. The resulting land use pattern is large-lot residential in nature, such as rural residential.
Residential – Medium Low Density	3.5 - 6 DU/Acre	The Medium Low Density designation is intended to provide for single family detached housing with densities of 3.5 to 6 units per acre.
Residential – Medium Density	5 – 12 DU/Acre	Medium Density residential covers developments of 5 to 12 units per acre and is intended for areas with predominantly single-family residential development, but can also accommodate a mix of housing types, including small-lot starter homes, zero-lot line developments, duplexes, and townhouses. Much of the City’s established neighborhoods fall within this designation.
Residential – Medium High Density	12 – 16 DU/Acre	Medium High Density residential is intended for neighborhoods with a mix of single-family residences, townhomes, garden apartments, and multi-family units intended to support a fine-grained, pedestrian scale area.
Neighborhood Mixed-Use	Min 12 – 16 DU/Acre FAR 1.5	The Neighborhood Mixed-Use designation provides for mixed-use residential uses that include local-serving, pedestrian-oriented commercial development, such as convenience shopping and professional offices in two- to three-story buildings. Development is expected to include ground-floor neighborhood retail uses and upper-level housing or offices, with a mix of small -lot single-family houses, townhomes, and multi-family dwelling units on side streets, in a horizontal or vertical mixed-use orientation. Residential densities establish 12 units per acre as the minimum and the maximum FAR is 1.5. There is no density maximum for Neighborhood Mixed Use.

General Plan Designation	Density/ Intensity	Description
Commercial - General	FAR 2.0	The Commercial - General designation allows for a wide range of commercial uses that are not appropriate in other areas because of higher volumes of vehicle traffic and potential adverse impacts on other uses. Examples of allowable uses include: building materials, storage facilities with active storefronts, equipment rental, wholesale businesses, and specialized retail not normally found in shopping centers.
Employment – Business Park	FAR 1.0	The Business Park designation provides for office/business parks in campus-like settings that are well suited for large offices or multi- tenant buildings. This designation is intended to accommodate and allow for the expansion of small businesses. Given its proximity to residential uses, only limited outdoor storage will be permitted, while adequate landscaping is imperative to minimize the visual impacts. Typical land uses include research and development, laboratories, administrative and general offices, medical offices and clinics, professional offices, prototype manufacturing, testing, repairing, packaging, and printing. No free-standing retail is permitted, except for small uses serving businesses and employees.
Employment – Regional Business Park	FAR 1.0	The Regional Business Park designation is intended for large or campus-like office and technology development that includes office, research and development, manufacturing, and other large-scale, professional uses, with limited and properly screened outdoor storage. Permitted uses include incubator-research facilities, prototype manufacturing, testing, repairing, packaging, and printing, as well as offices and research facilities. Small-scale retail and service uses serving local employees and visitors are permitted as secondary uses.
Employment – Light Industrial	FAR 1.5	The Light Industrial designation accommodates a diverse range of light industrial uses, including limited manufacturing and processing, research and development, fabrication, utility equipment and service yards, wholesaling, warehousing, and distribution activities. Small-scale retail and ancillary office uses are also permitted. Light Industrial areas may serve as buffers between Heavy Industrial and other land uses and otherwise are generally located in areas with good transportation access, such as along railroads and State Routes.
Employment – Heavy Industrial	FAR 1.5	The Heavy Industrial designation accommodates the broadest range of industrial uses including manufacturing, assembly, wholesaling, distribution, and storage activities that are essential to the development of a balanced economic base. Small-scale commercial services and ancillary office uses are also permitted.
Public Facilities	NA	The Public Facilities designation applies to public facilities, such as fire and police stations, City-operated recycling centers, and sewage treatment plants. An example of a public facility located in the Plan Area is City of Fresno Fire Station #7.
Open Space	NA	The Open Space designations (Parks and Recreational Facilities; Other Public Open Space) apply to open space areas that are not parks or trails, such as ponding basins.

While the total area subject to development under the SCSP would be the same as the General Plan, the SCSP proposes land use designation changes for certain areas, requiring a General Plan amendment and rezone of the same properties. The changes are proposed primarily to 1) reconcile land use designations with existing conditions, 2) to buffer sensitive uses (e.g., residential areas, Orange Center School) with less intensive uses (e.g., business park instead of industrial), and 3) to provide more opportunities for neighborhood-serving general commercial uses near residential areas. The SCSP would result in substantial reductions in acreage of Heavy Industrial land uses and a modest decrease in Regional Business Park, with corresponding increases in acreage of Business Park, Single-Family Residential, Public, Light Industrial, and General Commercial uses. Figure 3-6 illustrates proposed SCSP land uses and Table 3-4 shows the proposed net change for each land use designation.



Source: 2023 City of Fresno South Central Specific Plan, adapted by Ascent in 2023.

Figure 3-6 Proposed Land Use

Table 3-4 Proposed Land Use Designation Changes

General Plan Land Use Designation	Approximate Acreage	Proposed SCSP Land Use Designations	Net Change
Heavy Industrial	3,486	2,650	-836
Roadways and Infrastructure	627	627	0
Light Industrial	685	715	+30
Regional Business Park	350	333	-17
Open Space – Ponding Basin	158	158	0
Business Park	144	653	+509
Public	42	78	+36
Rail	32	32	0
Single Family Residential	30	270	+240
General Commercial	10	47	+37
Open Space – Neighborhood Park	3	3	0
Neighborhood Mixed-Use	0.25	0.25	0
Total	5,567	5,567	0

Note: Slight variations in sums due to rounding.

DEVELOPMENT DENSITY

As described above, EPS was retained by the City to conduct a market analysis of demand for non-residential development in the Plan Area by 2040 to help inform the development assumptions to be used in the specific plan. Growth projections for the SCSP were calculated using development assumptions and floor area ratios outlined in the General Plan for various land use types (Table 3-5).

Table 3-5 Development Assumptions by General Plan Land Use Based on 2040 General Plan Buildout

Land Use Designation	Density/Intensity Range	Assumed Density/Intensity	Residential	Food	Industrial	Medical	Office	Retail
Medium Density Residential	5-12 du/ac	6.5 du/ac	100%					
General Commercial	0-2.0 FAR	0.35 FAR		15%		5%	25%	55%
Business Park	0-1.0 FAR	0.4 FAR			40%		55%	5%
Regional Business Park	0-1.0 FAR	0.4 FAR			60%		35%	5%
Light Industrial	0-1.5 FAR	0.3 FAR			80%		20%	
Heavy Industrial	0-1.5 FAR	0.3 FAR			80%		20%	

Source: Fresno 2014.

The Plan Area currently supports nearly 19.6 million square feet of nonresidential development and 400 residential units. It is estimated that an additional 12 million square feet of nonresidential uses and 91 dwelling units would be constructed by 2040 (Table 3-6). Growth in the Plan Area would be primarily industrial, with smaller amounts of office and retail uses. Other land uses would be permitted in accordance with General Plan land use designations, but are not the focus of the SCSP.

Table 3-6 Assumed Development for the Proposed Plan Compared to Existing Conditions

Land Use Designation	Existing (square footage)	Proposed Plan (square footage) 2022-2040
Retail	0	866,676
Office	10,912	578,790
Industrial	19,624,154	10,576,278
Total Non-residential	19,635,066 ¹	12,021,744
Residential Units	400 dwelling units	91 dwelling units

¹ Existing development only reflects the employment land use categories within the Specific Plan Area.

Source: Ascent 2023.

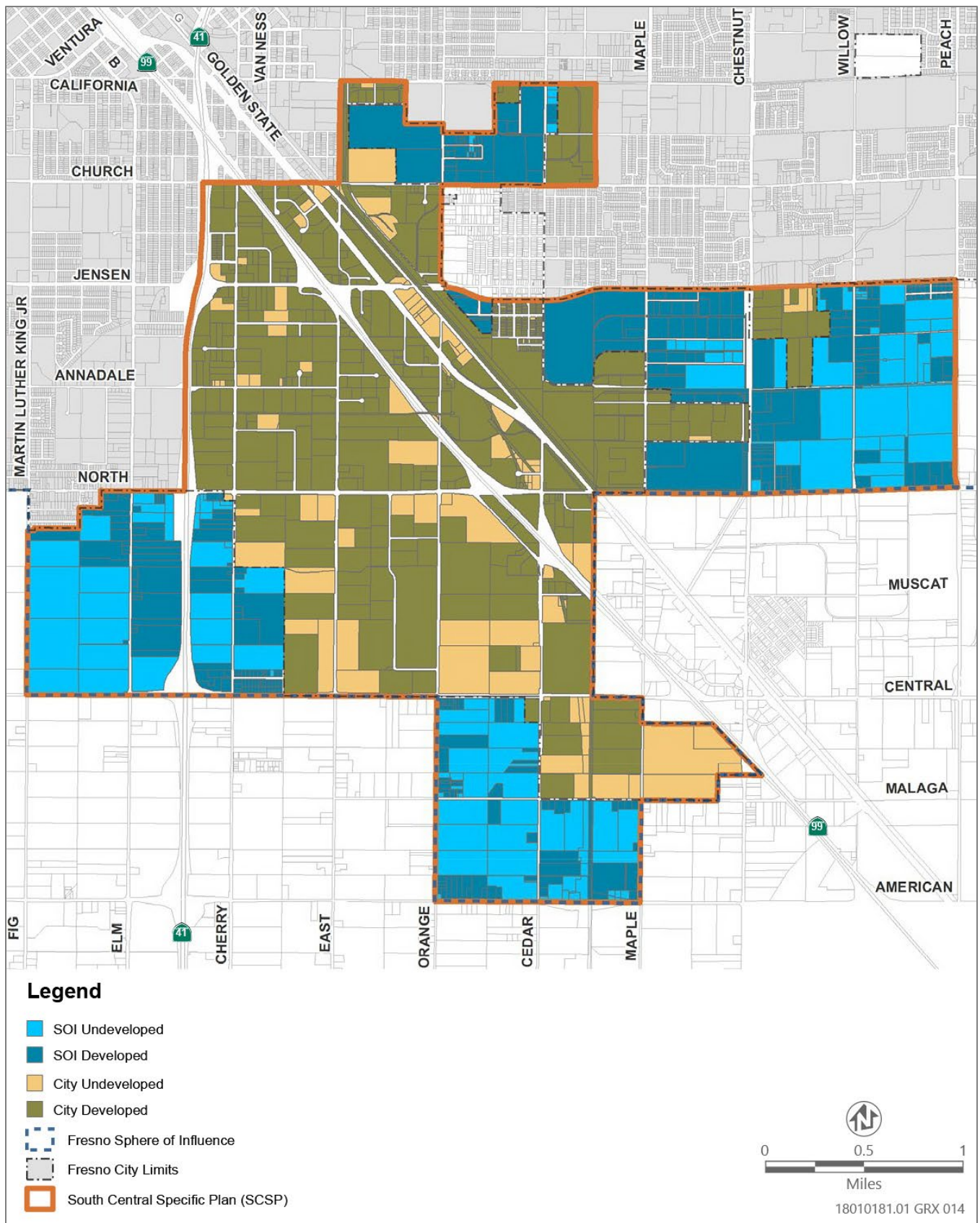
Of the 5,567-acre Plan Area, approximately 3,693 acres is developed as industrial, commercial, residential and other land uses, and approximately 1,874 acres is open space, farmland, and vacant. Approximately 700 acres of the Plan Area is conservatively assumed to be developed with non-residential uses, primarily industrial, by the year 2040. While it is not possible to identify where future development would occur, it is reasonable to assume that—in addition to some redevelopment—open space, farmland and vacant areas would be developed. Figure 3-7 shows developed and undeveloped land, within City limits and in the SOI, in the Plan Area.

A primary impetus for the SCSP is economic development and job growth. More than 14,000 new jobs would be created by 2040 with anticipated development, primarily in the industrial sector, with lesser but still substantial growth in office and retail jobs (Table 3-7).

Table 3-7 Anticipated Job Growth 2022-2040

Land Use Designations	Proposed Job Growth
Food (Restaurants)	183 persons
Industrial	10,576 employees
Office	1,928 employees
Retail	1,624 employees

Source: Ascent 2023.



Source: 2023 City of Fresno South Central Specific Plan, adapted by Ascent in 2023.

Figure 3-7 Developed and Undeveloped Land Within the Plan Area

3.6.3 Plan Policies

To implement the vision and guiding principles for the Plan Area, the SCSP includes the following policies, developed in coordination with the South Central Specific Plan Advisory Committee. (See Chapter 2, "Planning Process and Community Engagement" of the South Central Specific Plan for further information.)

TRANSPORTATION POLICIES

The transportation policies for the proposed plan are as follows:

- ▶ **Trucks:**
 - T-1: Establish and enforce truck routes to avoid neighborhoods and consider existing roadway capacities and conditions.
 - T-2: Ensure truck routes are safe for pedestrians and bicyclists.
 - T-3: limit truck idling times.
- ▶ **Public Transit:**
 - T-4: Expand bus area service and frequency.
 - T-5: Provide van shuttles, transit and carpool incentives, and bicycle parking for employees.
- ▶ **Roadway Improvements:**
 - T-6: Help school districts implement a "safe routes to school" program.
 - T-7: Build, repair and maintain roads in good condition.
 - T-8: Consider traffic calming studies.
 - T-9: Install traffic control or traffic safety measures to include bike lanes.
 - T-10: Install street lighting for public safety and visibility.
 - T-11: Install crosswalks and traffic calming measures near schools.
 - T-12: Consider a funding mechanism to pre-fund infrastructure improvements. prior to allowing development to occur.
 - T-13: Improve and maintain sidewalks.

AIR QUALITY AND OTHER ENVIRONMENTAL IMPACTS

The following policies are intended to reduce environmental harm, increased quality of life, and encourage sustainable practices:

- ▶ **Air Quality:**
 - AQ-1: Require the installation of air filtration systems in businesses to protect homes and schools.
 - AQ-2: Request additional 24-hour air monitors from the San Joaquin Valley Air Pollution Control District around distribution centers, major roads near distribution centers, and at receptive school districts.
 - AQ-3: Require the implementation of dust reduction measures near sensitive uses, including the installation of wind barriers and regular street sweeping.
- ▶ **Vehicle/Equipment and Operation Standards:**
 - AQ-4: Increase electric vehicle charging stations and alternative fuel stations.
 - AQ-5: Seek out funding sources to assist warehouses and industrial uses to transition to near-zero emissions technology.

- **AQ-6:** Consider construction of near zero fueling stations (i.e. CNG/Hydrogen).
 - **AQ-7:** Encourage commercial landscapers to use electric gardening equipment such as lawn mowers and leaf blowers.
 - **AQ-8:** Ensure loading docks and emission-generating equipment are located away from homes and schools.
 - **AQ-9:** Incentivize all construction equipment to follow the "Construction Clean Fleet" standards as identified by the San Joaquin Valley Air Pollution Control District under Rule 9510 Indirect Source Review (ISR).
 - **AQ-10:** Open a dialogue with businesses to encourage changing warehouse shift times so they do not overlap with commute and school traffic times.
 - **AQ-11:** Conduct a traffic study during high peak times (ex. Tuesday and Saturdays due to Cherry Auction) to include potential road widening plans.
- ▶ **Noise**
- **N-1:** Establish noise standards that are protective of residential and other noise-sensitive uses.
 - **N-2:** Identify noise-impacted areas in the Plan Area. (*A noise impacted area is an area that exceeds the City's noise standards.*)
 - **N-3:** Require the protection of noise-impacted areas through effective noise mitigation measures such as barriers, berms, design and placement of buildings, sound absorbing materials, and vegetation.
 - **N-4:** Require new sources of noise to use the best available technology to minimize noise. (*New development projects that generate noise in excess of the noise thresholds will be subject to this policy.*)
 - **N-5:** When designing and improving streets and highways, consider measures to reduce traffic noise.
- ▶ **Light and Glare**
- **L-1:** Require the incorporation of measures such as shielding or dimming to reduce outdoor lighting impacts.
- ▶ **Green Barriers/Tree Coverage/Beautification**
- **GB-1:** Require buffers between new industrial development and existing neighborhoods.
 - **GB-2:** Require the Installation of solid barriers or vegetative buffers between emissions sources and schools, daycares, medical offices, and homes.
 - **GB-3:** Require the Increased coverage of parking lots to avoid the "heat island effect."
 - **GB-4:** Create a Green Street Tree Planting Program, prioritizing areas with few trees.
 - **GB-5:** Coordinate with Tree Fresno on a Community Landscapes Plan.
 - **GB-6:** Support dual use of drainage facilities such as ponding basins and canals.
 - **GB-7:** Establish landscaping and site design standards for new businesses and industry, especially next to existing neighborhoods.
 - **GB-8:** Transform Highways 99 and 41 into gateways into the Plan Area through landscaping and architectural design.
- ▶ **Energy and Green Building**
- **EGB-1:** Require the reduction of energy consumption and promote energy efficiency through education, conservation programs, building design/operation standards, and incentive programs.
 - **EGB-2:** Incentivize private solar installations by providing information about financing and by expediting the permit process.

- **EGB-3:** Encourage installation of solar panels, battery storage, and zero emission backup electricity generators at distribution centers.
- ▶ **Water**
 - **W-1:** Protect groundwater and surface water by regulating sewage disposal facilities and preventing contaminating uses.
 - **W-2:** Implement a periodic water quality testing program in areas where contamination has been an issue.
 - **W-3:** Provide supplemental water resources to areas already impacted by groundwater quality and quantity degradation.
 - **W-4:** Identify funding tools to expand water system access in and near the Plan Area.
 - **W-5:** Require new development to implement water conservation measures and to contribute towards expanded and upgraded facilities.
 - **W-6:** Reduce water consumption through education, conservation standards, landscaping standards, retrofit programs, and incentive programs.
 - **W-7:** Seek funding to expand water facilities to neighbors within the Plan Area.
- ▶ **Solid Waste and Illegal Dumping**
 - **SW-1:** Establish community sanitation programs to address litter clean-up and illegal dumping.

EMPLOYMENT/COMMUNITY DEVELOPMENT POLICIES

The following policies seek to balance economic benefit and environmental impact, as well as increase the quality of life of local stakeholders:

- ▶ **Economic Development**
 - **E-1:** Coordinate a regional economic development strategy and monitor trends, emerging markets, and new technologies.
 - **E-2:** Implement programs to attract diverse new businesses and industries.
 - **E-3:** Consider establishing a funding/ grant program for small businesses.
 - **E-4:** Develop incentives to attract lower emission and greener industries.
- ▶ **Job Training and Employment**
 - **E-5:** Promote job training programs such as Career Technical Education, adult education, internships, mentoring, and apprenticeship.
 - **E-6:** Connect businesses with training, education, and local community partners.
 - **E-7:** Connect residents to existing training programs and to jobs in their neighborhoods.
 - **E-8:** Locate a new job training center accessible to job seekers.
 - **E-9:** Collaborate with Fresno City College local education institutions to establish a job training program that can serve as a source of readily-employable persons for surrounding businesses.
 - **E-10:** Prioritize hiring local residents.
- ▶ **Internet Access and Computer Literacy**
 - **E-11:** Increase public access to quality internet service.
 - **E-12:** Prioritize fiber connectivity in the Plan Area.

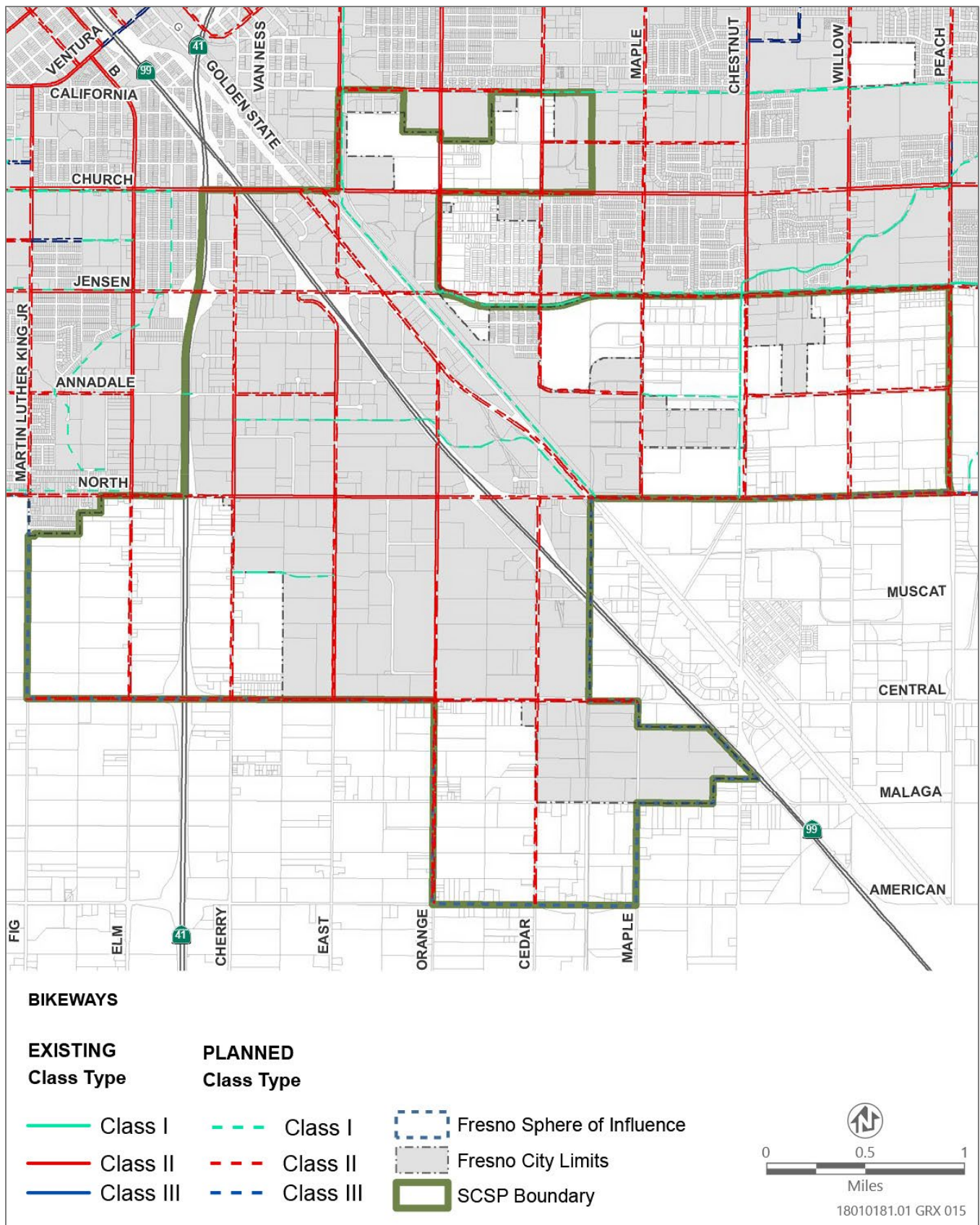
- **E-13:** Develop computer literacy programs and assist with online job applications.
- ▶ **Community Benefit District**
 - **CBD-1:** Consider a Community Benefit Fund to pay for measures such as air filtration systems, dual-paned windows, parks, job training programs, and job fairs near the Plan Area.
 - **CBD-2:** Encourage business and residential partnerships to assist in increasing communication and transparency and to provide a mechanism to raise concerns.
 - **CBD-3:** Investigate opportunities to develop resilient green buffers between existing industrial and residential uses.
 - **CBD-4:** Seek out funding to pay for dual-use ponding basins and green areas.
 - **CBD-5:** Research community benefit agreements around the country to determine how they could work and be funded in this Plan Area.
- ▶ **Public Noticing**
 - **PN-1:** Establish new noticing requirements for all project types.

3.6.4 Circulation Improvements

As identified in the SCSP, circulation improvements will be carried out by private developments, the County of Fresno, and the City of Fresno. Roadway bicycle and trail facilities from Fresno ATP and safe routes to school improvements by the City would be programmed into the Capital Improvement Plan and constructed as funding is available. The following describes the proposed improvements within the Plan Area.

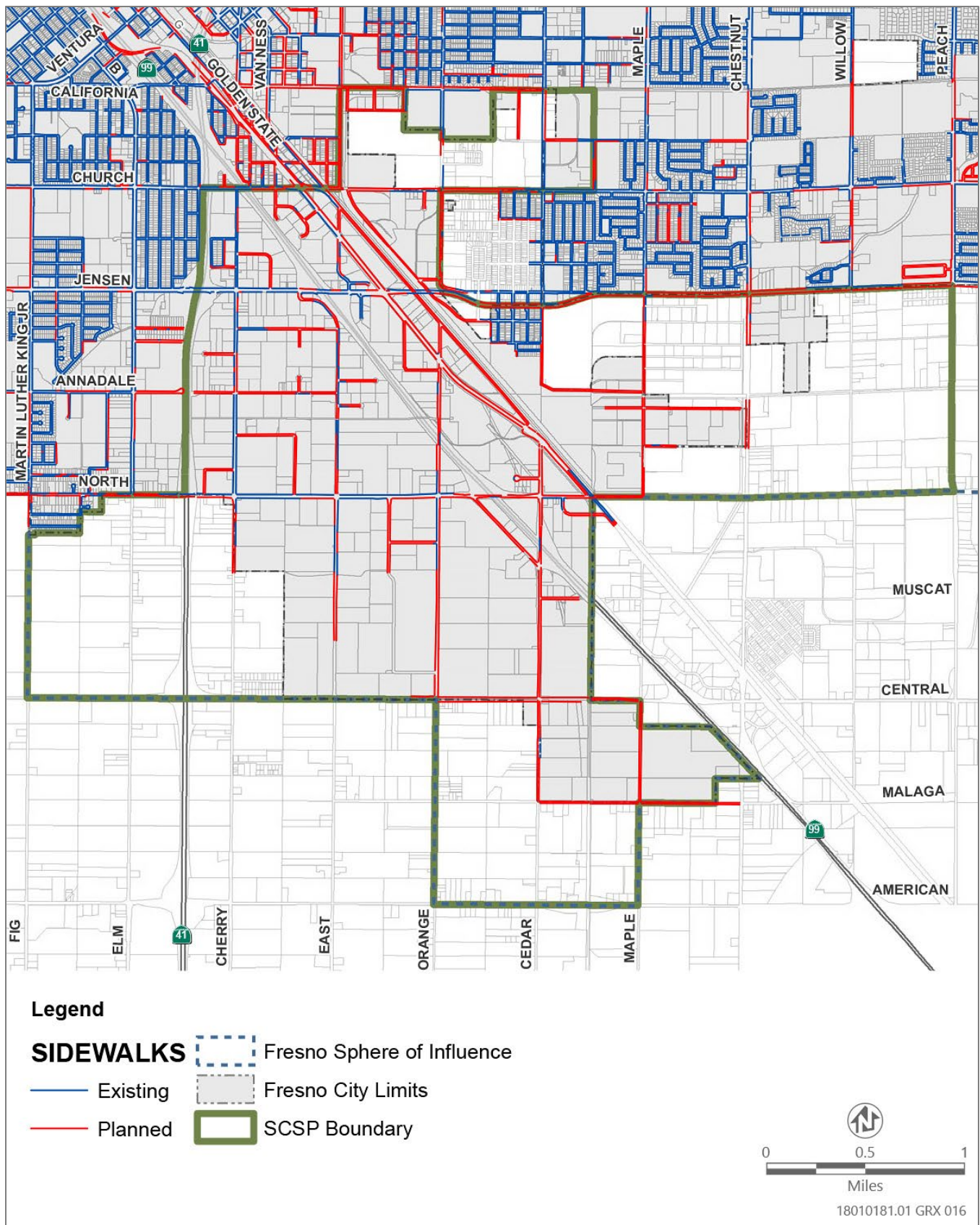
Pedestrian and Bicycle

The Plan Area has an incomplete bicycle and pedestrian network. There are many locations that lack bikeways and sidewalks or that have sidewalk gaps between developments. Inconsistent bicycle and pedestrian networks contribute to an unsafe and uninviting environment for pedestrians and cyclists. The Fresno Active Transportation Plan (ATP), adopted in 2016, proposes a long-term, comprehensive network of citywide bikeways, trails, and sidewalks that connect all parts of Fresno. Figures 3-8 and 3-9 show the existing and planned bikeways, trails, and sidewalks within the Plan Area.



Source: 2023 City of Fresno South Central Specific Plan, adapted by Ascent in 2023.

Figure 3-8 Existing and Planned Bicycle and Trail Network



Source: 2023 City of Fresno South Central Specific Plan, adapted by Ascent in 2023.

Figure 3-9 Existing and Planned Sidewalk Network

Safe Routes to Schools

Safe Routes to School programs aim to make it safer for students to use active modes of transportation, such as walking and biking, to school. In January 2020, the Fresno City Council approved a Safer Sidewalks to School Resolution, which was one of the recommendations of the Fresno ATP. The resolution acknowledged that many parts of the City lack complete sidewalks, creating hazards to pedestrians, particularly to children around neighborhood schools and that a more complete system of sidewalks would improve safety, walkability, bikeability, and community health.

Orange Center Elementary School, the only school in the Plan Area, is located on Cherry Avenue, between North and Central Avenues, and is outside of City of Fresno limits. As discussed in the RTTAP, potential safety improvements for students could include Class IV protected bikeways and sidewalks along Cherry Avenue, when annexed into the City.

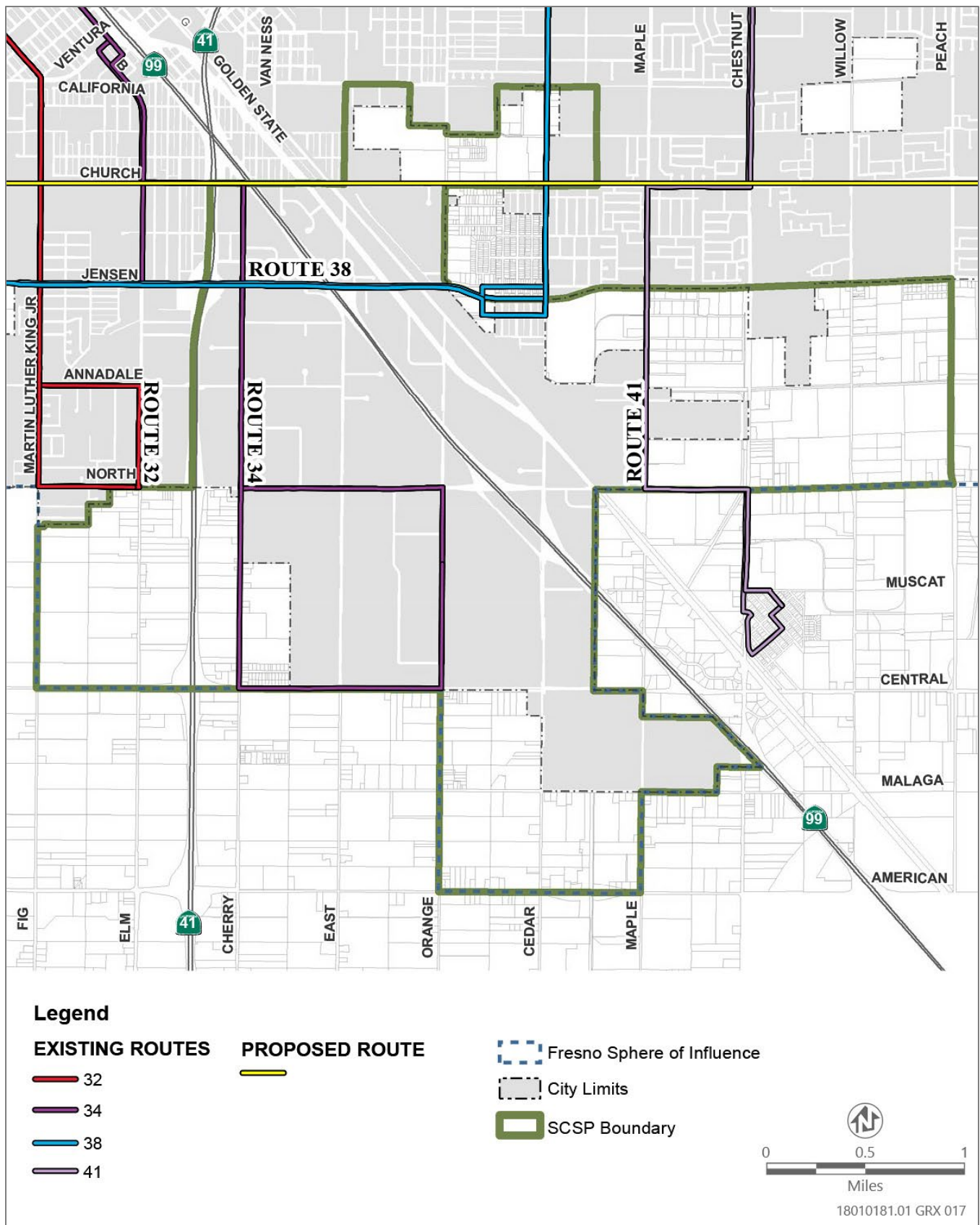
Transit

Transit service within the Plan Area is provided by Fresno Area Express (FAX). -Four of the 18 fixed routes provided by FAX are located immediately adjacent to and within the Plan Area. Figure 3-10 shows the existing and planned transit routes within the Plan Area.

Roadway Capacity and Planned Projects

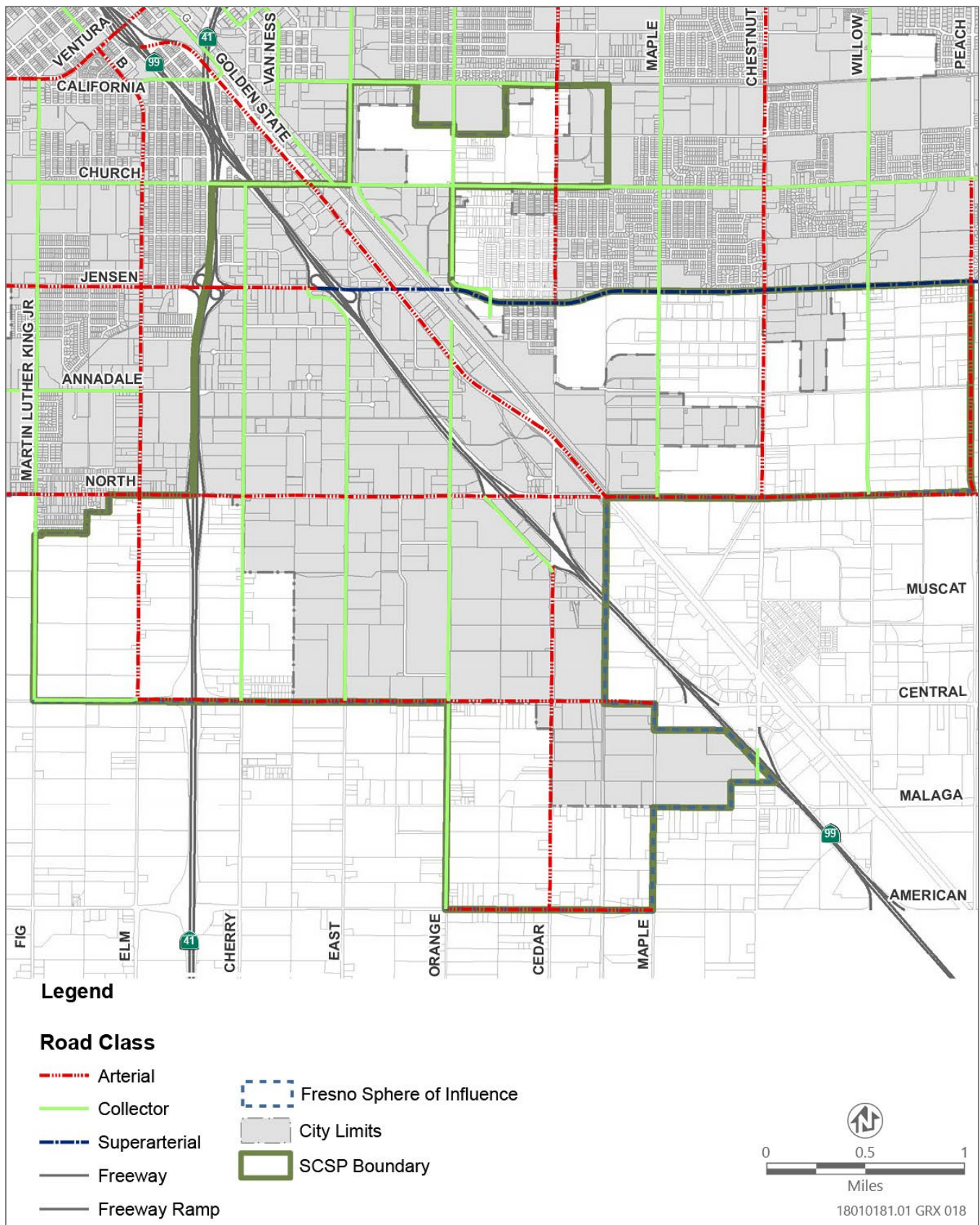
The public roadway network and State highway routes comprise the predominant transportation infrastructure in and around Fresno. The existing roadway network in South Central Fresno is predominantly a traditional grid network with major streets spaced at half-mile intervals. Figure 3-11 shows the planned roadway network within the Plan Area and Figure 3-12 shows three major east-west roadways and one major north-south roadway that are planned to be widened with additional lanes.

The City and the SJVAPCD are engaged in a truck reroute study (and companion health impact assessment) for the South Central Fresno AB 617 Community, which includes the Plan Area (see Chapter 1, "Introduction" of the SCSP for discussion of the Truck Reroute Study). The study is designed to address, among other things, truck transportation conflicts, accidents, and residential and school impacts. The truck reroute study is not yet complete, but it is anticipated that its recommendations will be implemented by the City and would further reduce the potential for transportation conflicts and hazards from incompatible land uses. Policies T-1 and T-2 of the SCSP would be implemented by the City's Public Works Department through the South Central Fresno AB 617 Community Truck Reroute Study. Policy outcomes and recommendations that result from the truck reroute study shall be adopted by reference in the SCSP.



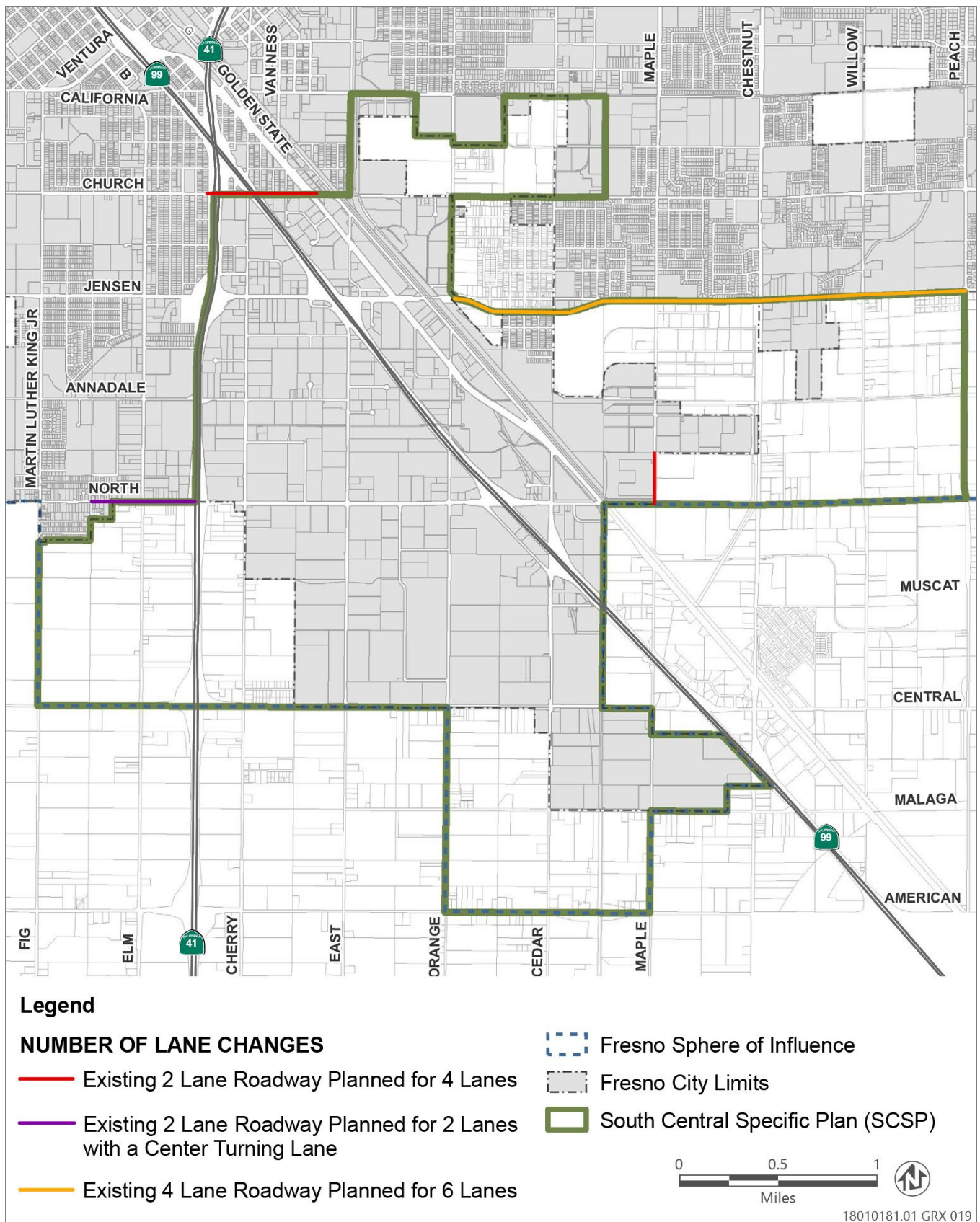
Source: 2023 City of Fresno South Central Specific Plan, adapted by Ascent in 2023.

Figure 3-10 Existing and Planned Transit Routes



Source: 2023 City of Fresno South Central Specific Plan, adapted by Ascent in 2023.

Figure 3-11 Roadway Classifications



Source: 2023 City of Fresno South Central Specific Plan, adapted by Ascent in 2023.

Figure 3-12 Planned Number of Roadway Lane Changes

3.6.5 Proposed Utilities

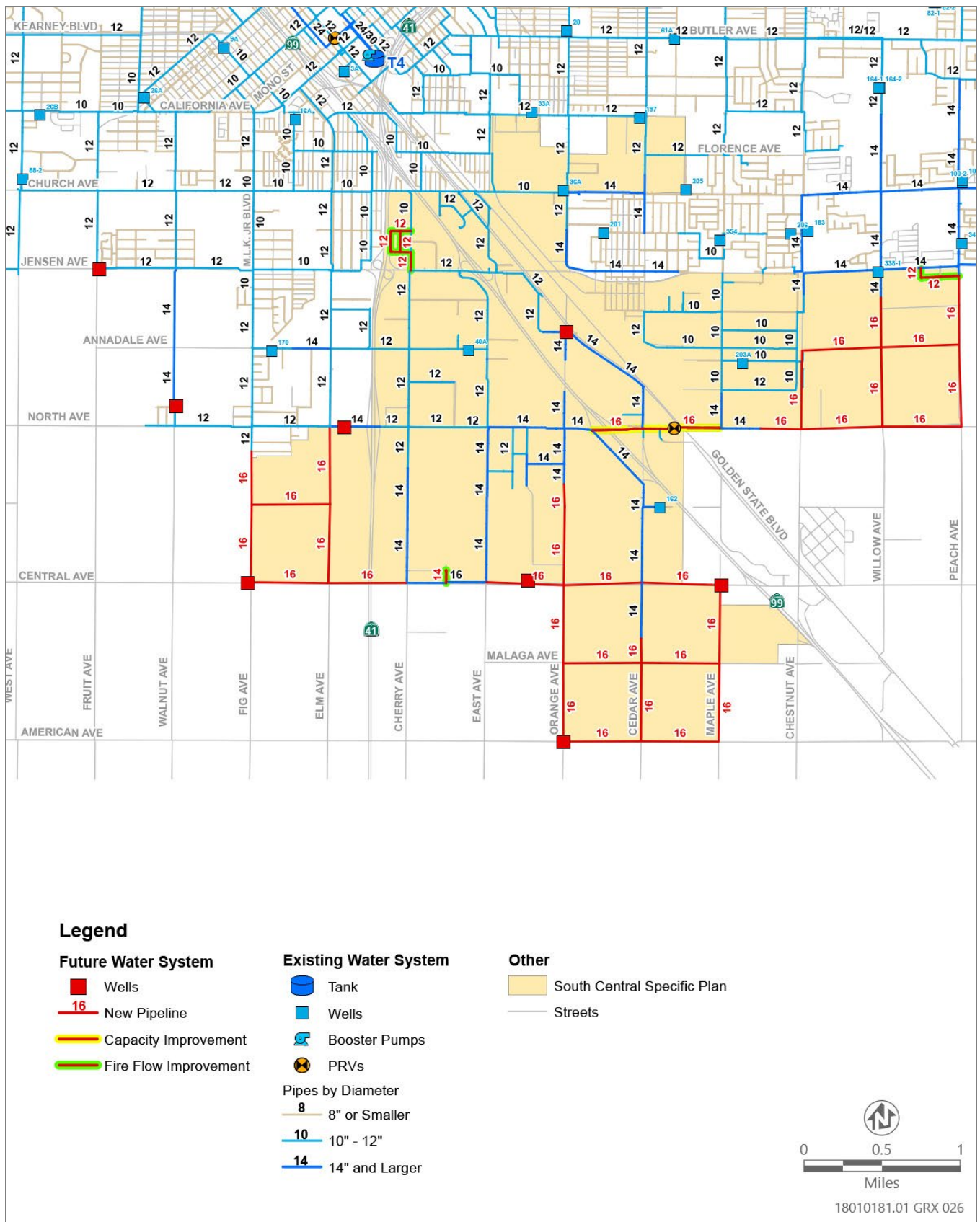
WATER AND WASTEWATER

To assess the need for future water and wastewater infrastructure needs in the Plan Area, the City retained Akel Engineering Group, Inc to prepare a hydraulic analysis (Akel 2022). This study assesses the impacts of proposed Plan Area water distribution and sewer collection systems resulting from proposed land use amendments. Capacity deficiencies in the existing and future water and wastewater systems were identified utilizing the City's existing hydraulic model and information from the City's 2020 Urban Water Management Plan, 2010 Water System Master Plan, and 2015 Sewer System Master Plan. The analysis concluded that water and sewer services within the Plan Area must be enhanced to support the development generated by the Specific Plan and maintain the target levels of service. As depicted on Figures 3-13, and 3-14 the following wet utility improvements are proposed as part of the SCSP:

- ▶ **Water:** The increase in surface water demand would require the installation of 14.7 miles of new 16-inch transmission grid mains and approximately eight new wells with a capacity of 2,125 gallons per minute (gpm) within the Plan Area.
- ▶ **Sewer:** A network of sewer collection infrastructure would be installed throughout the Plan Area to serve development. The proposed wastewater collection system would include installation of new transmission grid mains, upsizing of conveyance pipelines located along North Avenue between Cedar Avenue and Parkway Drive, and lift station capacity upgrade to a 5.4 million gallons per day (mgd).

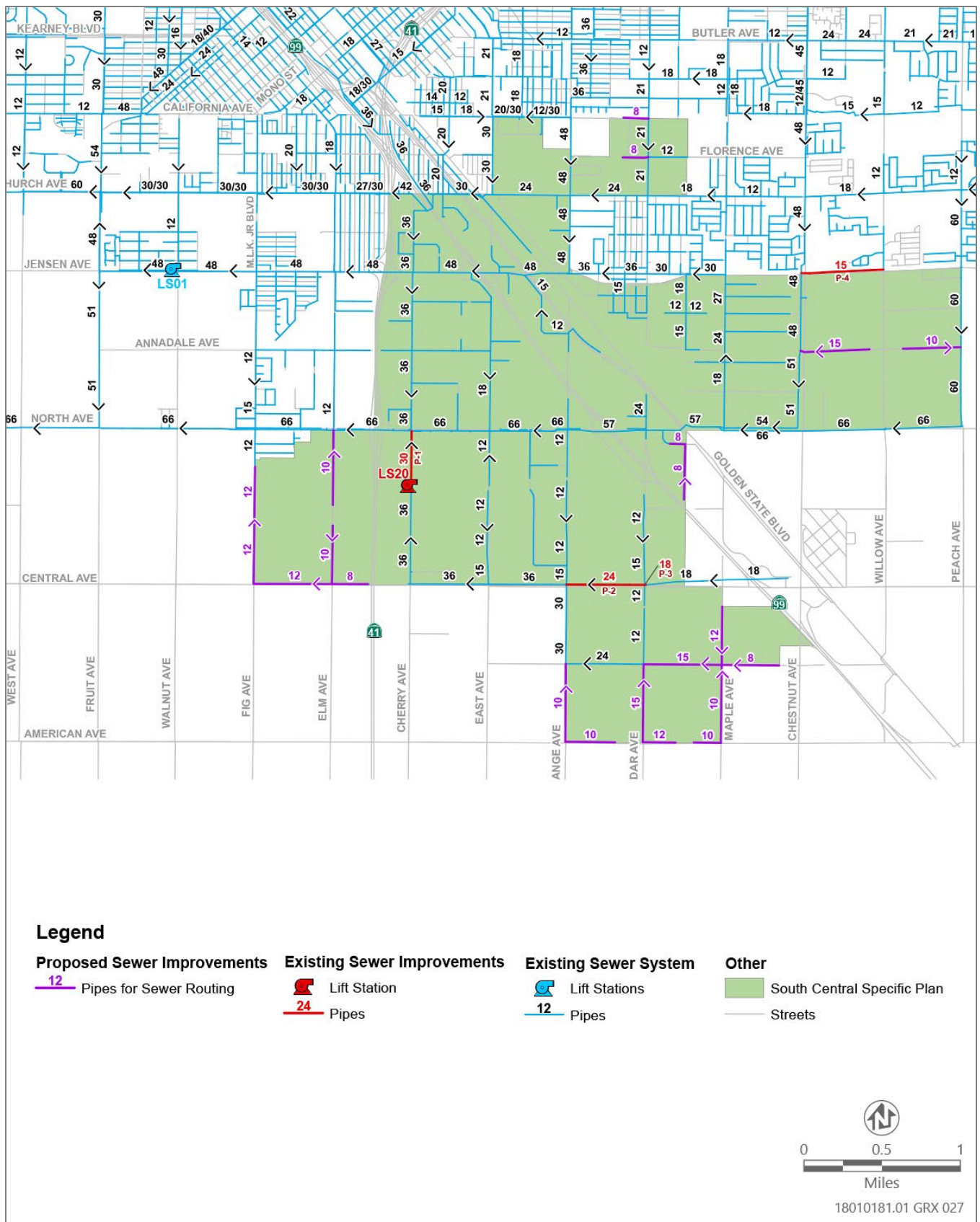
STORMWATER

The Fresno Metropolitan Flood Control District (FMFCD) is a special-purpose district that acquires and constructs facilities for flood control and the drainage of flood and storm waters, and conserves waters within the City. The proposed plan will change ponding basin capacities and require up to two new basins within the planning area. In addition, specific upgrades as part of the proposed plan to maintain service may include new streets and gutters, storm drain inlets, storm drain pipelines, detention and retention basins, pump stations, and outfall facilities that collect and drain runoff from developed land areas. Development would be planned in accordance with requirements set forth under the Stormwater Quality Management Plan (SWQMP).



Source: 2023 City of Fresno South Central Specific Plan, adapted by Ascent in 2023.

Figure 3-13 Water Distribution



Source: 2023 City of Fresno South Central Specific Plan, adapted by Ascent in 2023.

Figure 3-14 Sewer Collection System

3.6.6 Development Standards

The proposed plan includes proposed use regulations, permit requirements, and development standards. These regulations, requirements, and standards govern all future private development actions in the Plan Area, including new construction, additions, and renovations to existing structures and/or new land uses proposed for existing facilities. These regulations do not, however, govern legal non-conforming uses, structures, site features or lots. In addition, one overlay zone is identified to ensure compatibility with the proposed plan's vision and existing conditions. The proposed overlay zone would be applied over each zoning district in the Plan Area, adding a layer of development standards and use regulations within the designed overlay boundary (see Figure 3-15). Per the purpose of the SCSP, sensitive uses are defined as residential, school, park, and day care. Figure 3-16 identifies the proposed buffer zones implemented to protect these sensitive uses.

Development Regulations

1. Prohibit the following use classifications:
 - ▶ Rendering
 - ▶ Slaughterhouse
2. Prohibit the following use classifications within 1,000 feet of a sensitive use:
 - ▶ Service Station
 - ▶ Shooting/Archery Range
 - ▶ Salvage and Wrecking
 - ▶ Warehousing, Storage, and Distribution: Chemical and Mineral Storage
 - ▶ Freight/Truck/Terminals and Warehouses
 - ▶ Waste Transfer Facility
 - ▶ Mining and Quarrying
3. Require a Conditional Use Permit (CUP) for the following use classifications that fall within 1,000 feet of a sensitive use:
 - ▶ Motorcycle/Riding Club
 - ▶ Construction and Material Yards
 - ▶ Limited Industrial
 - Dry cleaning plants would not be permitted
 - ▶ Warehousing, Storage, and Distribution: Indoor Warehousing and Storage*
 - ▶ Warehousing, Storage, and Distribution: Outdoor Storage*
 - ▶ Warehousing, Storage, and Distribution: Wholesaling and Distribution*

*Must meet CARB criteria for zero emission facilities, as defined in CA Sustainable Freight Action Plan (July 2016)
4. Apply building setback standards to industrial uses that adjoin sensitive uses (see Figure 5-3 of the SCSP). In this circumstance, the following standards shall apply:
 - ▶ The buildings should be setback a minimum of 100 feet when sharing the same property line.
 - ▶ A wall or screen should be placed on the property line that is a minimum of 10 feet tall and be opaque for visual obscurity. Blank concrete or CMU walls without piers, caps and finishes are not allowed.
 - ▶ The minimum 50-foot landscape buffer should include a tree density canopy that covers 100 percent of the buffer area within 10 years of planting. Native trees, shrubs, and groundcovers should be selected over

ornamental species. The property owner and any successors in interest shall maintain these trees for the duration of ownership, ensuring any unhealthy or dead trees are replaced timely as needed.

- ▶ All landscaping shall be drought tolerant, and to the extent feasible, species with low biogenic emissions. Palm trees shall not be utilized.
 - ▶ All landscaping areas shall be properly irrigated for the life of the facility to allow for plants and trees to maintain growth.
 - ▶ Uses within the 100-foot setback and outside of the landscape buffer area can include a fire lane and if necessary, limited employee parking, but no visitor parking or public entries, loading docks, service yards, trash areas/disposal, or truck parking and idling.
5. Buildings that face major public access streets and require employee and visitor parking and entries, shall be setback a minimum of 150 feet from the curb line of the adjoining street (see Figure 5-3 of the SCSP). In this circumstance, the following standards should apply:
- ▶ A 45-foot minimum landscape buffer shall be provided from the back of the public sidewalk to a low wall or fence screen that hides the car parking lot. The height of the wall or fence should be no less than 3 feet. Company signage can be incorporated into the wall as it faces the public right of way.
 - ▶ The landscaped buffer area should include 100 percent tree canopy coverage within 10 years of planting. Native trees, shrubs and groundcovers should be selected over ornamental species.
 - ▶ No loading docks, service yards, trash areas, truck parking or idling is permitted.
6. In addition to the development standards outlined above, the City will amend its Development Code to meet, at minimum, the following:

Buffering & Screening:

- ▶ A solid decorative wall(s) of at least 10' in height between warehouses & all sensitive uses.
- ▶ Unless physically impossible, loading docks and truck entries shall be oriented away from abutting sensitive receptors.
- ▶ To the greatest extent feasible, loading docks, truck entries, and truck drive aisles shall be located away from nearby sensitive uses. In making feasibility decisions, the City must comply with existing laws and regulations and balance public safety and the site development's potential impacts to nearby sensitive uses. Therefore, loading docks, truck entries, and drive aisles may be located nearby sensitive uses at the discretion of the Planning Director, but any such site design shall include measures designed to minimize overall impacts to nearby sensitive uses.
- ▶ For any Warehouse building larger than 400,000 square feet in size, the building's loading docks shall be located a minimum of 300 feet away, measured from the property line of the sensitive receptor to the nearest dock door which does not exclusively serve electric trucks using a direct straight-line method.

Signage & Traffic Patterns

- ▶ Entry gates into the loading dock/truck court area shall be positioned after a minimum of 140 feet of total available stacking depth inside the property line. The stacking distance shall be increased by 70 feet for every 20 loading docks beyond 50 docks. Queuing, or circling of vehicles, on public streets immediately pre- or post-entry to an industrial commerce facility is strictly prohibited unless queuing occurs in a deceleration lane or right turn lane exclusively serving the facility.
- ▶ Applicants shall obtain approval of all turning templates to verify truck turning movements at entrance and exit driveways and street intersection adjacent to industrial buildings prior to entitlement approval.
- ▶ Anti-idling signs indicating a 3-minute diesel truck engine idling restriction shall be posted at industrial commerce facilities along entrances to the site and in the dock areas and shall be strictly enforced by the facility operator.

- ▶ Prior to issuance of certificate of occupancy, facility operators shall establish and submit for approval a Truck Routing Plan to and from the State Highway System based on the City's latest Truck Route Map.
 - The plan shall describe the operational characteristics of the use of the facility operator, including, but not limited to, hours of operations, types of items to be stored within the building, and proposed truck routing to and from the facility to designated truck routes that avoids passing sensitive uses, to the greatest extent possible.
 - The plan shall include measures, such as signage and pavement markings, queuing analysis and enforcement, for preventing truck queuing, circling, stopping, and parking on public streets.
 - Facility operator shall be responsible for enforcement of the plan.
 - A revised plan shall be submitted prior to a business license being issued by the City for any new tenant of the property.
 - The Planning Director shall have discretion to determine if changes to the plan are necessary, including any additional measures to alleviate truck routing and parking issues that may arise during the life of the facility.
- ▶ Signs and drive aisle pavement markings shall clearly identify the onsite circulation pattern to minimize unnecessary on-site vehicular travel.
- ▶ Facility operators shall post signs in prominent locations inside and outside of the building indicating that off-site parking for any employee, truck, or other operation related vehicle is strictly prohibited. The City may require facility operators to post signs on residential streets indicating that off-site truck parking is prohibited.
- ▶ Signs shall be installed at all truck exit driveways directing truck drivers to the truck route as indicated in the Truck Routing Plan and State Highway System.
- ▶ Signs shall be installed in public view with contact information for a local designated representative who works for the facility operator and who is designated to receive complaints about excessive dust, fumes, or odors, and truck and parking complaints for the site, as well as contact information for the SJVAPCD's complaint call-line: 1-800-870-1037. Any complaints made to the facility operator's designee shall be answered within 72 hours of receipt.
- ▶ Prior to issuance of a business license, the City shall ensure for any facility with a building or buildings larger than 400,000 total square feet, that the facility shall include a truck operator lounge equipped with clean and accessible amenities such as restrooms, vending machines, television, and air conditioning.

Alternative Energy

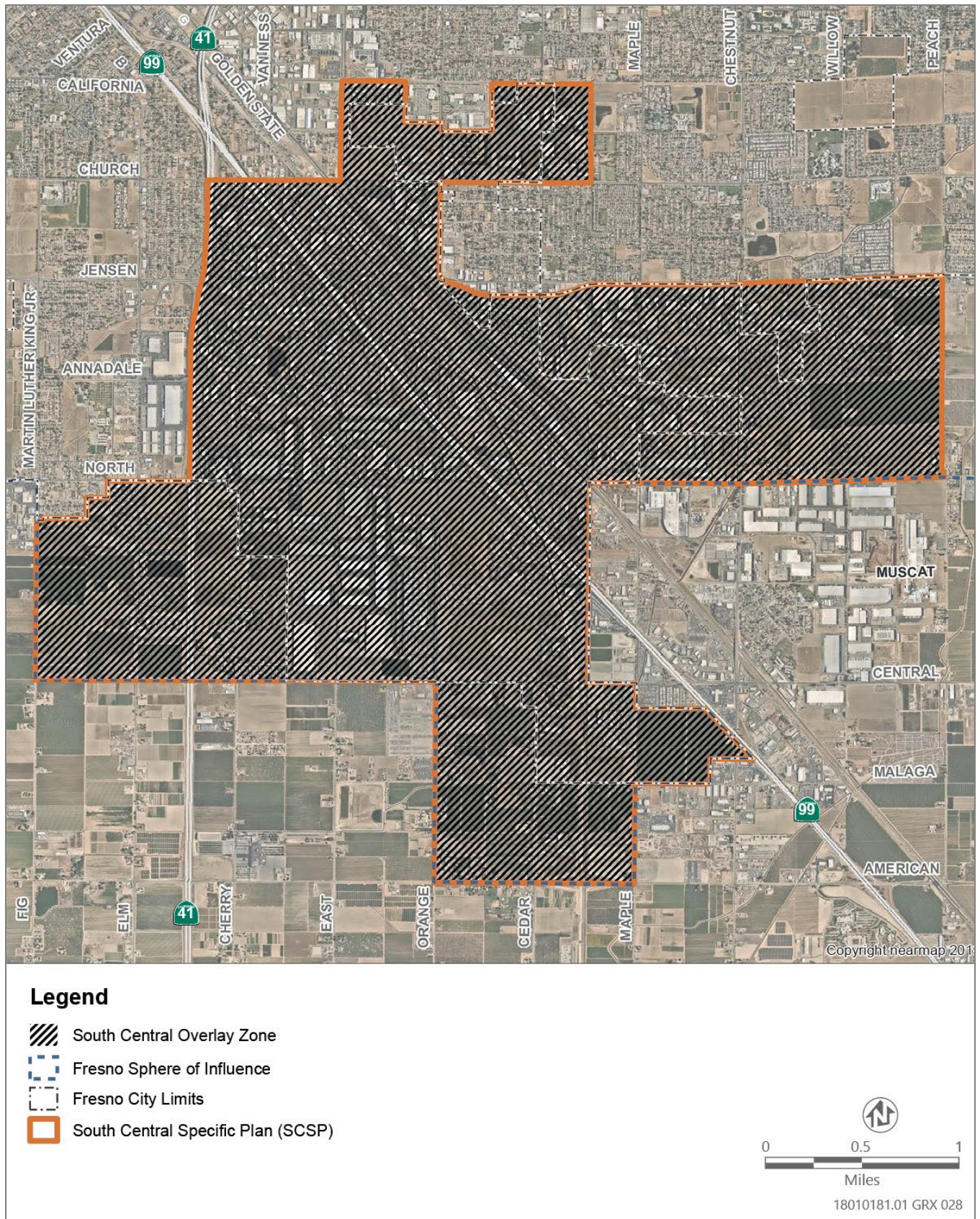
- ▶ On-site motorized operational equipment shall be ZE (zero emission).
- ▶ All building roofs shall be solar-ready, which includes designing and constructing buildings in a manner that facilitates and optimizes the installation of a rooftop solar photovoltaic (PV) system at some point after the building has been constructed.
- ▶ The office portion of a building's rooftop that is not covered with solar panels or other utilities shall be constructed with light colored roofing material with a solar reflective index ("SRI") of not less than 78. This material shall be the minimum solar reflective rating of the roof material for the life of the building.
- ▶ On buildings over 400,000 square feet, prior to issuance of a business license, the City shall ensure rooftop solar panels are installed and operated in such a manner that they will supply 100% of the power needed to operate all non-refrigerated portions of the facility including the parking areas.
- ▶ At least 10% of all passenger vehicle parking spaces shall be electric vehicle (EV) ready, with all necessary conduit and related appurtenances installed. At least 5% of all passenger vehicle parking spaces shall be equipped with working Level 2 Quick charge EV charging stations installed and operational, prior to building occupancy. Signage shall be installed indicating EV charging stations and specifying that spaces are reserved for clean air/EV vehicles. Unless superior technology is developed that would replace the EV charging units, facility operator and

any successors in interest shall be responsible for maintaining the EV charging stations in working order for the life of the facility.

- ▶ Unless the owner of the facility records a covenant on the title of the underlying property ensuring that the property cannot be used to provide chilled, cooled, or freezer warehouse space, a conduit shall be installed during construction of the building shell from the electrical room to 100% of the loading dock doors that have potential to serve the refrigerated space. When tenant improvement building permits are issued for any refrigerated warehouse space, electric plug-in units shall be installed at every dock door servicing the refrigerated space to allow transport refrigeration units (TRUs) to plug in. Truck operators with TRUs shall be required to utilize electric plug-in units when at loading docks.
- ▶ Bicycle racks are required per Section 15-2429 of the Fresno Municipal Code. The racks shall include locks and electric plugs to charge electric bikes and shall be located as close as possible to employee entrance(s). Nothing in this section shall preclude the warehouse operator from satisfying this requirement by utilizing bicycle parking amenities considered to be superior such as locating bicycle parking facilities indoors or providing bicycle lockers.

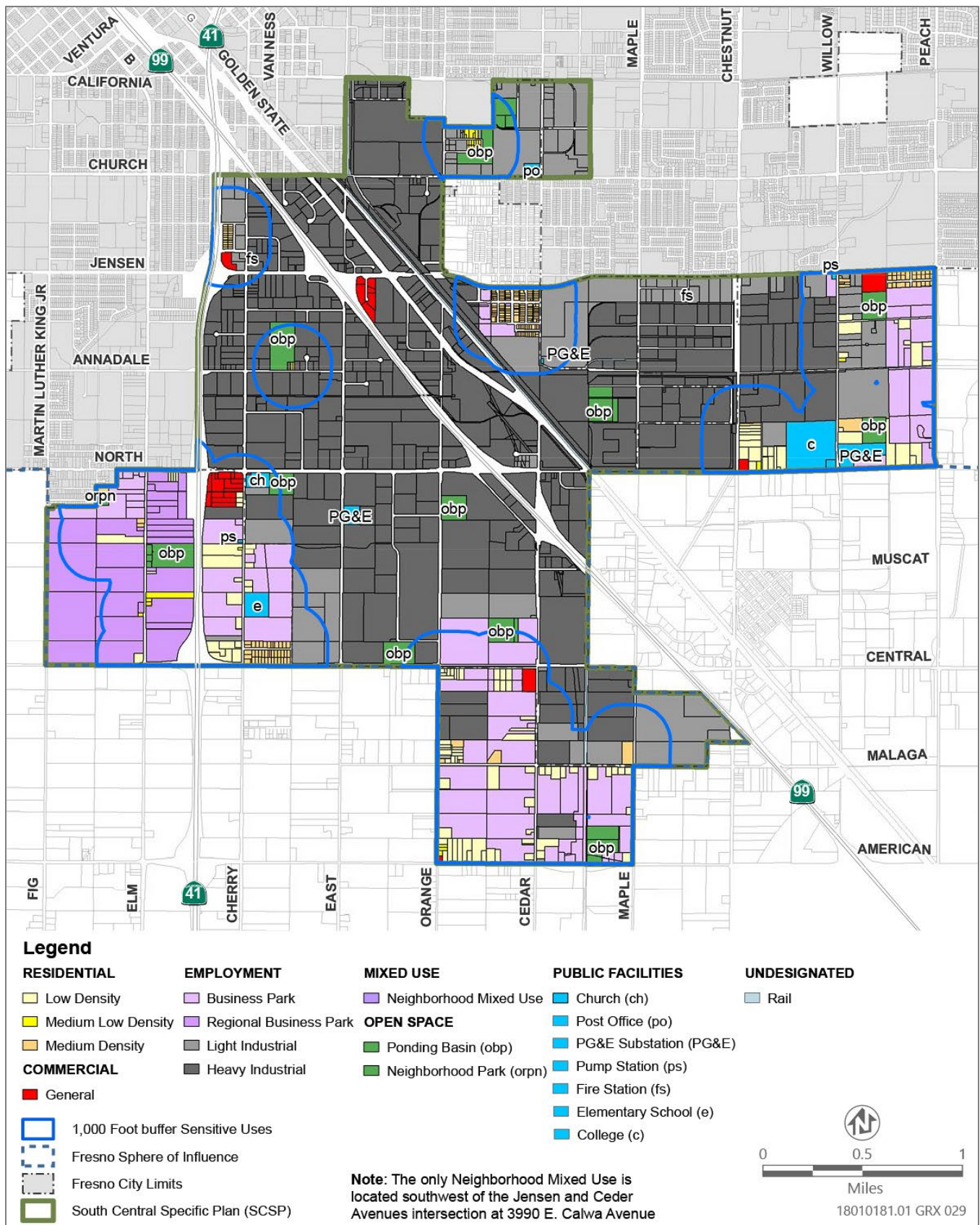
Operation & Construction

- ▶ Cool surface treatments shall be added to all drive aisles and parking areas, or such areas shall be constructed with a solar-reflective cool pavement such as concrete.
- ▶ To ensure that warehouse electrical rooms are sufficiently sized to accommodate the potential need for additional electrical panels, either a secondary electrical room shall be provided in the building, or the primary electrical room shall be sized 25% larger than is required to satisfy the service requirements of the building or the electrical gear shall be installed with the initial construction with 25% excess demand capacity.
- ▶ Use of super-compliant VOC architectural and industrial maintenance coatings (e.g., paints) shall be required.
- ▶ The facility operator shall incorporate a recycling program.
- ▶ The following environmentally responsible practices shall be required during construction:
 - The applicant shall use reasonable best efforts to deploy the highest rated CARB Tier technology that is available at the time of construction. Prior to permit issuance, the construction contractor shall submit an equipment list confirming equipment used is compliant with the highest CARB Tier at the time of construction. Equipment proposed for use that does not meet the highest CARB Tier in effect at the time of construction, shall only be approved for use at the discretion of the Planning Director and shall require proof from the construction contractor that, despite reasonable best efforts to obtain the highest CARB Tier equipment, such equipment was unavailable.
 - Use of electric-powered hand tools, forklifts, and pressure washers.
 - Designation of an area in any construction site where electric powered construction vehicles and equipment can charge.
 - Identification in site plans of a location for future electric truck charging stations and installation of a conduit to that location.
 - Diesel-powered generators shall be prohibited except in case of emergency or to establish temporary power during construction.
- ▶ A Property Maintenance Program shall be submitted for review and approval prior to the issuance of building permits. The program shall provide for the regular maintenance of building structures, landscaping, and paved surfaces in good physical condition, and appearance. The methods and maximum intervals for maintenance of each component shall be specified in the program.
- ▶ Property owner shall provide the facility operator with information on incentive programs such as the Carl Moyer Program and Voucher Incentive Program and shall require all facility operators to enroll in the United States Environmental Protection Agency's SmartWay Program.



Source: 2023 City of Fresno South Central Specific Plan, adapted by Ascent in 2023.

Figure 3-15 South Central Overlay Zone



Source: 2023 City of Fresno South Central Specific Plan, adapted by Ascent in 2023.

Figure 3-16 SPLU Proposed Buffers

3.7 POTENTIAL PERMITS AND APPROVALS REQUIRED

The Fresno City Council is the CEQA lead agency responsible for considering adoption and implementation of the proposed plan. As the lead agency under CEQA, Fresno is responsible for considering the adequacy of the EIR and determining if the project should be approved (Table 3-8).

Table 3-8 Required Approvals

Project Approval	Approving Authority
Approval of the General Plan Amendment, Development Code Amendment, and Rezone	Fresno City Council
Adoption of the South Central Specific Plan	Fresno City Council
Certification of the EIR	Fresno City Council
Repeal of the North Avenue Industrial Triangle Specific Plan	Fresno City Council
Replace the overlapping portion of the plan areas	Fresno City Council

The EIR is intended to apply to all listed project approvals as well as to any other approvals necessary or desirable to implement the project.

3.8 SUBSEQUENT ENTITLEMENTS AND APPROVALS

This Draft EIR has been prepared by the City to assess the potential environmental impacts that may arise in connection with actions related to implementation of the proposed plan. Pursuant to CEQA Guidelines Section 15367, the City is the Lead Agency for the proposed plan and has discretionary authority over the plan and future project approvals. This Draft EIR is intended to evaluate the environmental impacts of the proposed plan to the greatest extent possible and is used as the primary environmental document to evaluate subsequent planning and permitting actions associated with projects in the Plan Area. Once certified, the City intends for this analysis to be used consistent with all available streamlining provisions in CEQA, including, but not limited to, Guidelines Section 15162-15168, 15182 and 15183.

Other agencies may be consulted during the adoption process, however, their approval is not required for adoption of the proposed plan. Any subsequent development under the proposed plan may require approval of State, federal and Responsible Trustee Agencies that may rely on the analysis in this Draft EIR. These agencies may include but are not limited to:

- ▶ California Department of Transportation,
- ▶ California State Water Resources Control Board (State Water Board),
- ▶ California Department of Fish and Wildlife (CDFW),
- ▶ Central Valley Regional Water Quality Control Board (Central Valley RWQCB),
- ▶ Fresno Local Agency Formation Commission,
- ▶ San Joaquin Valley Air Pollution Control District (Valley Air District),
- ▶ Fresno Municipal Flood Control District, and
- ▶ Fresno Irrigation District.

3.8.1 Discretionary and Ministerial Actions

The proposed project is a policy-level document and does not include any specific development proposals and may not fully evaluate the impacts of other future specific, individual development that may be approved under implementation of the proposed project. The Planning Commission and other decision-making bodies would review the proposed project and make recommendations to the City Council, who has approval authority for adoption of the proposed plan and related actions. Future projects may be tiered off this Draft EIR or be found consistent with

this Draft EIR pursuant to one or more of CEQA's streamlining processes and may require additional, project-specific environmental analysis to secure the necessary discretionary development permits. Subsequent projects will be reviewed by the City for consistency with the General Plan, Specific Plan, Zoning Ordinance, and this Draft EIR, and subsequent project-level environmental review will be conducted if required by CEQA. Adoption of the proposed project would be enacted by a resolution of the City Council for the following discretionary actions:

- ▶ Adoption of the Fresno South Central Specific Plan.
- ▶ Amendment of the Fresno General Plan, including amendments to the Land Use Map and text.
- ▶ Approval of any future annexations would be subsequent to initial adoption of the Specific Plan.
- ▶ Repeal of the North Avenue Industrial triangle Specific Plan.
- ▶ Replace overlapping portion of the plan areas.

Adoption of the proposed project would be enacted by a City ordinance for the following discretionary actions:

- ▶ Rezoning of property for consistency with the General Plan Amendment and South Central Specific Plan.
- ▶ Text Amendment of the Development Code to incorporate new overlay zone and other provisions called for in the South Central Specific Plan.

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4 AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES AND MITIGATION MEASURES

4.0 APPROACH TO THE ENVIRONMENTAL ANALYSIS

This Draft EIR evaluates and discloses the environmental impacts associated with the proposed plan, in accordance with CEQA (Public Resources Code [PRC] Section 21000, et seq.) and the State CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3, Section 15000, et seq.). The potentially significant environmental impacts of implementation of the proposed plan, including assumed construction and operation, are evaluated in Sections 4.1 through 4.16, consistent with State CEQA Guidelines Section 15126.2. A significant impact is defined in CEQA as a substantial or potentially substantial adverse change to the physical environment resulting from implementation of a project. Where significant environmental impacts are identified, feasible mitigation measures are described. Mitigation measures may avoid, minimize, or compensate for significant adverse impacts and need to be fully enforceable through permit conditions, agreements, or other legally binding means (State CEQA Guidelines Section 15126.4[a]). Mitigation measures are not required for impacts that are found to be less than significant. In addition, Chapter 6, "Alternatives," presents a reasonable range of alternatives that may reduce the project's potentially significant or significant impacts on the environment.

4.0.1 Program-Level Environmental Review

The degree of specificity in an EIR will correspond to the degree of specificity in the underlying activity described in the EIR (State CEQA Guidelines Section 15146). For this reason, a program EIR, typically prepared for projects such as an area plan, should focus on the secondary effects that can be expected to follow from adoption of the plan, but the EIR need not be as detailed as a project-level EIR.

As described fully in Chapter 3, "Project Description," the project involves implementation of the SCSP. The proposed plan is a policy document that, together with proposed development standards and design guidelines, will guide growth in the 5,567-acre Plan Area.

In accordance with State CEQA Guidelines Section 15168, this document is a program EIR. The City will use this document to make decisions based on its planning policies and statutory requirements. A program EIR enables a lead agency to examine the overall effects (direct, indirect, and cumulative) of a proposed project or course of action and to consider broad policy alternatives and program-wide mitigation measures at an early time in the decision-making process, when the agency has greater flexibility. A program EIR under the provisions of the State CEQA Guidelines Section 15168 evaluates the impacts of a series of actions that can be characterized as one large project and are:

- ▶ related geographically;
- ▶ related as logical parts in a chain of contemplated actions;
- ▶ connected with issuances of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program; or
- ▶ related as individual activities carried out under the same authorizing statutory or regulatory authority that have generally similar environmental effects that can be mitigated in similar ways.

4.0.2 Baseline

The State CEQA Guidelines (CCR Section 15125[a]) state that:

An EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant.

As described in Chapter 1, "Introduction," the City issued a notice of preparation (NOP) for the project on July 8, 2019 and revised NOP on April 14, 2021, and initiated preparation of the CEQA environmental review process. While conditions in the Plan Area have not changed substantially since 2019, for purposes of this analysis, the baseline conditions for this Draft EIR are generally the conditions that existed in 2021. However, where appropriate, sections also address current conditions.

Sections 4.1 through 4.16 present the existing environmental conditions in the Plan Area and surrounding area as appropriate, in accordance with the State CEQA Guidelines (CCR Section 15125). This setting generally serves as the baseline against which environmental impacts are evaluated. The extent of the environmental setting area evaluated (the project study area) differs among resources, depending on the locations where impacts would be expected. For example, air quality impacts are assessed for the air basin (macroscale) as well as the site vicinity (microscale), whereas aesthetic impacts are assessed for the Plan Area vicinity only.

4.0.3 Significance Criteria

The State CEQA Guidelines (Section 15382) define a significant effect on the environment as:

...a substantial, or potentially substantial adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.

Sections 4.1 through 4.16 identify the standards used to determine the level of significance of the environmental impacts for each resource topic, in accordance with the State CEQA Guidelines (Sections 15126, 15126.2, and 15143). The topics upon which these thresholds of significance were developed are based on the environmental checklist in Appendix G of the State CEQA Guidelines; best available data; and regulatory standards of federal, state, and local agencies. The significance of each impact is determined by comparing the effects of the proposed plan to the baseline condition and determining whether substantial, adverse physical changes would result. Methods and assumptions used to frame and conduct the impact analyses are also described in Sections 4.1 through 4.16 for each resource topic.

4.0.4 Contents of the Resource Chapters

Sections 4.1 through 4.16 of this Draft EIR each include the following components.

Regulatory Background: This subsection presents information on the laws, regulations, plans, and policies that relate to the issue area being discussed. Regulations originating from the federal, State, and local levels are each discussed as appropriate.

Existing Conditions: This subsection presents the existing environmental conditions of the Plan Area and in the surrounding area, as appropriate, in accordance with State CEQA Guidelines Section 15125. The discussions of the environmental setting focus on information relevant to the issue under evaluation. The extent of the environmental setting area evaluated (the plan study area) differs among resources, depending on the locations where impacts would be expected.

Environmental Impacts and Mitigation Measures: This subsection presents thresholds of significance and discusses potentially significant effects of the proposed plan on the existing environment, including the environment beyond the project boundaries, in accordance with State CEQA Guidelines Section 15126.2. The methodology for impact analysis is described, including technical studies upon which the analyses rely. The thresholds of significance are defined and thresholds for which the proposed plan would have no impact are disclosed and dismissed from further evaluation. Project impacts and mitigation measures are numbered sequentially in each subsection (Impact 4.2-1, Impact 4.2-2, Impact 4.2-3, etc.). A summary impact statement precedes a more detailed discussion of the environmental impact. The discussion includes the analysis, rationale, and substantial evidence upon which conclusions are drawn. The determination of level of significance of the impact is defined in bold text. A “less-than-significant” impact is one that would not result in a substantial adverse change in the physical environment. A “potentially significant” impact or “significant” impact is one that would result in a substantial adverse change in the physical environment; both are treated the same under CEQA in terms of procedural requirements and the need to identify feasible mitigation. Mitigation measures are identified, as feasible, to avoid, minimize, rectify, reduce, or compensate for significant or potentially significant impacts, in accordance with the State CEQA Guidelines Section 15126.4. Unless otherwise noted, the mitigation measures presented are recommended in the EIR for consideration by the City to adopt as conditions of approval.

Where an existing law, regulation, or permit specifies mandatory and prescriptive actions about how to fulfill the regulatory requirement as part of the project definition, leaving little discretion in its implementation, and would avoid an impact or maintain it at a less-than-significant level, the environmental protection afforded by the regulation is considered before determining impact significance. Where existing laws or regulations specify a mandatory permit process for future projects, performance standards without prescriptive actions to accomplish them, or other requirements that allow substantial discretion in how they are accomplished, or have a substantial compensatory component, the level of significance is determined before applying the influence of the regulatory requirements. In this circumstance, the impact would be potentially significant or significant, and the regulatory requirements would be included as a mitigation measure.

This subsection also describes whether mitigation measures would reduce project impacts to less-than-significant levels. Significant-and-unavoidable impacts are identified as appropriate in accordance with State CEQA Guidelines Section 15126.2(b). Significant-and-unavoidable impacts are also summarized in Chapter 7, “Other CEQA Sections.”

References: The full references associated with the parenthetical references found throughout Sections 4.1 through 4.16 can be found in Chapter 9, “References,” organized by section number.

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4.1 AESTHETICS

This section provides a description of existing visual conditions (i.e., the physical features that make up the visible landscape) in the project area and an assessment of changes to those conditions that would occur from project implementation. The effects of the SCSP on the visual environment are generally defined in terms of the physical characteristics and potential visibility of development accommodated by the plan, the extent to which SCSP development would change the perceived visual character and quality of the environment, and the expected level of sensitivity that the viewing public may have where such development would alter existing views. This analysis evaluates effects on visual character and quality of the project area, scenic vistas, scenic resources within a state scenic highway view corridor, and light and glare, where applicable.

Comments received in response to the NOP that pertain to aesthetics address warehouse siting and design, the potential cumulative increase in light and glare and its effect on residential neighborhoods and other sensitive receptors, and impacts on currently vacant and/or agricultural parcels in rural and low-density residential areas related to buildout of the proposed plan.

4.1.1 Regulatory Setting

FEDERAL

No federal plans, policies, regulations, or laws related to aesthetics, light, and glare are applicable to the project.

STATE

California Scenic Highway Program

California's Scenic Highway Program was created by the California Legislature in 1963 and is managed by the California Department of Transportation (Caltrans). The goal of this program is to preserve and protect scenic highway corridors from changes that would affect the aesthetic value of the land adjacent to highways. A highway may be eligible or officially designated "scenic" depending on how much of the natural landscape travelers can see, the scenic quality of the landscape, and the extent to which development intrudes on travelers' enjoyment of the view (Caltrans 2023a).

Nighttime Sky - Title 24 Outdoor Lighting Standards

The California legislature passed a bill in 2001 requiring the California Energy Commission (CEC) to adopt energy efficiency standards for outdoor lighting for both the public and private sectors. In addition to improved energy efficiency standards, Title 24 standards regulate lighting characteristics such as maximum power and brightness, shielding, and sensor controls to turn lighting on and off. Different lighting standards are set by classifying areas by lighting zone. The classification is based on population figures of the 2010 Census. Areas can be designated as LZ1 (dark), LZ2 (rural), or LZ3 (urban). Lighting requirements for dark and rural areas are stricter in order to protect the areas from new sources of light pollution and light trespass.

LOCAL

City of Fresno General Plan

The *City of Fresno General Plan* contains the following policies related to aesthetics that apply to the proposed plan. These policies are contained in Chapter 3, "Urban Form, Land Use, and Design," and in Chapter 4, "Mobility and Transportation (City of Fresno 2022).

- ▶ **Policy UF-1-e: Unique Neighborhoods.** Promote and protect unique neighborhoods and mixed use areas throughout Fresno that respect and support various ethnic, cultural and historic enclaves; provide a range of housing options, including furthering affordable housing opportunities; and convey a unique character and lifestyle attractive to Fresnoans. Support unique areas through more specific planning processes that directly engage community members in creative and innovative design efforts.
- ▶ **Policy UF-13-a: Future Planning to Require Design Principles.** Require future planning, such as Specific Plans, neighborhood plans or Concept Plans, for Development Areas and BRT Corridors designated by the General Plan to include urban design principles and standards consistent with the Urban Form, Land Use, and Design Element.
- ▶ **Policy UF-14-a: Design Guidelines for Walkability.** Develop and use design guidelines and standards for a walkable and pedestrian-scaled environment with a network of streets and connections for pedestrians and bicyclists, as well as transit and autos.
- ▶ **Policy LU-1-a: Promote Development within the Existing City Limits as of December 31, 2012.** Promote new development, infill, and rehabilitation of existing building stock in the Downtown Planning Area, along BRT corridors, in established neighborhoods generally south of Herndon Avenue, and on other infill sites and vacant land within the City.
- ▶ **Policy LU-1-b: Land Use Definition and Compatibility.** Include zoning districts and standards in the Development Code that provide for the General Plan land use designations and create appropriate transitions or buffers between new development with existing uses, taking into consideration the health and safety of the community.
- ▶ **Policy LU-2-c: Infill Design Toolkit.** Develop and distribute an infill design toolkit, consistent with the City's Infill Development Act to support and encourage infill development.
- ▶ **Policy LU-2-e: Neighborhood Preservation.** Incorporate standards in the Development Code to preserve the existing residential quality of established neighborhoods.
- ▶ **Policy LU-4-a: Neighborhood Nuisance Abatement.** Continue proactive and responsive code enforcement and nuisance abatement programs to improve the attractiveness of residential neighborhoods.
- ▶ **Policy LU-5-g: Scale and Character of New Development.** Allow new development in or adjacent to established neighborhoods that is compatible in scale and character with the surrounding area by promoting a transition in scale and architectural character between new buildings and established neighborhoods, as well as integrating pedestrian circulation and vehicular routes.
- ▶ **Policy LU-6-a: Design of Commercial Development.** Foster high quality design, diversity, and a mix of amenities in new development with uses through the consideration of guidelines, regulations and design review procedures.
- ▶ **Policy LU-6-b: Commercial Development Guidelines.** Consider adopting commercial development guidelines to assure high quality design and site planning for large commercial developments, consistent with the Urban Form policies of this Plan.
- ▶ **Policy LU-6-d: Neighborhood and Community Commercial Center Design.** Plan for neighborhood mixed use and community commercial uses to implement the Urban Form concepts of this Plan, promote the stability and identity of neighborhoods and community shopping areas, and allow efficient access without compromising the operational effectiveness of the street system.
 - Neighborhoods will be anchored by community commercial centers with a mix of uses that meet the area's needs and create a sense of place; and

- Community commercial centers will be located within Activity Centers.
- ▶ **Policy LU-6-e: Regional Center Planning and Design.** Promote economic growth with regional commercial centers.
 - New regional commercial centers will be located with access to State Routes and/or other major transportation facilities to ensure access from throughout the region;
 - Regional shopping centers will have internally-unified building design, landscaping, and signage standards.
- ▶ **Policy LU-6-f: Auto-Oriented Commercial Uses.** Direct highway-oriented and auto-serving commercial uses to locations that are compatible with the Urban Form policies of the General Plan. Ensure adequate buffering measures for adjacent residential uses, noise, glare, odors, and dust.
- ▶ **Policy LU-7-b: Business and Industrial Parks.** Promote business and industrial park sites that are of sufficient size, unified in design, and diversified in activity to attract a full range of business types needed for economic growth.
- ▶ **Policy LU-9-e: Downtown Sightline.** Require new development to preserve existing sightlines to Downtown to the extent feasible.
- ▶ **Policy LU-9-f: View Corridors.** Promote new view corridors that highlight the Downtown skyline.
- ▶ **Policy D-1-c: Privately Owned Public Spaces.** Consider creating and adopting design standards and incentives for providing privately owned public open spaces and plazas for gathering to enhance the pedestrian realm and provide opportunities for social interaction.
- ▶ **Policy D-1-d: Public Art.** Continue to promote a citywide public art program that contributes to an awareness of the City's history and culture.
- ▶ **Policy D-1-e: Graphic Identity.** Continue the preservation, promotion, procurement and strategic location of landmarks, monuments and artwork that provide orientation and represent Fresno's cultural heritage and artistic values.
- ▶ **Policy D-1-f: Update Street Signs.** Consider updating street sign regulations to create a way-finding system and graphic identity without dominating city and district appearance.
- ▶ **Policy D-1-g: Reducing Surface Parking.** Consider adopting and implementing incentives to replace existing large surface parking lots in centers with parking structures, and to incorporate them into high-density mixed use developments.
- ▶ **Policy D-1-h: Screening of Parking.** Consider requiring all new development with parking in Activity Centers and along corridors to be screened or concealed. Locate principal pedestrian entrances to new non-residential buildings on the sidewalk; any entrances from parking areas should be incidental or emergency use only.
- ▶ **Policy D-1-j: Lighting Standards.** Update lighting standards to reflect best practices and protect adjoining uses from glare and spillover light.
- ▶ **Policy D-2-a: Design Requirements for Gateways.** Create unified design requirements for gateways to welcome travelers to the City's Activity Centers.
- ▶ **Policy D-3-c: Local Streets as Urban Parkways.** Develop local streets as "urban parkways," where appropriate, with landscaping and pedestrian spaces.
- ▶ **Policy D-3-d: Undergrounding Utilities.** Partner with utility companies to continue to pursue the undergrounding of overhead utilities as feasible.
- ▶ **Policy D-4-a: Design Review for Large Buildings.** Consider adopting and implementing a streamlined design review process for new construction and visible exterior alterations of large and significant multi-family, mixed-use and non-residential development.

- ▶ **Policy D-4-c: Appropriate Day and Night Activity.** Promote new residential, commercial and related forms of development that foster both day and appropriate nighttime activity; visual presence on the street level; appropriate lighting; and minimally obstructed view areas.
- ▶ **Policy D-4-d: Design for Safety.** Continue to involve the City's Police Department in the development review process to ensure new buildings are designed with security and safety in mind.
- ▶ **Policy D-4-f: Design Compatibility with Residential Uses.** Strive to ensure that all new non-residential land uses are developed and maintained in a manner complementary to and compatible with adjacent residential land uses, to minimize interface problems with the surrounding environment and to be compatible with public facilities and services.
- ▶ **Policy D-4-g: Development Code Update for Design Concepts.** Ensure that standards in the Development Code implement General Plan design concepts for each land use type.
- ▶ **Policy D-4-h: Metal Buildings.** Promote the establishment of standards and guidelines for metal buildings to be acceptable and economical forms of structures.
 - New buildings with metal walls or metal roofs shall be painted or have other appropriate finishes, as approved by the City; and
 - Mechanical equipment shall be screened with parapet walls, mechanical wells, or other means. Roof vent color must match that of the roof. The distinctive pattern of ribs and joints in standing seam and other metal roofing materials should coordinate dimensionally with similar elements in exterior walls.
- ▶ **Policy D-5-a: Code Enforcement.** Continue enforcement of the Fresno Municipal Code to remove or abate public nuisances in a timely manner.
- ▶ **Policy D-5-b: Clean Streets.** Promote community partnerships and continued City efforts toward litter clean-up and abatement of trash stockpiles on public and private streets.
- ▶ **Policy D-5-d: Graffiti Prevention and Abatement.** Seek ways to end graffiti, continue and expand the City's effective Graffiti Abatement Program.
- ▶ **Policy D-6-a:** Consult with neighboring populations, including non-English speaking groups, to inform the architecture, landscape, programming, and interior design of City-owned facilities such as parks, offices, street lighting, and other visible features.
- ▶ **Policy D-6-b:** Consider adopting and implementing incentives for, and support efforts by, private development to incorporate culturally-specific architectural elements in areas with a predominant ethnic population.
- ▶ **Policy MT-3-b:** Preserve street trees lining designated scenic corridors or boulevards. Replace trees of the predominant type and in a comparable pattern to existing plantings if there is no detriment to public safety.

City of Fresno Municipal Code

Zoning Ordinance

The City's Zoning Ordinance (Chapter 15 of the Municipal Code) is intended to provide a guide for the physical development of the city in order to achieve the arrangement of land uses depicted in the approved general plan, as well as implement goals, objectives, and policies of the approved general plan. Ordinance Section 15-904 provides site design development standards. Among the aspects of development regulated by the Municipal Code are types of allowable land uses, setback and height requirements, landscaping, landscape buffers, lighting and glare, walls, fencing, signage, access, parking requirements, storage areas, and trash enclosures.

Fresno Outdoor Lighting and Illumination Ordinance

The City's Zoning Ordinance contains Article 20, General Site Regulations, which provides standards for outdoor lighting in an effort to minimize light pollution, glare, and light trespass caused by inappropriate or misaligned light fixtures, while improving nighttime public safety, utility, security, and preserving the night sky as a natural resource

and thus facilitating people's enjoyment of stargazing. Article 25, Performance Standards, of the Zoning Ordinance includes standards related to lighting and glare.

Fresno Tree Preservation Ordinance

The City's Zoning Ordinance contains Article 3.5, Street Trees and Parkways, which contains policies regarding the preservation of trees within city limits. The Ordinance requires the City to plant, maintain, protect, preserve, and to regulate the planting, maintaining, protecting and preserving of public trees and landscaping; to eliminate dangerous conditions caused by trees and shrubs that may result in injuries to persons or property; to protect all trees within the city against the spread of disease or pests, and to provide for the special protection of heritage and landmark trees within the city limits. This portion of Fresno's Municipal Code implements a comprehensive permitting process for new and existing development and property owners and provides feasible alternatives and options to tree removal where practicable.

4.1.2 Environmental Setting

REGIONAL SETTING

The Plan Area is located in the south-central portion of the city, generally south of the urban Downtown core and surrounded by agriculture and rural residential uses to the southwest and southeast. The Downtown area includes high-rise buildings, civic/institutional buildings, and industrial warehouses. Land uses within the city vary in visual character and height, although most of the structures in the city are between one and three stories in height with some taller structures, especially in the Downtown. The surrounding suburbs contain low-rise neighborhood buildings that are primarily dominated by single-family residential uses. Heavy industrial uses dominate the Plan Area. The San Joaquin River, which runs along the northern border of the city, consists of varied topography along the bluff, and is recognized as a scenic visual resource (City of Fresno 2022). The overall topography of the area is relatively flat with no significant landforms, offering a limited view of the surrounding region such as the mountains to the east and the developed areas in the periphery.

SCENIC RESOURCES

Scenic resources are defined as natural or man-made elements that contribute to an area's scenic value and are visually pleasing. Scenic resources include landforms, vegetation, water, and adjacent scenery. The degree to which these resources are present in a community and their scenic value is subject to personal and cultural interpretation. However, it is possible to qualify certain resources as having positive aesthetic characteristics and establish general guidelines for assessing the aesthetic impacts of new development.

Scenic resources within the Plan Area include landscaped open space on private property as well as surrounding rural and agricultural lands. Currently there are no parks within the Plan Area. Historic buildings in Downtown Fresno are considered scenic resources and Man-made scenic resources provide a unique skyline that can be partially seen from the Plan Area.

A scenic vista is a viewpoint that provides expansive views of a highly valued landscape for the public's benefit and is often viewed from some distance away. Aesthetic components of a scenic vista include (1) scenic quality; (2) sensitivity level; and (3) view access. Typical scenic vistas are locations where views of rivers, hillsides, and open space areas are accessible from public vantage points (City of Fresno 2020). No part of the Plan Area is designated as a scenic vista.

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.

There are no officially designated state scenic highways located in the city of Fresno (City of Fresno 2022; Caltrans 2023b). Fresno County has four eligible State Scenic Highways, and the nearest eligible highway is located northeast of the Plan Area along State Route 168 (approximately 3 miles northeast of the Plan Area) (Caltrans 2023b). The Plan Area is not visible from any of the eligible State Scenic Highways.

Scenic Corridors

A scenic corridor is the view from a roadway that may include a distant panorama and/or the immediate roadside area and encompass the outstanding natural features and landscapes that are considered scenic. The City's General Plan designates 12 roadway segments in the city as scenic corridors, none of which are located in the Plan Area. The nearest, Kearney Boulevard, is located approximately 1.4 miles northwest of the Plan Area. The Plan Area is not visible from Kearney Boulevard or any other designated scenic corridor.

VISUAL CHARACTER OF THE PLAN AREA

Visual quality is defined as the overall visual impression or attractiveness of an area as determined by the landscape characteristics, including landforms, rock forms, water features, and vegetation patterns. The attributes of line, form, and color combine in various ways to create landscape characteristics whose variety, vividness, coherence, uniqueness, harmony, and pattern contribute to the overall visual quality of an area.

Visual quality is assessed through determining the degree of vividness, unity, and intactness of the view:

- ▶ **Vividness:** the visual power or memorability of landscape components as they combine in striking or distinctive visual patterns.
- ▶ **Unity:** 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.
- ▶ **Intactness:** the visual integrity of the natural and human-built landscape and its freedom from encroaching, incongruous elements; this factor can be present in well-kept urban and rural landscapes, as well as in natural settings.

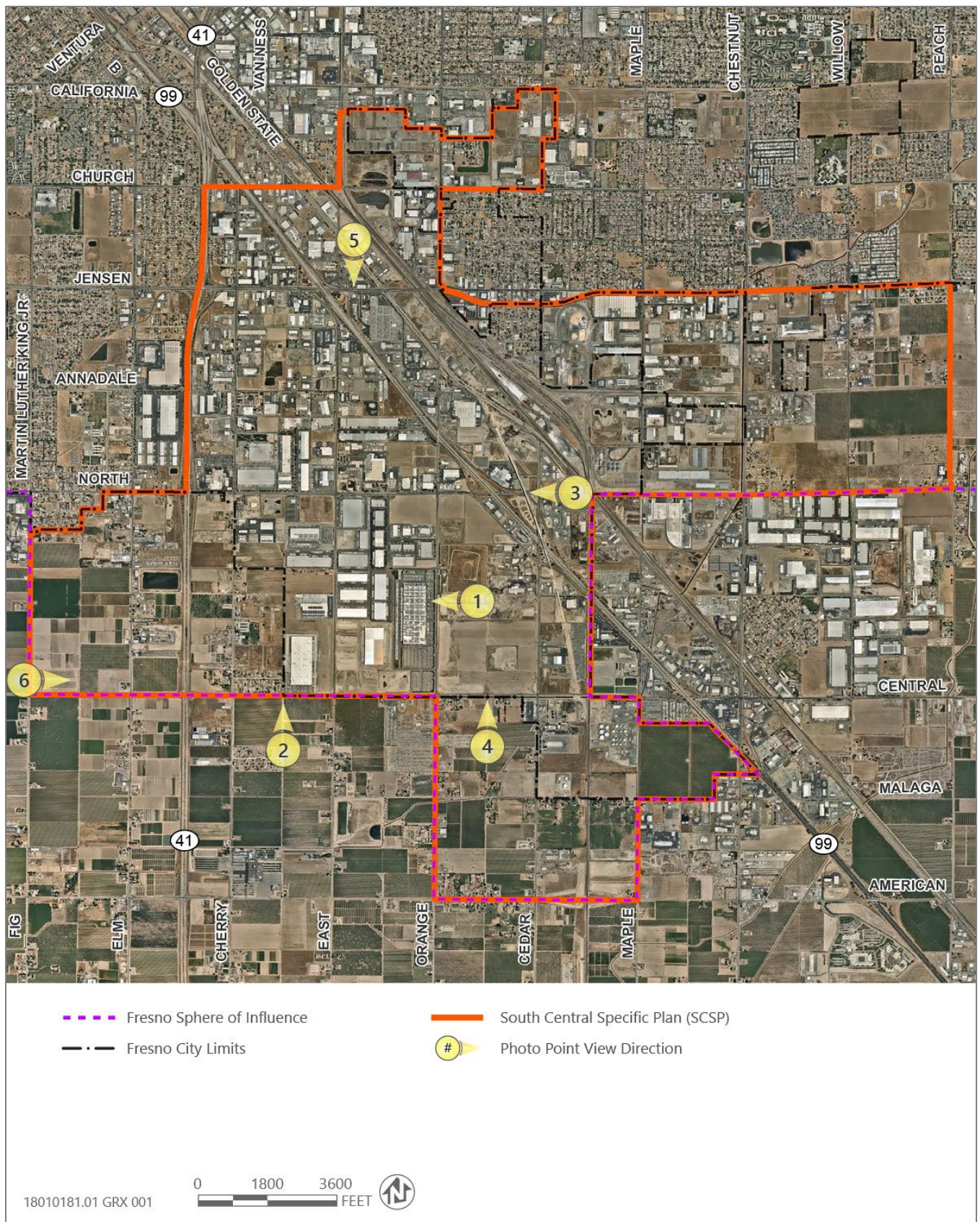
Additionally, views are rated based on viewer groups and sensitivity. Viewer groups include (1) motorists, such as those who are commuting, touring, or transporting goods on roadways, and (2) neighbors, such as those occupying residential, commercial, and industrial land uses. Viewer sensitivity is affected by proximity (i.e., the distance from the viewer to the scene), extent (i.e., number of viewers observing the scene), and duration (i.e., how long viewers spend looking at the scene).

The Plan Area consists primarily of industrial, agriculture, ponding basins, vacant land, and some residential. Large low-rise buildings with manufacturing, processing, and warehouse uses, as well as utility equipment and service yards, characterize the industrial area. Four single-family neighborhoods are located in the Plan Area; three along the northern border and one along the southern border. Rural residential and agricultural lands are located along the southern, southwest, and eastern perimeter.

Significant sources of light and glare throughout the Plan Area include streetlights, lighting within parking lots, interior lights from buildings, exterior lighting associated with industrial facilities, and light emitted from residential and non-residential buildings. Rural residential and agricultural areas are not characterized by significant sources of light and glare.

Representative Viewpoints

Six vantagepoints were chosen to represent publicly accessible views of the Plan Area and to characterize the visual environment. These viewpoints also serve as a basis for describing the kinds of aesthetic changes that would occur with implementation of development under the SCSP. It should be noted that these viewpoints are not intended to represent important views or specific visual characteristics, nor were they chosen to identify any specific development proposal or type. They are intended solely to depict the visual character and environment of the Plan Area and offer examples of how future development could appear. Descriptions of views from these viewpoints, as well as an assessment of visual quality and character of the views, are provided below. Viewpoint locations and photographs from each viewpoint are illustrated in Figures 4.1-1 and 4.1-2, respectively.



Source: Image produced and provided by the City of Fresno, Adapted by Ascent Environmental in 2023.

Figure 4.1-1 Photograph Viewpoints

Viewpoint 1: Amazon Distribution Center (Looking West)

The area pictured in the view from Viewpoint 1 is located in a primarily industrial and rural portion of the Plan Area (Figure 4.1-2a, Viewpoint 1). The roads in this area are wide and bordered with sidewalks and landscaped strips. The building is a large, two-story Amazon distribution facility. A large employee parking lot is located along the eastern and southern perimeter and is visible along South Orange Avenue. Additionally, there are no scenic resources in the area. The visual character is newer industrial. Vividness is low because there are no distinct visual patterns or elements. The developed area has a moderate intactness because there is moderate visual order related to the building and landscape design's mix with more industrial elements, such as the surrounding warehouses to the north and west, as well as graded vacant land to the east and south. The development has moderate unity because development has low contrast with less developed areas outside the Amazon facility. Therefore, this area has a moderately low visual quality. Viewers in this area include Amazon employees, delivery vehicle drivers, and commuters traveling through the area. Viewer sensitivity is therefore low.

Viewpoint 2: Ulta Warehouse Behind Berm (Looking North)

Viewpoint 2 is from the manmade berm immediately southwest of the Ulta Warehouse at the corner of East Central Avenue and South Mary Avenue (Figure 4.1-2a, Viewpoint 2). This viewpoint is dominated by a vegetated berm, with some development noticeable on the horizon. Power lines, light poles, metal fencing, and the roadway add linear elements to the view. The area includes rural and agricultural lands interspersed with industrial development which is a visual characteristic associated with many portions of the Plan Area. There are no specific scenic resources in this area. Vividness is low because there are no distinct visual patterns or elements, and the existing warehouse is largely obstructed from view by intervening vegetation. These views have a moderately high intactness because encroaching elements of the roadway, light poles, sidewalk, and fence, along with landscaping along the berm are expected elements in a rural industrial area. The view has a moderately high unity because of the aligned nature of the linear elements and the minimal skyline, the boundary line between earth and sky, however the transmission line and light poles reduces its prominence. Therefore, this area has moderate visual quality. Typical viewers in the area of Viewpoint 2 include Ulta workers and visitors, commuters, delivery vehicle drivers, Orange Center Elementary School employees and students, and adjacent Daleville neighborhood residents. Typical viewers in this area include school employees and students. Viewer sensitivity is therefore moderate.

Viewpoint 3: Highspeed Rail (Looking West)

The elevated highspeed rail is visible and prominent along State Route (SR) 99 and neighboring frontage roads (Figure 4.1-2b, Viewpoint 3). Surrounding the highspeed rail is partially graded undeveloped land and a grass-covered hill in the background, which is the Cedar Avenue Recycling and Transfer Station. The visual character is largely industrial, though some undeveloped areas are visible, although it would not be considered a scenic resource. Vividness is high due to the distinct visual patterns of the rail pillars. These views have moderate intactness because of the mix of patterns and intrusion on the landscape by elements such as the highspeed rail against the sky. Likewise, there is moderate unity because of the mix of horizontal and vertical elements such as trees and a large berm associated with the Cedar Avenue Recycling and Transfer Station combined with modern development such as the highspeed rail. Therefore, this area has moderate visual quality. Typical viewers in this area include industrial workers and commuters. Viewer sensitivity is therefore moderate.

Viewpoint 4: Vacant Lot (Looking North)

Viewpoint 4 shows that of a vacant graded lot (Figure 4.1-2b, Viewpoint 4). The visual character is predominantly undeveloped and rural. Vividness is low because there are no distinct visual patterns or elements. This view has low unity because of the contrasting patterns of the horizontal rooflines, the angled alignment of the Cedar Avenue Recycling and Transfer Station (grass-covered hill, and the vertical telephone towers. This view has several visual intrusions that reduce the intactness to low, including a hill associated with the Cedar Avenue Recycling and Transfer Station that is not consistent with rural industrial areas and the disturbed soil. Additionally, there are no scenic resources in this area. Therefore, the visual quality is low. Viewers in this area include those driving along East Central Avenue and South Cedar Avenue, which includes local residences, commuters, and those driving for work. Views in this direction, however, would see the area for a short period because this view is of prominently flat land with few visual vertical elements. Visual sensitivity is therefore low.



Source: Ascent Environmental in 2023.

Viewpoint 1: Amazon distribution center, looking west.



Source: Ascent Environmental in 2023.

Viewpoint 2: Ultra warehouse behind berm, looking north.

Figure 4.1-2a Representative Photographs of Plan Area



Source: Ascent Environmental in 2023.

Viewpoint 3: Highspeed rail, looking west.



Source: Ascent Environmental in 2023.

Viewpoint 4: Vacant lot, looking north.

Figure 4.1-2b Representative Photographs of Plan Area



Source: Ascent Environmental in 2023.

Viewpoint 5: Hotel/retail, looking south.



Source: Ascent Environmental in 2023.

Viewpoint 6: Agriculture solar array, looking east.

Figure 4.1-2c Representative Photographs of Plan Area

Viewpoint 5: Hotel/Retail (Looking South)

The area pictured in the view from Viewpoint 5 is located in one of the most urbanized portions of the Plan Area (Figure 4.1-2c, Viewpoint 5). The roads in this area are wide and bordered with sidewalks and landscaped strips. Most of the buildings are large and range from single-story to four-story structures grouped within a combined hotel/retail area. A paved driveway is visible on the bottom right side of the view. There are no scenic resources in this area. The development obscures long-range views of scenic resources including agricultural lands. The visual character is commercial. Vividness is low because there are no distinct visual patterns or elements. The developed area has a moderate intactness because there is moderate visual order related to the building and landscape design's mix with more commercial elements, such as the vertical retail signs, light poles, and wide driveways. The development has moderate unity because development has low contrast with neighboring commercial development. Therefore, this area has a moderate visual quality. Viewers in this area include workers at the businesses, delivery vehicle drivers, commuters traveling through the area, consumers coming to purchase goods or services, and local residents. Viewer sensitivity is therefore moderate.

Viewpoint 6: Agriculture Solar Array (Looking East)

The viewpoint is dominated by a flat grassy field, a solar array, some development noticeable on the horizon, and on a clear day the scenic mountains are visible in the distance (Figure 4.1-2c, Viewpoint 6). Power lines, barbed wire fences, and a grouping of trees add linear elements to the view. The area pictured demonstrates rural and agricultural lands visual character, a considered scenic resource, associated with many intervening portions of the Plan Area. Vividness is low because there are no distinct visual patterns or elements. The view has a moderately high intactness because encroaching elements of the power lines and fencing are expected elements in a rural agricultural area. These views have a moderately high unity because of the aligned nature of the linear elements and the minimal skylining of the transmission line. Therefore, this area has moderate visual quality. Typical viewers in the area include commuters along West Central Avenue and South MLK Jr. Boulevard. Viewer sensitivity is therefore moderate.

LIGHT AND GLARE CONDITIONS

Views of the night sky can be an important part of the natural environment, particularly in communities surrounded by extensive open space. Light pollution refers to all forms of unwanted light in the night sky, including glare, light trespass, skyglow, and over-lighting. The terms "glare" and "skyglow" are used in this analysis to describe the visual effects of lighting. Glare is direct exposure to bright lights. Light that is either emitted directly upward by luminaires or reflected from the ground is scattered by dust and gas molecules in the atmosphere, producing a luminous background known as skyglow.

Existing sources of light and glare are uniformly present in the project vicinity. Existing sources of light include streetlights along project roadways; lights in parking lots, along walkways, and on the exteriors of buildings; lights associated with the railroad system; and interior lights in buildings.

Natural and artificial light reflect off various surfaces and can create localized occurrences of daytime and nighttime glare. Buildings and structures made with glass, metal, and polished exterior roofing materials exist throughout Fresno. In the Plan Area, light and glare are concentrated in the northern and central portions where commercial and industrial development are generally located. Limited lighting currently exists in rural residential and agricultural areas that are located throughout the southern portions of the Plan Area. Buildings and structures made with glass, metal, and polished exterior or roofing materials exist throughout the Plan Area. These surfaces, as well as the natural and manmade light sources, could result in localized glare.

4.1.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

This section analyzes aesthetic impacts that would occur from implementation of the proposed plan. The visual resource analysis is based on field surveys, existing planning documents, and focused review of the extent of land use and density change associated with the proposed plan. The analysis focuses on whether the proposed plan would result in adverse effects to scenic vistas, scenic resources, or alteration of the visual characteristics and quality of the area, the scale or degree of which appears as a substantial obvious and disharmonious modification of the overall visual conditions of the project area. Additionally, the analysis considers whether introduction of new light and glare sources would adversely affect views.

The following information, in combination with the thresholds below, was used to determine whether implementing the proposed plan would create adverse visual effects:

- ▶ visual features or resources that make up and define the visual character of the viewsheds (the physiographic areas composed of land, water, biotic, and cultural elements that may be viewed and mapped from one or more viewpoints and that have inherent scenic qualities and/or aesthetic values as determined by those who view them),
- ▶ quality of the identified visual resources relative to overall regional visual character, and
- ▶ major viewer groups and viewer exposure.

PROPOSED SCSP POLICIES

The following policies from the proposed plan relate to protection of visual resources.

- ▶ **Policy GB-1:** Require buffers between new industrial development and existing neighborhoods.
- ▶ **Policy GB-2:** Require the installation of solid barriers or vegetative buffers between emissions sources and schools, daycares, medical offices, and homes.
- ▶ **Policy GB-4:** Create a Green Street Tree Planting Program, prioritizing areas with few trees.
- ▶ **Policy GB-5:** Coordinate with Tree Fresno on a Community Landscapes Plan.

THRESHOLDS OF SIGNIFICANCE

An impact on aesthetics would be significant if implementation of the proposed plan would:

- ▶ 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 and in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality; or
- ▶ create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

ISSUES NOT DISCUSSED FURTHER

All issues applicable to aesthetics listed under the significance thresholds above are addressed in this section.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 4.1-1: Result in a Substantial Adverse Effect on a Scenic Vista

Implementation of the proposed plan would result in additional industrial, commercial, and to a lesser degree, residential development and supporting infrastructure in the Plan Area. New development would be visually consistent with existing uses in the Plan Area. As noted above, there are no designated scenic vistas in the Plan Area so no adverse effect would result. Therefore, this impact would be **less than significant**.

No part of the Plan Area is designated as a scenic vista by the City of Fresno General Plan. Some areas within the southern portion of the Plan Area contain undeveloped areas of agriculture and could be considered picturesque and visually pleasing. However, despite the rural characteristics of the southern portion of the Plan Area, there are no unique or distinguishing features that would qualify it for designation as a scenic vista.

The Plan Area is partially visible from SR 99. Because the topography of the Plan Area is relatively flat and SR 99 is at a similar elevation as the surrounding area, views from SR 99 are primarily limited to the more developed and urbanized portions of the Plan Area. More specifically, views from SR 99 primarily consist of uses located immediately adjacent to the freeway. The Plan Area is not identified as having scenic vistas and expansive views across the Plan Area are limited due to intervening structures and relatively flat and consistent topography of the area. Therefore, potential impacts of the proposed project on scenic vistas would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.1-2: Damage Scenic Resources within a State Scenic Highway

Development under the proposed plan would not occur along an eligible or designated state scenic highway, and no project components would be visible from any designated or eligible state scenic highway. Consequently, development under the proposed plan would not damage scenic resources within a state scenic highway. Therefore, there would be **no impact**.

As stated in Section 4.1.2, there are no officially designated state scenic highways within or in the vicinity of the project area, nor anywhere in Fresno County. The nearest eligible state highway is located approximately 8 miles northeast of the Plan Area along State Route 168, which does not provide visibility to the Plan Area (Caltrans 2023b). Thus, **no impact** to scenic resources within a state scenic highway would occur with implementation of the Project.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.1-3: Substantially Degrade the Existing Visual Character or Quality of Public Views of the Site and Its Surroundings

Implementation of the proposed plan would facilitate future development and result in a substantial alteration to the existing visual character and quality of the Plan Area. Specifically, implementation of the proposed plan would result in increases of densities and intensification primarily of industrial and commercial land uses within the Plan Area. Substantial changes in the existing visual character would result in a **significant** impact.

Implementation of the proposed plan would result in a substantial amount of development within the Plan Area. Of the 5,567-acre Plan Area available for development, approximately 3,693 acres is developed as industrial, commercial, and other land uses, and approximately 1,874 acres is open space and farmland. Approximately 700 acres of the Plan Area is conservatively assumed to be developed with non-residential uses, primarily industrial, by the year 2040. While it is not possible to identify where future development would occur, it is reasonable to assume that open space, farmland, and vacant areas would be developed. As such, planned development would replace existing rural,

agricultural, and open space uses, which would substantially alter the visual character within the Plan Area—and views of the Plan Area from surrounding lands—through the increase of densities and intensification of land uses. Implementation of the proposed plan would marginally decrease the overall visual quality in terms of vividness, unity, and intactness. However, proposed development would be generally visually consistent with the existing development, and motorists, possibly the largest viewer group, would have fleeting views resulting in lower sensitivity.

Various temporary visual impacts could occur as a result of construction activities as the Plan Area develops, including grading, equipment and material storage, and staging. Some of these impacts could last for several weeks or months during any single construction phase. The loss of existing landscaping and trees would also be a temporary impact until new landscaping matures. However, these construction-related impacts would be temporary and viewer sensitivity in the majority of cases would be slight to moderate. Thus, construction impacts would be less than significant.

The southern portion of the Plan Area is generally more rural and less developed while more developed portions of the Plan Area are along SR 99 and the northwestern portion of the Plan Area. The proposed plan would result in the conversion of undeveloped land to urban uses, which may contribute to changes in the regional landscape and visual character of the area. In order to reduce visual impacts, development within the Plan Area is required to be consistent with the General Plan, Fresno Zoning Ordinance, and the proposed plan, which includes development standards to ensure quality and cohesive design. These standards include specifications for building height, massing, and orientation; exterior lighting standards and specifications; and landscaping standards. Implementation of the design standards are intended to promote quality design throughout the Plan Area, and result in development that would be internally cohesive while maintaining an aesthetic quality similar to surrounding uses. Many of the parcels identified for development are already planned for development in the General Plan or contain existing urbanized land uses. Thus, redevelopment of an existing developed or urbanized site would not conflict with zoning or other regulations governing scenic quality.

Overall, the loss of vacant and open space land in the Plan Area will change the visual character of the area in perpetuity, resulting in the conversion of mainly fallow ground to permanently erect structures, and thereby degrading the visual character and quality. Compliance with the City's General Plan and Municipal Code, and implementation of the proposed plan's development regulations would reduce visual impacts to the extent feasible. Although the implementation of the proposed plan guiding principles and policies would reduce the potential impacts to visual character from locations within and outside the Plan Area, the replacement of rural and agricultural land with urban land uses would result in a substantial alteration of the visual character of the Plan Area. Therefore, the impact on the visual character of the Plan Area would be **significant**.

Mitigation Measures

No feasible mitigation measures are available to substantially reduce the impact.

Significance after Mitigation

The potential visual character impacts as a result of proposed future development cannot be mitigated to less than significant. Therefore, the impact on the existing visual character would be **significant and unavoidable**.

Impact 4.1-4: Create a New Source of Substantial Light or Glare Which Would Adversely Affect Day or Nighttime Views

The proposed plan would facilitate future development and would introduce new sources of light and glare associated with new buildings and facilities. Although residential development is limited in the Plan Area and the SCSP proposes relatively little residential development that could be affected by additional light and glare, such lighting could nonetheless contribute to indirect lighting/glare on adjacent land uses that could adversely affect daytime or nighttime views and result in additional skyglow. This impact would be **significant**.

Light

Development under the proposed plan could increase the amount of light from streetlights, exterior lighting systems on private and public property, exterior lighting from buildings, and vehicular headlights. The increase in lighting could also result in light spillover onto adjacent properties located outside the Plan Area. New urban development would substantially alter the light exposure within existing rural and agricultural areas. Examples of potential causes of increased light exposure include lighting systems associated with new development and roads; lighting on properties to provide safety and security; lighting associated with public facilities; increases in nighttime traffic that would increase lighting from car headlights. Therefore, new development facilitated by the proposed plan would increase the amount of light that could cause light spillover onto adjacent properties within and adjacent to the Plan Area, as well as and increase the illumination of the sky at night. Future development would be required to comply with the lighting standards established in the City Municipal Code (Article 25, Performance Standards), as well as proposed Specific Plan policy L-1, which incorporates measures such as shielding or dimming to reduce outdoor lighting impacts. However, due to the anticipated increase in new development, the increase in light illumination within the Plan Area is still considered a **significant** impact.

Glare

New development under the SCSP would increase the number of structures that could create new sources of glare within the Plan Area and directly adjacent to the Plan Area. New potential sources of glare include materials used on building facades, parking lots, signs, roadway surfaces, and motor vehicles. Sources of glare are typical of urban environments and future development would add to the existing sources. Within the rural and agricultural areas, there are limited sources of glare. The primary sources of glare in the Plan Area would occur from vertical structures such as building facades and signs and implementation of the SCSP would result in substantial new sources. Future development would be required to comply with the glare standards established in the City Municipal Code (Article 25, Performance Standards). However, because the increase in new development would be substantial, the increase in glare within the Plan Area would be a **significant** impact.

Mitigation Measures

Mitigation Measure 4.1-1: Use Nonreflective Materials

To reduce the potential for glare from new and redeveloped buildings and structures within the Plan Area, the Preliminary and Final Design Review plan(s) for all future projects in the Plan Area shall show that the use of reflective building materials that have the potential to result in glare that would be visible from sensitive receptors located in the vicinity of the project sites is prohibited. The City of Fresno Planning and Development Department shall ensure that the approved project uses appropriate building materials with low reflectivity to minimize potential glare nuisance to off-site receptors. These requirements shall be included in future project improvement plans, subject to review and approval by the City of Fresno.

Mitigation Measure 4.1-2: Prepare a Lighting Plan

A lighting plan for all future projects in the Plan Area subject to section 15-2508 and section 15-2015 of the City of Fresno Municipal Code shall be prepared prior to approval of each project. The lighting plan shall demonstrate that the lighting systems and other exterior lighting throughout the project area have been designed to minimize light spillage onto adjacent properties to the greatest extent feasible, consistent with section 15-2508, Lighting and Glare and section 15-2015, Outdoor Lighting and Illumination of the City of Fresno Municipal Code. Use of LED lighting or other proven energy efficient lighting shall be required for facilities to be dedicated to the City of Fresno for maintenance. These requirements shall be included in future project improvement plans, subject to review and approval by the City of Fresno.

Significance after Mitigation

Implementation of Mitigation Measure 4.1-1 would reduce the potential for substantial glare from development under the SCSP because it would prohibit use of reflective materials that have the potential to adversely affect sensitive receptors in the vicinity of specific projects. This prohibition would be included in project plans, which would be

reviewed and approved by the City of Fresno. Therefore, with implementation of this mitigation measure, the impact would be reduced to a **less-than-significant** level.

Mitigation Measure 4.1-2 would reduce the potential for substantial light spillage and light pollution from development under the SCSP because it would require preparation and implementation of a lighting plan for future projects that demonstrates that lighting has been designed to minimize such spillage in accordance with the City's Municipal Code. The lighting plans would be reviewed and approved by the City of Fresno. Therefore, with implementation of this mitigation measure, the impact would be reduced to a **less-than-significant** level.

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4.2 AGRICULTURE AND FORESTRY RESOURCES

This section describes applicable regulations and existing environmental conditions relative to agricultural resources in the Plan Area and the surroundings, including Prime Farmland, Unique Farmland, and Farmland of Statewide Importance. It also includes an analysis of environmental impacts on these resources that would result from implementation of the proposed plan and identifies recommended mitigation measures for significant or potentially significant impacts. As discussed in Chapter 3, "Project Description," approximately 3,693 acres of the 5,567-acre Plan Area are developed as industrial, commercial, and other land uses and approximately 1,874 acres is open space, farmland, and vacant. An estimated 700 acres of the Plan Area would be developed with non-residential uses, primarily industrial, by the year 2040. While it is not possible to identify where future development would occur, it is reasonable to assume that open space, farmland, and vacant areas would be developed. Therefore, this section also addresses the potential for implementation of the SCSP to result in the conversion of agricultural lands to other uses.

The Plan Area does not contain forestry resources, nor is any portion of it zoned forestland (as defined by PRC Section 12220[g]), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104[g]).

Comments regarding the Right-to-Farm ordinance and impacts related to conversion of farmland were received during the NOP comment period and are addressed in this section of the EIR.

4.2.1 Regulatory Setting

FEDERAL

Farmland Protection Policy Act

The Natural Resources Conservation Service, a federal agency within the U.S. Department of Agriculture, is the agency primarily responsible for the implementation of the Farmland Protection Policy Act. The purpose of the Farmland Protection Policy Act is to minimize federal programs' contribution to the conversion of farmland to nonagricultural 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 Natural Resources Conservation Service provides technical assistance to federal agencies, state, and local governments; tribes or non-profit organizations that desire to develop farmland protection programs and policies.

STATE

California Public Resources Code

The California Public Resources Code contains the following definitions for forest land, timberland, and prime agricultural land that are applicable to the proposed project.

"Forest land" is defined in PRC Section 12220(g) as:

land that can support 10% 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.

"Timberland" is defined in PRC Section 4526 as:

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 any 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 after consultation with the district committees and others.

“Timberland Production Zone” is defined in Government Code Section 51104(g) as:

an area which has been zoned pursuant to Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h). With respect to the general plans of cities and counties, “timberland preserve zone” means “timberland production zone.”

“Prime Agricultural Land” is defined in Government Code Section 51201 as:

an area of land, whether 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 United States Department of Agriculture (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 that has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the USDA.
- ▶ 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 return during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than \$200.00 dollars per acre.
- ▶ Land that has returned from the production of unprocessed agricultural plant products an annual gross value of not less than \$200.00 dollars per acre for three of the previous five calendar years.

California Department of Conservation Farmland Mapping and Monitoring Program

Important Farmland in California is classified and mapped according to the California Department of Conservation’s (DOC) Farmland Mapping and Monitoring Program (FMMP). Authority for the FMMP comes from Government Code Section 65570(b) and Public Resources Code (PRC) Section 612. Government Code Section 65570(b) requires the Department of Conservation to collect or acquire information on the amount of land converted to or from agricultural use for every mapped county and to report this information to the Legislature. PRC Section 612 requires DOC to prepare, update, and maintain Important Farmland Series Maps and other soils and land capability information. The FMMP categories are defined as follows:

- ▶ Prime Farmland (P): This land category has the best combination of physical and chemical features for sustaining long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce crops with sustained high yields. The land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
- ▶ Farmland of Statewide Importance (S): This category is similar to Prime Farmland but with minor shortcomings (e.g., greater slopes or less ability to store soil moisture). The land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
- ▶ Unique Farmland (U): This category consists of lesser quality soils used for the production of the State’s leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards. The land must have been cropped at some time during the 4 years prior to the mapping date.
- ▶ Farmland of Local Importance (L): This land category is important to the local agricultural economy as determined by each county’s Board of Supervisors and a local advisory committee.
- ▶ Grazing Land (G): This type of land is occupied with vegetation suited to grazing livestock. This category was developed in cooperation with the California Cattleman’s Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities. The minimum mapping unit is 40 acres.
- ▶ Urban and Built-Up Land (D): This type of land is occupied by structures with a building density of at least one unit to 1.5 acres, or approximately six structures to a 10-acre parcel. Common examples include residential,

industrial, commercial, institutional facilities, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, and water control structures.

- ▶ Other Land (X): This type of land is not included in any other mapping category. Common examples include low-density rural developments, brush, timber wetland, riparian area not suitable for livestock grazing, and water bodies smaller than 40 acres. Vacant and non-agricultural land surrounded on all sides by urban development that is greater than 40 acres is mapped as Other Land.
- ▶ Water (W): This classification includes perennial water bodies with an extent of at least 40 acres.
- ▶ Optional Designation – Land Committed to Non-Agricultural Use: This type of land is defined as existing farmland, grazing land, and vacant areas, which have a permanent commitment for development.

The California Land Conservation Act of 1965

The California Land Conservation Act of 1965, or Williamson Act, preserves agricultural and open space lands through property tax incentives and voluntary restrictive use contracts. Private landowners voluntarily restrict their land to agricultural and compatible open-space uses under minimum 10-year rolling term contracts. In return, restricted parcels are assessed for property tax purposes at a rate consistent with their actual use, rather than potential market value.

Farmland Security Zones

In 1998 the state legislature established the Farmland Security Zone (FSZ) program. FSZs are similar to Williamson Act contracts, in that the intention is to protect farmland from conversion. The main difference, however, is that the FSZ must be designated as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance. The term of the contract is a minimum of 20 years. The property owners are offered an incentive of greater property tax reductions when compared to the Williamson Act contract tax incentives; the incentives were developed to encourage conservation of prime farmland through FSZs. The non-renewal and cancellation procedures are similar to those for Williamson Act contracts. The Plan Area and the immediately adjacent parcels are not within the FSZ program.

LOCAL

City of Fresno General Plan

Policies in the *City of Fresno General Plan* (City of Fresno 2014) emphasize preservation of farmland by incentivizing new development within and adjacent to already-urbanized land, only extending public utilities to new development that adheres to the plan, and not expanding the City's sphere of influence. The Resource Conservation and Resilience Element of the General Plan also addresses the broader planning issues of farmland preservation, and the Urban Form, Land Use, and Design Element of the General Plan establishes a permanent buffer designed to separate and preserve long-term agriculture to the east and outside SOI boundary from urban uses to the west inside the SOI boundary. The following objective and policies related to agricultural resources are applicable to the proposed plan:

Objective RC-9. Preserve agricultural land outside of the area planned for urbanization under this General Plan.

- ▶ **Policy RC-9-a: Regional Cooperation.** Work to establish a cooperative research and planning program with the Counties of Fresno and Madera, City of Clovis, and other public agencies to conserve agricultural land resources.
- ▶ **Policy RC-9-b: Unincorporated Land in the Planning Area.** Express opposition to residential and commercial development proposals in unincorporated areas within or adjacent to the Planning Area when these proposals would do any of the following:
 - Make it difficult or infeasible to implement the General Plan;
 - Contribute to the premature conversion of agricultural, open space, or grazing lands; or
 - Constitute a detriment to the management of resources and/or facilities important to the region (such as air quality, water quantity and quality, traffic circulation, and riparian habitat).

- ▶ **Policy RC-9-c: Farmland Preservation Program.** In coordination with regional partners or independently, establish a Farmland Preservation Program. When Prime Farmland, Unique Farmland, or Farmland of Statewide Importance is converted to urban uses outside City limits, this program would require that the developer of such a project mitigate the loss of such farmland consistent with the requirements of CEQA. The Farmland Preservation Program shall provide several mitigation options that may include, but are not limited to the following: Restrictive Covenants or Deeds, In Lieu Fees, Mitigation Banks, Fee Title Acquisition, Conservation Easements, Land Use Regulation, or any other mitigation method that is in compliance with the requirements of CEQA. The Farmland Preservation Program may be modeled after some or all of the programs described by the California Council of Land Trusts.

City of Fresno Zoning Ordinance

The City's Zoning Ordinance (Chapter 15 of the Municipal Code) (City of Fresno 2023) is intended to provide a guide for the physical development of the city in order to achieve the arrangement of land uses depicted in the approved General Plan, as well as implement goals, objectives, and policies of the approved General Plan.

4.2.2 Environmental Setting

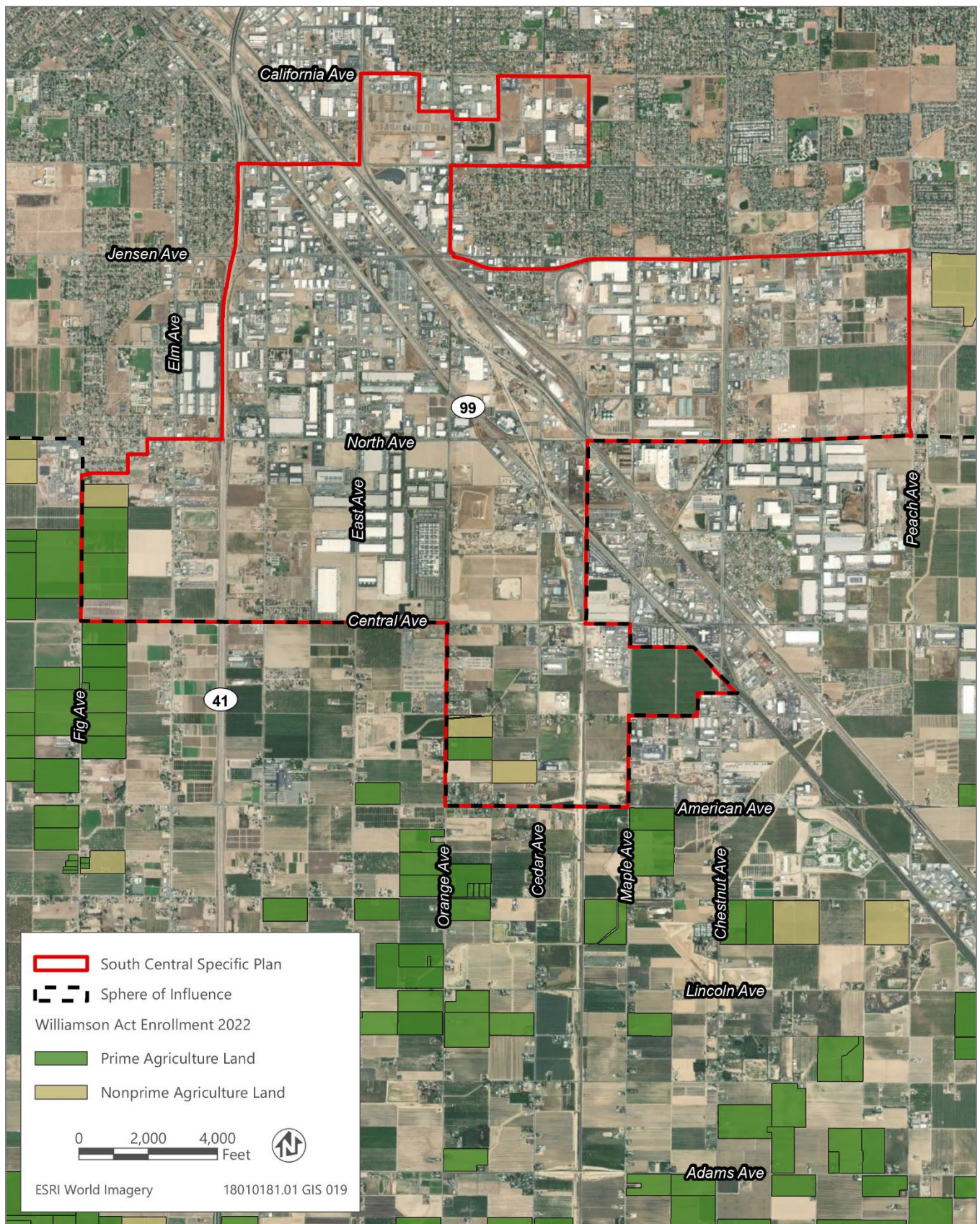
Agriculture is a major activity within the undeveloped portions of Fresno County. Although portions of the Plan Area are located within the City of Fresno Sphere of Influence (SOI), it is immediately adjacent to active agricultural operations in Fresno County. Fresno County has approximately 1.88 million acres of farmland and is considered one of the most diverse and productive farming areas in the world. According to the 2020 Fresno County Crop Report, published by the Fresno County Agricultural Commissioner's Office, the gross value of Fresno County's agricultural production for 2020 was approximately \$7.9 billion. That value rose in 2021 to over \$8.08 billion, becoming one of the top three agricultural producing counties in California and the nation. Almonds are the County's leading commodity, with grapes having the second highest total gross value (County of Fresno 2021).

Plan Area

Approximately 61 percent of the land within the Plan Area is developed while the other 39 percent is Farmland (DOC 2023). The Plan Area has approximately 975 acres of Prime Farmland, approximately 7 acres of Farmland of Statewide Importance, 0 acres of Unique Farmland, and approximately 538 acres of Farmland of Local Importance. Approximately 153 acres are under Williamson Act contracts, as shown in Figure 4.2-1, and are zoned exclusive and limited agricultural land use districts per the County of Fresno's zoning ordinance (County of Fresno 2023). Of the 153 acres, approximately 98 acres are enrolled as Prime Agriculture Land, and 55 acres are enrolled as Nonprime Agriculture Land. Figure 4.2-2 shows the farmland classifications within the Plan Area. The Farmland of Statewide Importance, Farmland of Local Importance, Vacant or Disturbed Land, Rural Residential Land, Confined Animal Agriculture, and Semi-agriculture and Rural Commercial Land areas are mainly scattered throughout the southern, western, and eastern portions of the Plan Area (DOC 2023).

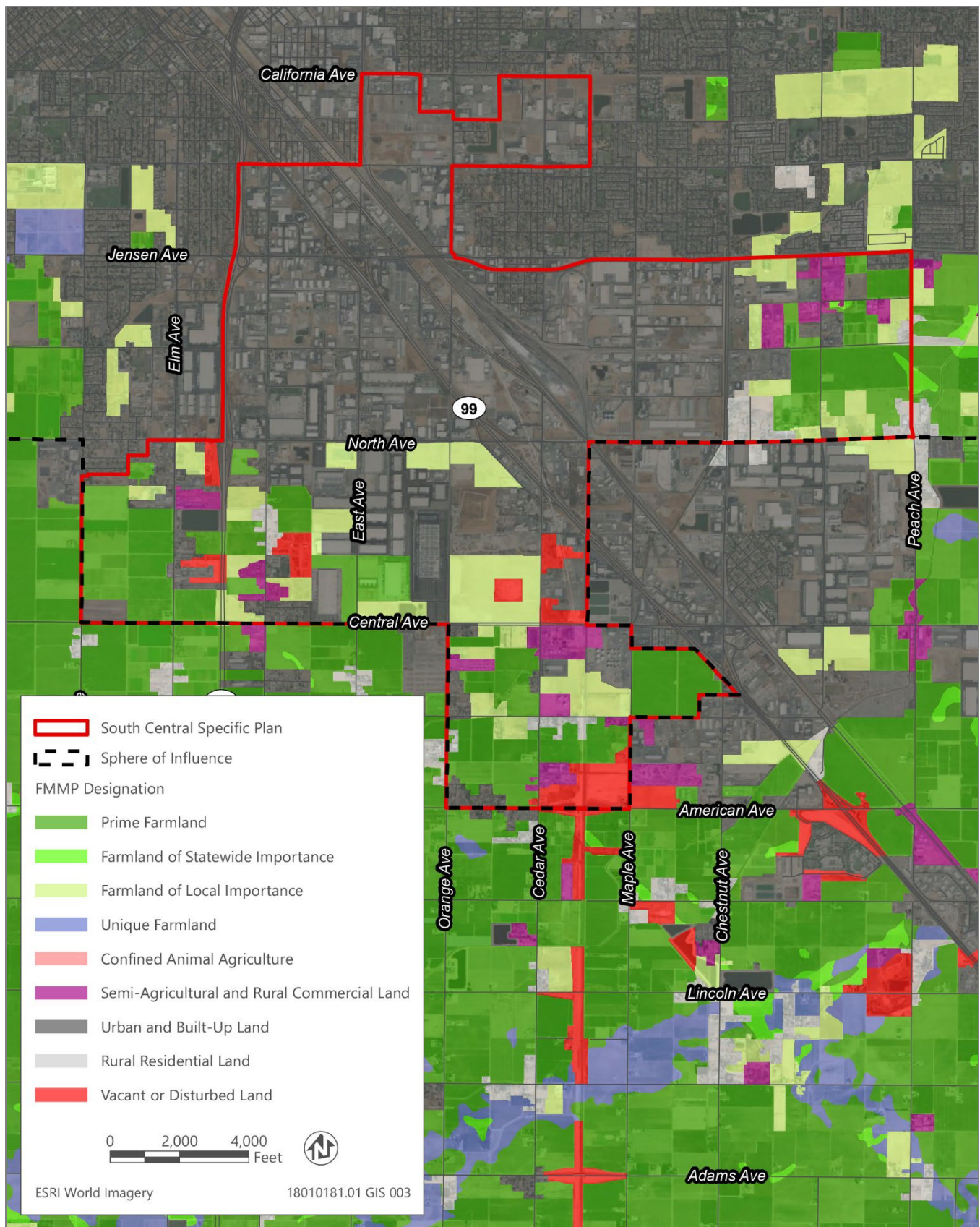
Adjacent Land Uses

Surrounding lands include unincorporated Fresno County to the southwest, south, and southeast of the Plan Area, with incorporated areas of the City of Fresno to the west, north, and east. The unincorporated areas of Fresno County include limited and exclusive agriculture (Williamson Act contract), heavy industrial, light manufacturing, and single-family residential land uses. Lands north of the Plan Area in the City of Fresno include single-family residential, commercial, and public and institutional land uses. These areas are primarily categorized as Urban and Built-Up Land by the FMMP, with Prime Farmland mainly to the south and west (City of Fresno 2022). Figure 4.2-2 also shows the farmland classifications for lands surrounding the Plan Area.



Source: Data downloaded from DOC in 2023.

Figure 4.2-1 Williamson Act Contract Lands



Source: 2018 Fresno County data downloaded from DOC in 2020.

Figure 4.2-2 FMMP Farmland Designations

4.2.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

State and local mapping of farmland and forest land was used to identify the potential for resources within the Plan Area. Evaluation of impacts of the proposed plan was based on a review of the following:

- ▶ City of Fresno General Plan (City of Fresno 2014);
- ▶ Fresno General Plan Public Review Draft Program Environmental Impact Report (City of Fresno 2020);
- ▶ Farmland Mapping and Monitoring Program (DOC 2023); and
- ▶ Fresno County Crop Report (County of Fresno 2021).

THRESHOLDS OF SIGNIFICANCE

An impact on agriculture and forestry resources would be significant if implementation of the proposed plan would:

- ▶ 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)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government 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.

Issues Not Discussed Further

Forestland and Timberland Production Zones

There are no forestland and timberland production zones within, or in proximity to, the Plan Area, and implementation of the plan would have no impact on these lands. Therefore, no further analysis is required by CEQA.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 4.2-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) to Non-agricultural Use

Implementation of the proposed plan would accommodate development of additional industrial, commercial, and a small amount of residential land uses. While the locations of specific developments cannot be known at this time, it is likely that development would result in conversion of existing Prime Farmland and Farmland of Statewide Importance to non-agricultural uses. The conversion of existing Farmland to non-agricultural use would result in a **significant** impact.

As stated in Section 4.2.2, above, there are approximately 982 acres of Prime Farmland and Farmland of Statewide Importance scattered primarily throughout the western, southern, and eastern portions of the Plan Area. The majority of the Plan Area is designated as Urban Built-Up land (approximately 3,769 acres). Land uses surrounding the Plan Area consist of primarily agricultural use to the south, southeast, and southwest, with residential, commercial, and industrial uses to the north, northeast, and northwest of the Plan Area. Implementation of the proposed plan would

result in some level of conversion of Prime Farmland and Farmland of Statewide Importance within the Plan Area to developed acreage, including for business, commercial, industrial, residential, open space, and public facility uses, as described in Chapter 3, "Project Description." Because future development would result in the loss of important farmlands to non-agricultural uses, this impact would be **significant**.

Additionally, the proposed project would comply with the General Plan, which includes several policies intended to protect agricultural uses in the City. Policy RC-9-a directs the City to work with the Counties of Fresno and Madera, the City of Clovis, and other public agencies to conserve agricultural land resources. Additionally, Policy RC-9-b defines when residential and commercial development on unincorporated agricultural land should be prohibited, and Policy RC-9-c describes implementation of the Farmland Preservation Program (FPP).

Mitigation Measures

Mitigation Measure 4.2-1: Preserve Farmland

In compliance with General Plan Policy RC-9-c, until the City's Farmland Preservation Program is implemented, future development that would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within the Plan Area shall be analyzed on a project-by-project basis at the time a project application is submitted. Project proponents shall mitigate the loss at a 1:1 ratio. One of the following mitigation options shall be utilized to mitigate the loss: Restrictive Covenants or Deeds, In Lieu Fees, Mitigation Banks, Fee Title Acquisition, Conservation Easements, Land Use Regulation, or other feasible mitigation. The mitigation shall be verified by the City of Fresno for each such project during improvement plan review.

Significance after Mitigation

While implementation of Mitigation Measure 4.2-1 would reduce the above-identified impact through preservation of agricultural land at a 1:1 ratio, the impact would not be reduced to a less-than-significant level because important farmland would still be permanently converted to urban uses. Feasible mitigation measures do not exist to reduce the above impact to a less-than-significant level. Therefore, the impact would remain **significant and unavoidable**.

Impact 4.2-2: Conflict with existing zoning for agricultural use, or a Williamson Act contract

The plan area includes lands outside the Fresno city limits, in unincorporated Fresno County, but within the City's SOI. While no lands within the City of Fresno are under Williamson Act contracts, approximately 153 acres within the SOI are so enrolled. Although no proposals for annexation have been submitted (and none are assessed as part of the SCSP), implementation of the proposed plan is likely to result in conversion of existing Farmlands that are enrolled in Williamson Act contracts to non-agriculture uses. Therefore, this impact would be **significant**.

Approximately 153 acres of the Plan Area outside the existing City limits but within the City's SOI are under the Williamson Act contracts, approximately 98 acres of which are enrolled as Prime Agriculture Land and 55 acres as Nonprime. The approximately 153 acres are currently classified as within exclusive and limited agriculture land use districts per the County of Fresno's zoning ordinance (County of Fresno 2023). Implementation of the proposed plan would result in substantial development within the Plan Area. Of the 5,567-acre Plan Area available for development, approximately 3,693 acres is developed as industrial, commercial, and other land uses, and approximately 1,874 acres is open space, farmland, and vacant. Approximately 700 acres of the Plan Area would be developed with non-residential uses, primarily industrial, by the year 2040. While it is not possible to identify precisely where and when future development would occur, it is reasonable to assume that agricultural areas under Williamson Act contracts would be developed. Compliance with General Plan Objective RC-9 and Policies RC-9-a through RC-9-c are intended to limit the premature conversion of agricultural land within the Plan Area. Although compliance with the aforementioned policies may reduce impacts to agricultural resources on land under Williamson Act contracts, future development of such lands could occur. Because future development could result in conflict with a Williamson Act contract and no feasible mitigation is available, this impact would be **significant and unavoidable**.

Mitigation Measures

No mitigation is available.

Impact 4.2-3: Involve Other Changes in the Existing Environment That Would Lead to the Abandonment of Agricultural Operations and Conversion of Farmland or Forest Land to Non-Agricultural or Non-Forest Land Use

The proposed plan would result in the conversion of farmland and designated agricultural land into non-agricultural use. However, the proposed plan would not result in other changes in the existing environment other than those discussed under Impacts 4.2-1 and 4.2-2. Therefore, impacts would be considered **less than significant**.

As discussed in Impact 4.2-1, future development in accordance with the proposed plan would result in the conversion of farmland to a non-agricultural use. Except for direct conversion, implementation of the proposed plan would not result in other changes in the existing environment that would adversely affect agricultural land outside of the Plan Area. Although the proposed plan would result in conversion of land to urban uses, it would not necessarily contribute to the same occurring outside of the Plan Area because the land outside of the Plan Area is within the County and outside the City's SOI and growth boundary.

In addition, Fresno County's Right to Farm Ordinance is intended to reduce the occurrence of such conflicts between nonagricultural and agricultural land uses between the County of Fresno and the City of Fresno by requiring the transferor of any property in the County to provide a disclosure statement describing that the County permits agricultural operations. Projects outside of the Plan Area that are compliant with the County's Right to Farm Ordinance would be required to buffer project uses from adjacent agricultural uses to reduce adverse effects on such uses. Because the proposed plan would not result in other changes that would lead to the abandonment of agricultural operations or the conversion of farmland to non-agricultural land uses, impacts would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

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4.3 AIR QUALITY

This section includes a discussion of existing air quality conditions, a summary of applicable regulations, and an analysis of potential construction and operational air quality impacts resulting from anticipated development in the Plan Area. Mitigation is developed as necessary to reduce significant air quality impacts to the extent feasible.

Comments pertaining to air quality were received during the NOP scoping process from the California Air Resources Board (CARB), the San Joaquin Valley Air Pollution Control District (SJVAPCD), and the California Department of Justice. CARB provided information pertaining to the regulations it oversees that govern sources of air pollution within the state, emphasized the importance of the existing environment within the vicinity of the Plan Area as a heavily pollution-burdened community, and recommended that a health risk assessment (HRA) be prepared for the proposed plan. SJVAPCD similarly commented on the existing conditions within the Plan Area and provided information pertaining to its recommended CEQA guidance including proposed measures that may be applicable. The existing character of the Plan Area as it relates to air pollution is discussed throughout this analysis. The potential effects from exposure to toxic air contaminants (TACs) is qualitatively evaluated under Impact 4.3-3; because no specific developments are known or proposed at this time, an HRA was not prepared for the construction or operation of the proposed plan. Estimates as to the nature, location, size, and other characteristics of future development would be speculative. The contribution of emissions to the San Joaquin Valley Air Basin (SJVAB) from anticipated development and recommended mitigation measures are discussed in Section 4.3.3, "Environmental Impacts and Mitigation Measures."

4.3.1 Regulatory Setting

Air quality in the Plan Area is regulated through the efforts of various federal, state, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, planning, policymaking, education, and a variety of programs. The agencies responsible for improving the air quality within the air basins are discussed below.

FEDERAL

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

Criteria Air Pollutants

The CAA required EPA to establish National Ambient Air Quality Standards (NAAQS) for six common air pollutants found all over the United States, referred to as criteria air pollutants. EPA has established primary and secondary NAAQS for the following criteria air pollutants: ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), respirable particulate matter with aerodynamic diameter of 10 micrometers or less (PM₁₀) and fine particulate matter with aerodynamic diameter of 2.5 or less (PM_{2.5}), and lead. Criteria air pollutants are compounds that, at certain concentrations, can cause harm to human and animal health and the environment. Extensive scientific and economic research has been conducted to evaluate the specific concentrations where these pollutants may cause harm to health and environment and are reflected in EPA's NAAQS, which are shown in Table 4.3-1. The primary standards protect public health, and the secondary standards protect public welfare. The CAA also required each state to prepare a state implementation plan (SIP) for attaining and maintaining the NAAQS. The federal Clean Air Act Amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. EPA is responsible for reviewing all SIPs to determine whether they conform to the mandates of the CAA and its amendments, and whether implementation will achieve air quality goals. If EPA determines a SIP to be inadequate, EPA may prepare a federal implementation plan that imposes

additional control measures. If an approvable SIP is not submitted or implemented within the mandated time frame, sanctions may be applied to transportation funding and stationary air pollution sources in the air basin.

Table 4.3-1 National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California (CAAQS) ^{ab}	National (NAAQS) ^c	
			Primary ^{bd}	Secondary ^{be}
Ozone	1-hour	0.09 ppm (180 µg/m ³)	— ^e	Same as primary standard
	8-hour	0.070 ppm (137 µg/m ³)	0.070 ppm (147 µg/m ³)	
Carbon monoxide (CO)	1-hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)	Same as primary standard
	8-hour	9 ppm ^f (10 mg/m ³)	9 ppm (10 mg/m ³)	
Nitrogen dioxide (NO ₂)	Annual arithmetic mean	0.030 ppm (57 µg/m ³)	53 ppb (100 µg/m ³)	Same as primary standard
	1-hour	0.18 ppm (339 µg/m ³)	100 ppb (188 µg/m ³)	—
Sulfur dioxide (SO ₂)	24-hour	0.04 ppm (105 µg/m ³)	—	—
	3-hour	—	—	0.5 ppm (1300 µg/m ³)
	1-hour	0.25 ppm (655 µg/m ³)	75 ppb (196 µg/m ³)	—
Respirable particulate matter (PM ₁₀)	Annual arithmetic mean	20 µg/m ³	—	Same as primary standard
	24-hour	50 µg/m ³	150 µg/m ³	
Fine particulate matter (PM _{2.5})	Annual arithmetic mean	12 µg/m ³	9.0 µg/m ³	15.0 µg/m ³
	24-hour	—	35 µg/m ³	Same as primary standard
Lead ^f	Calendar quarter	—	1.5 µg/m ³	Same as primary standard
	30-Day average	1.5 µg/m ³	—	—
	Rolling 3-Month Average	—	0.15 µg/m ³	Same as primary standard
Hydrogen sulfide	1-hour	0.03 ppm (42 µg/m ³)	No national standards	
Sulfates	24-hour	25 µg/m ³		
Vinyl chloride ^f	24-hour	0.01 ppm (26 µg/m ³)		
Visibility-reducing particulate matter	8-hour	Extinction of 0.23 per km		

Notes: µg/m³ = micrograms per cubic meter; km = kilometers; ppb = parts per billion; ppm = parts per million.

- a California standards for ozone, carbon monoxide, SO₂ (1- and 24-hour), NO₂, particulate matter, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
- b Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25 degrees Celsius (°C) and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- c National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic means) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over three years, is equal to or less than the standard. The PM₁₀ 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. The PM_{2.5} 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the US Environmental Protection Agency for further clarification and current federal policies.
- d National primary standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
- e National secondary standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- f CARB has identified lead and vinyl chloride as toxic air contaminants with no threshold of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

Source: CARB 2016.

California's SIP is updated periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. The current SIP is a compilation of plans and regulations that govern how the region and state will comply with the CAA requirements to attain and maintain the NAAQS for ozone and PM_{2.5}.

Corporate Average Fuel Economy Standards

The National Highway Traffic Safety Administration and EPA set the Corporate Average Fuel Economy (CAFE) standards to improve the average fuel economy and reduce exhaust pollution generated by cars and light duty trucks. The CAFE standards have been enacted under the Energy Policy and Conservation Act since 1978. This national program requires automobile manufacturers to build a single light-duty national fleet that meets all requirements under both federal programs and the standards of California and other states. The purpose of this program is to increase fuel economy and limit vehicle emissions, including carbon dioxide emissions, of cars and light-duty trucks (77 *Federal Register* 62630).

EPA has established several emissions standards for on- and off-road heavy-duty diesel engines used in trucks and other equipment. This was done in part because diesel engines are a significant source of oxides of nitrogen (NO_x), PM₁₀, and PM_{2.5}, and because the EPA has identified diesel particulate matter (diesel PM) as a probable carcinogen. Implementation of the heavy-duty diesel on-road vehicle standards and the non-road diesel engine standards are estimated to reduce particulate matter and NO_x emissions from diesel engines up to 95 percent in 2030 when the heavy-duty vehicle fleet is completely replaced with newer heavy-duty vehicles that comply with these emission standards.

In concert with the diesel engine emission standards, EPA regulations have also substantially reduced the amount of sulfur allowed in diesel fuels. The sulfur contained in diesel fuel is a significant contributor to the formation of particulate matter in diesel-fueled engine exhaust. The new standards reduced the amount of sulfur allowed by 97 percent for highway diesel fuel (from 500 parts per million by weight [ppmw] to 15 ppmw), and by 99 percent for off-highway diesel fuel (from about 3,000 ppmw to 15 ppmw). The low sulfur highway fuel (15 ppmw sulfur), also called ultra-low sulfur diesel is currently required for use by all vehicles in the United States. All the aforementioned federal diesel engine and diesel fuel requirements have been adopted by California, in some cases with modifications making the requirements more stringent or the implementation dates sooner.

Hazardous Air Pollutants and Toxic Air Contaminants

TACs, or in federal parlance, HAPs, are a defined set of airborne pollutants that may pose a present or potential hazard to human health. A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations.

A wide range of sources, from industrial plants to motor vehicles, emit TACs. The health effects associated with TACs are diverse and generally are assessed locally, rather than regionally due to their dispersive properties (i.e., TAC concentrations disperse through the air and reduce with increasing distance from the source). TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage; or short-term acute effects such as eye watering, respiratory irritation (a cough), running nose, throat pain, and headaches.

For evaluation purposes, TACs are separated into carcinogens and non-carcinogens based on the nature of the physiological effects associated with exposure to the pollutant. Carcinogens are assumed to have no safe threshold below which health impacts would not occur. This contrasts with criteria air pollutants for which acceptable levels of exposure can be determined and for which the ambient standards have been established (Table 4.3-1). Cancer risk from TACs is expressed as excess cancer cases per one million exposed individuals, typically over a lifetime of exposure.

EPA regulates HAPs through its National Emission Standards for HAPs. The standards for a particular source category require the maximum degree of emission reduction that the EPA determines to be achievable, which is known as the Maximum Achievable Control Technology—MACT standards. These standards are authorized by Section 112 of the 1970 CAA and the regulations are published in 40 Code of Federal Regulations Parts 61 and 63.

STATE

California Air Resources Board

CARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA). The CCAA, which was adopted in 1988, required CARB to establish California Ambient Air Quality Standards (CAAQS) (see Table 4.3-1).

Criteria Air Pollutants

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

The CCAA requires that all local air districts in the state endeavor to attain and maintain the CAAQS by the earliest date practical. The CCAA specifies that local air districts should focus particular attention on reducing the emissions from transportation and areawide emission sources. It also provides air districts with the authority to regulate stationary and indirect sources, such as vehicle movement and residential, commercial, and industrial development.

Toxic Air Contaminants

TACs in California are regulated primarily through the Tanner Air Toxics Act (AB 1807, Chapter 1047, Statutes of 1983) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (Hot Spots Act) (AB 2588, Chapter 1252, Statutes of 1987). AB 1807 sets forth a formal procedure for CARB to designate substances as TACs. Research, public participation, and scientific peer review are required before CARB can designate a substance as a TAC. To date, CARB has identified more than 21 TACs and adopted EPA's list of HAPs as TACs. Most recently in 1998, diesel PM was added to CARB's list of TACs.

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

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

CARB has adopted diesel exhaust control measures and more stringent emissions standards for various transportation-related mobile sources of emissions, including transit buses, and off-road diesel equipment (e.g., tractors, generators). Over time, the replacement of older vehicles will result in a vehicle fleet that produces substantially lower levels of TACs than under current conditions. Mobile-source emissions of TACs (e.g., benzene, 1-3-butadiene, diesel PM) have been reduced significantly over the last decade and will be reduced further in California through a progression of regulatory measures (e.g., Low Emission Vehicle/Clean Fuels and Phase II reformulated gasoline regulations) and control technologies. With implementation of CARB's Risk Reduction Plan and other regulatory programs, it is estimated that by 2035, emissions of diesel PM will be less than half of those in 2010 (CARB 2023a). CARB's 2022 Advanced Clean Fleets regulation will also lead to reduction in diesel PM through the transition of medium- and heavy-duty trucks to become fully electric by 2045. Additionally, CARB's 2022 amendments to the 2004 Transport Refrigeration Unit (TRU) Airborne Toxic Control Measure increases the stringency of TRU PM_{2.5} and requires the electrification of diesel-powered TRU trucks by 2029.

Adopted regulations are also expected to continue to reduce formaldehyde emissions emitted by cars and light-duty trucks. As emissions are reduced, it is expected that risks associated with exposure to the emissions will also be reduced.

LOCAL

San Joaquin Valley Air Pollution Control District

Criteria Air Pollutants

Air Quality Plans

SJVAPCD is the primary agency responsible for meeting the NAAQS and CAAQS in the SJVAB, in which the Plan Area is located. The SJVAB has been designated as nonattainment with respect to the NAAQS and CAAQS for ozone and PM_{2.5} (Table 4.3-2) (CARB 2020; EPA 2023). SJVAPCD works with CARB and EPA to maintain the region's portion of the SIP for ozone and PM_{2.5}.

SJVAPCD also enforces air quality regulations, educates the public about air quality, and implements a number of programs to provide incentives for the replacement or retrofit of older diesel engines. SJVAPCD's air quality guidance also influences land use development in the SJVAB by providing decision makers with suggested goals, policies, and science pertaining to siting receptors to known or planned locations of stationary and/or mobile sources of air pollution.

SJVAPCD adopted its 2018 Plan for the 1997, 2006, and 2012 PM_{2.5} NAAQS Standards (PM_{2.5} Plan) on November 15, 2018. The PM_{2.5} Plan utilizes extensive science and research, state of the art air quality modeling, and best available information to develop a strategy to attain the federal health-based 1997, 2006, and 2012 NAAQS (SJVAPCD 2018). Additionally, SJVAPCD adopted its 2016 Ozone Plan for 8-Hour Ozone NAAQS Standard (2016 Ozone Plan) in June 2016. The 2016 Ozone Plan provides a comprehensive strategy to reduce NO_x emissions, which combine with reactive organic gases (ROG) to form ground-level ozone, by 60 percent between 2012 and 2031 to assist SJVAPCD in attaining the 2008 8-hour ozone NAAQS (SJVAPCD 2016).

Rules and Regulations

All projects are subject to adopted SJVAPCD rules and regulations in effect at the time of construction. Specific rules applicable to the proposed plan may include but are not limited to the following:

- ▶ **Regulation VIII—Fugitive Dust PM₁₀ Prohibitions:** Rules 8011–8081 are designed to reduce PM₁₀ emissions (predominantly dust) generated by human activity, including construction and demolition activities, road construction, bulk materials storage, paved and unpaved roads, carryout and track out, and landfill operations. Compliance with Regulation VIII is mandatory and enforced through civil penalties, so compliance by proponents of future projects in the Plan Area is assumed in this analysis. SJVAPCD is made aware of actions that violate its regulations and rules, such as Regulation VIII, and may investigate claims that, if found to be accurate, may result in financial penalties.
- ▶ **Rule 2010—Permits Required:** This rule applies to anyone who operates or plans to operate, construct, alter, or replace any source operation that may emit air contaminants or may reduce the emission of air contaminants. New development in the Plan Area that proposes new stationary sources would be subject to SJVAPCD permitting requirements for stationary sources such as boilers or back-up generators.
- ▶ **Rule 2201—New and Modified Stationary Source Review Rule:** This rule applies to all new stationary sources and all modifications of existing stationary sources. Stationary sources are subject to SJVAPCD permit requirements if, after construction, they emit or may emit one or more affected pollutant. The proposed plan could result in development that would require the use of diesel generators to support the operations in scenarios where electrical power is unavailable.
- ▶ **Rule 3180—Administration Fees for Indirect Source Review:** This rule serves to recover SJVAPCD's costs for administering the requirements of Rule 9510, Indirect Source Review (summarized below).
- ▶ **Rule 3135—Dust Control Plan Fee:** This rule requires applicants to submit a fee with a dust control plan. The purpose of this fee is to recover SJVAPCD's cost for reviewing such plans and conducting compliance inspections.

- ▶ **Rule 4002—National Emissions Standards for Hazardous Air Pollutants:** This rule applies to all stationary sources of HAPs and requires them to comply with the standards, criteria, and requirements set forth therein.
- ▶ **Rule 4101—Visible Emissions:** This rule prohibits emissions of visible air contaminants to the atmosphere and applies to any source operation that emits or may emit air contaminants.
- ▶ **Rule 4102—Nuisance:** This rule applies to any source operation that emits or may emit air contaminants or other materials. If such emissions create a public nuisance, the owner/operator could be in violation and be subject to enforcement action by SJVAPCD.
- ▶ **Rule 4601—Architectural Coatings:** This rule limits ROG from architectural coatings by specifying storage, cleanup, and labeling requirements for architectural coatings. This rule also establishes ROG limits for various architectural coating types.
- ▶ **Rule 4622—Gasoline Transfer Into Motor Vehicle Fuel Tanks:** The purpose of this rule is to limit emissions of gasoline vapors from the transfer of gasoline into motor vehicle fuel tanks. This rule applies to any gasoline storage and dispensing operation or mobile fueler from which gasoline is transferred into motor vehicle fuel tanks.
- ▶ **Rule 4641—Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations:** This rule applies to the manufacture and use of certain asphalt types for paving and maintenance operations.
- ▶ **Rule 9510—Indirect Source Review:** Also known as the Indirect Source Rule (ISR), this rule is intended to reduce or mitigate emissions of NO_x and PM₁₀ from the construction- and operation-related emissions of new land use development in the SJVAPCD. This rule requires specific percentage reductions in estimated on-site construction and operation emissions, and/or payment of a prescribed off-site mitigation fee for required reductions that cannot be met on the project site. Construction emissions of NO_x and PM₁₀ exhaust must be reduced by 20 percent and 45 percent, respectively. Operational emissions of NO_x and PM₁₀ must be reduced by 33.3 percent and 50 percent, respectively. The rule applies to residential developments of 50 units or more, and commercial development projects of 2,000 square feet and larger, so the proposed development would be subject to the ISR. The provisions of Rule 9510 are described in more detail in the analysis of environmental impacts and mitigation measures.

Guide for Assessing and Mitigating Air Quality Impacts

SJVAPCD's *Guide for Assessing and Mitigating Air Quality Impacts* (GAMAQI) is an advisory document that provides lead agencies, consultants, and project applicants with analysis guidance and uniform procedures for addressing air quality in environmental documents. The GAMAQI describes the criteria that the SJVAPCD uses when reviewing and commenting on the adequacy of environmental documents. It recommends thresholds for determining whether projects would have significant adverse environmental impacts, identifies methods for predicting project emissions and impacts, and identifies measures that can be used to avoid or reduce air quality impacts. If modeled construction- or operation-related emissions for a project exceed SJVAPCD's mass emission thresholds for criteria air pollutants and precursors, then SJVAPCD recommends implementing mitigation to reduce these emissions. SJVAPCD's mass emission thresholds are presented in Section 4.3.3, "Environmental Impacts and Mitigation Measures."

Typically, air districts develop thresholds of significance for CEQA evaluation (summarized below) in consideration of maintaining or achieving attainment under the NAAQS and CAAQS for the geographical area they oversee (long-term regional air quality planning). These thresholds are often tied to the SIP of an air district in nonattainment for criteria air pollutants within a cumulative context. The associated air quality plans are submitted to CARB and contain an inventory of existing ambient air pollutant concentrations and, if applicable, a suite of measures to reduce air pollution along with a projected date of achieving attainment under the NAAQS and CAAQS. Air quality plans identify a budget that accounts for new, future sources of pollution from land use development and stationary sources. These budgets inform the development of CEQA thresholds of significance; "projects with emissions below the thresholds of significance for criteria pollutants would be determined to 'not conflict or obstruct implementation of [SJVAPCD's] air quality plan'" (SJVAPCD 2015a: 65).

Health Impacts from Exposure to Criteria Air Pollution

The NAAQS and CAAQS represent concentrations of criteria air pollutants protective of human health and are substantiated by extensive scientific evidence. CARB states that ambient air quality standards (AAQSs) “are established to protect even the most sensitive individuals in our communities. An air quality standard defines the maximum amount of a pollutant that can be present in outdoor air without harm to the public’s health” (CARB 2023b). SJVAPCD, like other air districts in California and within the United States, are tasked with producing local air quality plans to attain the NAAQS and CAAQS by an eventual date. These plans include mass emissions inventories coupled with control measures that achieve necessary reductions in certain criteria pollutants and precursors to meet the concentration-based NAAQS and CAAQS. In developing CEQA thresholds of significance, SJVAPCD has developed quantitative, project-level thresholds based on anticipated levels of growth in the SJVAB in consideration of existing sources of air pollution and a future attainment date. These thresholds of significance are intended to optimize emission elimination of proposed projects while requiring a level of mitigation that is realistic and achievable. Thus, projects that demonstrate levels of construction and/or operational emissions below these thresholds would be consistent with long-term regional planning efforts in the SJVAB to attain the NAAQS and CAAQS and, therefore, avoid subjecting residents of the region to harmful concentrations of criteria air pollutants. Consequently, such projects would not result in emissions that would conflict with an area achieving future attainment status under the NAAQS and CAAQS as outlined by an applicable air quality plan.

Similarly, projects that demonstrate emissions levels in exceedance of an applicable threshold could contribute to the continued nonattainment designation of a region or potentially degrade a region from attainment to nonattainment, resulting in acute or chronic respiratory and cardiovascular illness associated with exposure to concentrations of criteria air pollutants above what EPA and CARB consider safe. Symptoms can include coughing, difficulty breathing, chest pain, eye and throat irritation and, in extreme cases, death caused by exacerbation of existing respiratory and cardiovascular disease, cancer, and impaired immune and lung function. However, the exact location and magnitude of specific health impacts that could occur as a result of an individual project’s or group of projects’ construction and operational emissions of primary and secondary pollutants are difficult to model with any degree of reliability for several reasons. Below includes a discussion of the types of modeling that may be used to estimate dispersion of pollutants, their inputs and scientific limitations, and use in estimating health impacts.

The most common approach to determining the fate and transport of directly emitted criteria air pollutants is through dispersion modeling. Dispersion modeling is best suited for primary criteria air pollutants, such as CO, PM₁₀ and PM_{2.5}, which are directly emitted into the atmosphere and, at certain concentrations, cause adverse health and environmental impacts. Other pollutants of concern are identified as secondary pollutants, which are emitted as one compound, which then combines with other pollutants, to form criteria air pollution. To follow these secondary pollutants into the ambient atmosphere, use of a photochemical model is required.

The secondary pollutants of concern for this analysis are ROG, NO_x, and oxides of sulfur (SO_x), which combine in the atmosphere to form ground-level ozone and secondary PM. Photochemical modeling of these secondary pollutants is a more difficult exercise than the modeling of primary pollutants for the following reasons. With respect to the formation of ground-level ozone from the oxidation (i.e., combination) of ROG and NO_x in the presence of sunlight, rates of ozone formation are a function of a variety of complex physical factors, including topography, building influences on air flow (e.g., downwash), ROG and NO_x concentration ratios, multiple meteorological conditions, and sunlight exposure (Seinfeld and Pandis 1996: 298). For example, rates of ozone formation are highest in elevated temperatures and when the ratio of ROG to NO_x is 5.5:1. When temperatures are lower and this ratio shifts, rates of ozone formation are stunted (Seinfeld and Pandis 1996: 299–300). In addition, ROG emissions are composed of many compounds that have different levels of reactivity leading to ozone formation. Methane, for instance, is the most common ROG compound, yet it has one of the lowest reactivity potentials (Seinfeld and Pandis 1996: 309, 312).

Moreover, as confirmed by epidemiological studies reviewed and confirmed by EPA and CARB, some groups may develop more severe health impacts than others. For instance, infants, children, the elderly, and individuals with preexisting medical conditions are more susceptible to developing illnesses from exposure to air pollutants. Additionally, environmental conditions (e.g., exposure to secondhand smoke), lifestyle choices (e.g., diet, exercise, use of drugs or tobacco products), and presence of a health condition (e.g., cancer, chronic illness) that may affect an

individual's existing health is privileged information unknown to an air quality expert, regulator, lead agency, or any other person using photochemical models. Air dispersion and photochemical modeling cannot account for the locations of these individuals on a regional basis, and, therefore, the degree to which an individual may respond to certain concentrations of criteria air pollutants (e.g., the development of lifelong chronic conditions such as asthma or the exacerbation of an existing respiratory or cardiovascular condition) cannot be meaningfully predicted. As explained in greater detail in Section 4.3.3, "Impacts and Mitigation Measures," the best modeling tools available use regional and national health data to quantify potential health effects; however, these results are not specific to any one location and cannot account for nuances in health data that are unknown.

During the litigation process that led to the Friant Ranch Decision (*Sierra Club v. County of Fresno* (Dec. 24, 2018) 6 Cal.5th 502), SJVAPCD submitted an *amicus curiae* brief in support of Fresno County and Friant Ranch LP (the parties that ultimately did not prevail in the Friant Ranch Decision). In that brief, SJVAPCD provided scientific context and expert opinion regarding the feasibility of performing regional dispersion and photochemical modeling for ozone from one specific project. SJVAPCD described the challenges of trying to correlate pollutants in the atmosphere and cited several variables as to how and where pollutants would ultimately settle and the connection to actual health effects that would be realized in any one specific location from the generation of such pollutants. Such modeling, as existed at that time in 2009, that could reasonably link secondary pollution formation to specific health effects in a meaningful context from one project or group of projects *alone* was not readily available for use by lead agencies. This concern led SJVAPCD to state that "CEQA does not require an EIR to correlate a project's air quality emissions to specific health impacts, because such an analysis is not reasonably feasible." As SJVAPCD explains (SJVAPCD 2015b [footnotes omitted]):

Attainment of a particular NAAQS occurs when the concentration of the relevant pollutant remains below a set threshold on a consistent basis throughout a particular region. For example, the San Joaquin Valley attained the 1-hour ozone NAAQS when ozone concentrations remained at or below 0.124 parts per million Valley-wide on 3 or fewer days over a 3-year period. Because the NAAQS are focused on achieving a particular concentration of pollution region-wide, the Air District's tools and plans for attaining the NAAQS are regional in nature.

For instance, the computer models used to simulate and predict an attainment date for the ozone or particulate matter NAAQS in the San Joaquin Valley are based on regional inputs, such as regional inventories of precursor pollutants (NO_x, SO_x and [ROG]) and the atmospheric chemistry and meteorology of the Valley. At a very basic level, the models simulate future ozone or PM levels based on predicted changes in precursor emissions Valley wide. Because the NAAQS are set levels necessary to protect human health, the closer a region is to attaining a particular NAAQS, the lower the human health impact is from that pollutant.

The goal of these modeling exercises is not to determine whether the emissions generated by a particular factory or development project will affect the date that the Valley attains the NAAQS. Rather, the Air District's modeling and planning strategy is regional in nature and based on the extent to which all of the emission-generating sources in the Valley (current and future) must be controlled in order to reach attainment.

Accordingly, the Air District has based its thresholds of significance for CEQA purposes on the levels that scientific and factual data demonstrate that the [SJVAB] can accommodate without affecting the attainment date for the NAAQS. The Air District has tied its CEQA significance thresholds to the level at which stationary pollution sources must "offset" their emissions.... Thus, the CEQA air quality analysis for criteria air pollutants is not really a localized, project-level impact analysis but one of regional cumulative impacts.

The brief explains that these CEQA thresholds of significance are not intended to be applied such that any localized human health impact associated with a project's emissions could be identified. Rather, CEQA thresholds of significance are used to determine whether a project's emissions would obstruct a region's capability of attaining the NAAQS and CAAQS according to the emissions inventory prepared in a SIP, which is then submitted and reviewed by CARB and EPA. This sentiment is corroborated in an additional brief submitted to the California Supreme Court by the South Coast Air Quality Management District (SCAQMD 2015). While the proposed plan would result in an assumed level of development by 2040 from multiple projects over the planning horizon, the modeling challenge

described herein would still apply, and perhaps more so, given that the nature, scale, and location of future development is unknown.

Therefore, this analysis aligns with the sentiments of these *amicus curiae* briefs and does not perform dispersion or photochemical modeling to numerically correlate the estimated emissions from future development in the Plan Area to potential human health impacts. Rather, this analysis follows SJVAPCD's guidance in evaluating the plan's emissions against SJVAPCD's thresholds of significance and provides a qualitative correlation between the plan's emissions and resulting health impact. SJVAPCD has not developed its own model(s) for project- or plan-level evaluation of resulting concentrations of ozone precursors within the SJVAB that link emissions of an individual project to changes in health of individuals.

Toxic Air Contaminants

At the local level, air districts may adopt and enforce CARB control measures. Under SJVAPCD Rule 2010 ("Permits Required") and Rule 2201 ("New and Modified Stationary Source Review"), all sources that possess the potential to emit TACs are required to obtain permits from SJVAPCD. Permits may be granted to these operations if they are constructed and operated in accordance with applicable regulations, including New Source Review standards and air toxics control measures. SJVAPCD limits emissions and public exposure to TACs through multiple programs. SJVAPCD prioritizes TAC-emitting stationary sources based on the quantity and toxicity of the TAC emissions and the proximity of the facilities to sensitive receptors. Sensitive receptors are people or facilities that generally house people (e.g., residences, schools, hospitals), that may experience adverse effects from unhealthy concentrations of air pollutants. SJVAPCD's *District's Risk Management Policy to Address OEHHA's Revised Risk Assessment Guidance Document*, *Framework for Performing Health Risk Assessments*, and *Draft Guidance for Air Dispersion Modeling* are tools that may be utilized by experts to assess potential health effects at locations of sensitive receptors from the construction and operation of projects emitting TACs (SJVAPCD 2015c, 2018).

City of Fresno General Plan

The following existing City of Fresno General Plan Policies have been adopted to protect air quality:

- ▶ **Policy RC-4-a: Support Regional Efforts.** Support and lead, where appropriate, regional, State and federal programs and actions for the improvement of air quality, especially the SJVAPCD's efforts to monitor and control air pollutants from both stationary and mobile sources and implement Reasonably Available Control Measures in the Ozone Attainment Plan.
- ▶ **Policy RC-4-b: Conditions of Approval.** Develop and incorporate air quality maintenance requirements, compatible with Air Quality Attainment and Maintenance Plans, as conditions of approval for General Plan amendments, community plans, Specific Plans, neighborhood plans, Concept Plans, and development proposals.
- ▶ **Policy RC-4-c: Evaluate Impacts with Models.** Continue to require the use of computer models used by SJVAPCD to evaluate the air quality impacts of plans and projects that require such environmental review by the City.
- ▶ **Policy RC-4-d: Forward Information.** Forward information regarding proposed General Plan amendments, community plans, Specific Plans, neighborhood plans, Concept Plans, and development proposals that require air quality evaluation, and amendments to development regulations to the SJVAPCD for their review of potential air quality and health impacts.
- ▶ **Policy RC-4-k: Electric Vehicle Charging.** Develop standards to facilitate electric vehicle charging infrastructure in both new and existing public and private buildings, in order to accommodate these vehicles as the technology becomes more widespread.

A discussion of the proposed plan's consistency with the policies above is in the impact analysis section where applicable.

4.3.2 Environmental Setting

The Plan Area is within the City of Fresno and the SJVAB. Ambient concentrations of air pollutants are determined by the levels of emissions released by pollutant sources and the ability of the atmosphere to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, atmospheric stability, and the presence of sunlight.

The SJVAB is the southern half of California's Central Valley and is approximately 250 miles long and averages 35 miles wide. The SJVAB 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 Strait. The bowl-shaped topography inhibits movement of pollutants out of the SJVAB.

The SJVAB is in a Mediterranean Climate Zone and is influenced by a subtropical high-pressure cell most of the year generated by the Pacific Ocean that influences the amount of rain that is deposited, the characteristics of temperature, and the deposition/collection of air pollution in the SJVAB. Rainfall is sparse and occurs mainly in winter. Summers are hot and dry. Summertime maximum temperatures often exceed 100 degrees Fahrenheit (°F).

The subtropical high-pressure cell is strongest during spring, summer and fall and produces subsiding air, which can result in temperature inversions, or a reversal of the normal behavior of temperature in the troposphere that results in a layer of cool air at the surface is overlaid by a layer of warmer air, in the SJVAB. 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 (1,500–3,000 feet). These mountains can function as a physical barrier to trap emissions of regional pollutants in the SJVAB leading to degraded, stagnant air quality.

Winter-time high pressure events can often last many weeks with surface temperatures often lowering to 30–40°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.

Solar radiation and temperature are particularly important in the chemistry of photochemical smog (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 ROG and NO_x) under the influence of sunlight (SJVAPCD 2015a).

The local meteorology of the Plan Area and surrounding area is represented by measurements recorded at the Western Regional Climate Center Friant Government CP Station. The average annual precipitation from 1912 to 2016 was approximately 14.3 inches. Average January temperatures range from a normal minimum of 36.7°F to a normal maximum of 55.4°F. July temperatures range from a normal minimum of 61.0°F to a normal maximum of 100.3°F (WRCC 2016). The prevailing wind direction is from the northwest (WRCC 2002).

EXISTING AMBIENT AIR QUALITY

Criteria Air Pollutants

Concentrations of criteria air pollutants are used to indicate the quality of the ambient air. A description of key criteria air pollutants in the SJVAB and their potential impacts on human health is provided below. Fresno County's attainment status for the CAAQS and the NAAQS are shown in Table 4.3-2. Emission source types and health effects are summarized in Table 4.3-3.

Table 4.3-2 Attainment Status Designations for Fresno County

Pollutant	National Ambient Air Quality Standard	California Ambient Air Quality Standard
Ozone	—	Nonattainment (1-hour) Classification-Serious ¹
	Nonattainment (8-hour) ² Classification=Extreme	Nonattainment (8-hour)
Respirable particulate matter (PM ₁₀)	Attainment (24-hour)	Nonattainment (24-hour)
	—	Nonattainment (Annual)
Fine particulate matter (PM _{2.5})	Nonattainment (24-hour)	—
	Nonattainment (Annual)	Nonattainment (Annual)
Carbon monoxide (CO)	Unclassified/Attainment (1-hour)	Attainment (1-hour)
	Unclassified/Attainment (8-hour)	Attainment (8-hour)
Nitrogen dioxide (NO ₂)	Unclassified/Attainment (1-hour)	Attainment (1-hour)
	Unclassified/Attainment (Annual)	Attainment (Annual)
Sulfur dioxide (SO ₂) ⁵	Unclassified/Attainment (1-Hour)	Attainment (1-hour)
		Attainment (24-hour)
Lead (Particulate)	Attainment (3-month rolling avg.)	Attainment (30-day average)
Hydrogen Sulfide	No Federal Standard	Unclassified (1-hour)
Sulfates		Attainment (24-hour)
Visibly Reducing Particles		Unclassified (8-hour)
Vinyl Chloride		Unclassified (24-hour)

¹ Per Health and Safety Code (HSC) Section 40921.5(c), the classification is based on 1989–1991 data, and therefore does not change.

² 2015 Standard.

Sources: CARB 2020; EPA 2023.

Table 4.3-3 Sources and Health Effects of Criteria Air Pollutants

Pollutant	Sources	Acute ¹ Health Effects	Chronic ² Health Effects
Ozone	Ozone is a photochemical oxidant (a substance whose oxygen combines chemically with another substance in the presence of sunlight) and the primary component of smog. It is a secondary pollutant resulting from the reaction of ROG and NO _x in the presence of sunlight. ROG emissions result from incomplete combustion and evaporation of chemical solvents and fuels; NO _x results from the combustion of fuels	increased respiration and pulmonary resistance; cough, pain, shortness of breath, lung inflammation	permeability of respiratory epithelia, possibility of permanent lung impairment
Carbon monoxide (CO)	CO is an odorless, colorless gas formed by the incomplete combustion of fuels and motor vehicle exhaust. Other sources include industrial processes, carbon black manufacturing, non-transportation related fuel combustion, and natural sources such as wildfires.	headache, dizziness, fatigue, nausea, vomiting, death	permanent heart and brain damage
Nitrogen dioxide (NO ₂)	NO ₂ is a brownish, highly reactive gas that is present in all urban environments. The major human-made sources of NO ₂ are combustion devices, such as boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines.	coughing, difficulty breathing, vomiting, headache, eye irritation, chemical pneumonitis or pulmonary edema; breathing abnormalities, cough, cyanosis, chest pain, rapid heartbeat, death	chronic bronchitis, decreased lung function
Sulfur dioxide (SO ₂)	coal and oil combustion, steel mills, refineries, and pulp and paper mills	Irritation of upper respiratory tract, increased asthma symptoms	Insufficient evidence linking SO ₂ exposure to chronic health impacts

Pollutant	Sources	Acute ¹ Health Effects	Chronic ² Health Effects
Respirable particulate matter (PM ₁₀), Fine particulate matter (PM _{2.5})	fugitive dust, soot, smoke, mobile and stationary sources, construction, fires and natural windblown dust, and formation in the atmosphere by condensation and/or transformation of SO ₂ and ROG	breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular diseases, premature death	alterations to the immune system, carcinogenesis
Lead	metal processing	reproductive/ developmental effects (fetuses and children)	numerous effects including neurological, endocrine, and cardiovascular effects

Notes: NO_x = oxides of nitrogen; ROG = reactive organic gases.

¹ Acute health effects refer to immediate illnesses caused by short-term exposures to criteria air pollutants at fairly high concentrations. An example of an acute health effect includes fatality resulting from short-term exposure to carbon monoxide levels in excess of 1,200 parts per million.

² Chronic health effects refer to cumulative effects of long-term exposures to criteria air pollutants, usually at lower, ambient concentrations. An example of a chronic health effect includes the development of cancer from prolonged exposure to particulate matter at concentrations above the national ambient air quality standards.

Source: CARB 2023b.

Toxic Air Contaminants

TACs in California are regulated primarily through the Tanner Air Toxics Act (AB 1807, Chapter 1047, Statutes of 1983) and the Hot Spots Act (AB 2588, Chapter 1252, Statutes of 1987). AB 1807 sets forth a formal procedure for CARB to designate substances as TACs. Research, public participation, and scientific peer review are required before CARB can designate a substance as a TAC.

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

Assembly Bill 617

AB 617 of 2017 aims to help protect air quality and public health in communities that are disproportionately affected by air pollution. AB 617 imposes a state-mandated community-scale program to address non-vehicular sources (e.g., refineries, manufacturing facilities) of criteria air pollutants and TACs. The bill requires CARB to identify heavily polluted communities suffering from a high exposure burden and directs regional air districts to focus air quality improvement efforts through implementation of community air monitoring plans and adoption of emission reduction programs within these identified areas. Currently, air districts use command-and-control strategies to review individual sources and impose emissions limits on emitters based on BACT, pollutant type, and proximity to certain existing land uses. AB 617, however, addresses the cumulative and additive nature of air pollutant health effects impacting a community by requiring local air quality assessment and emission reduction planning.

The Plan Area is located within the South Central Fresno community boundaries defined during the AB 617 process, a community that was nominated by the SJVAPCD and selected by CARB as a monitoring community pursuant to AB 617. In 2019, SJVAPCD published the Community Air Monitoring Plan: South Central Fresno AB 617 Community, an air quality monitoring plan that involved community engagement and coordination with SJVAPCD. The Community Air Monitoring Plan identifies areas of interest for AB 617 monitoring such as stationary and mobile sources, monitoring site locations, sampling schedules, and types of equipment and strategies. The plan was designed to obtain detailed air pollution levels through the community, determine areas in the community of highest risk, quantify sources of air pollution within the community, and to position the community to develop emissions reduction strategies and monitor the effectiveness of those strategies.

As identified in the Community Air Monitoring Plan, pollutants of concern in the Plan Area are PM_{2.5}, black carbon, NO_x, hydrogen sulfide, CO, ozone, and volatile organic compounds (VOCs), with major pollutant sources including heavy duty trucks, idling cars, residential wood burning, industrial uses and processes, and illegal trash burning. Specifically, there are existing industrial uses located in the southwest portion of the community and including a fossil

fuel electric power generation facility along with several other industrial sources. The community is also traversed by State Routes (SRs) 99, 41, and 180, sources of mobile exhaust pollution and air toxics.

CalEnviroScreen, developed by the California Environmental Protection Agency, is an online mapping tool that uses socioeconomic data in combination with numerous environmental indicators (e.g., pollution exposure, traffic conditions, water quality) and existing sensitive population (e.g., cardiovascular disease, asthma) to develop a combined overall score, by census tract, in California. The scores are presented as percentiles relative to all the census tracts in the state; thus, the higher the score, the higher the overall burden to that specific area compared to other geographic locations in the state. Based on published data in CalEnviroScreen 4.0 (CalEPA 2023), the South Central Fresno community has a high cumulative air pollution exposure burden and has census tracts that have been designated as disadvantaged communities. The Plan Area is measured within CalEnviroScreen's 90-100 percentile for the highest level of socioeconomic and environmental burden (Figure 4.3-1).

Odors

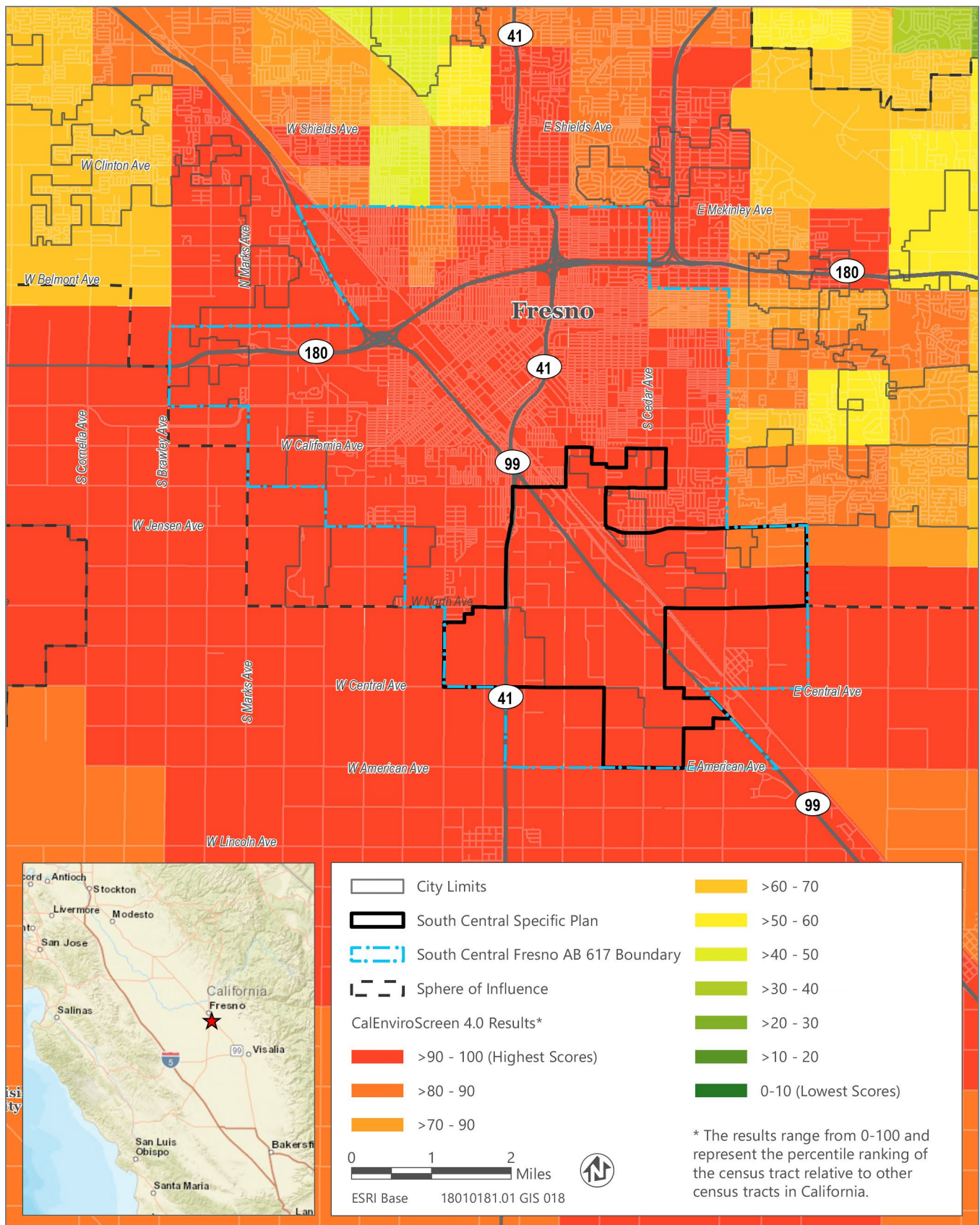
Odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals can smell very minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; an odor that is offensive to one person may be perfectly acceptable to another (e.g., fast food restaurant). It is important to also 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. Odor sources of concern include wastewater treatment plants, sanitary landfills, composting facilities, recycling facilities, petroleum refineries, chemical manufacturing plants, painting operations, rendering plants, and food packaging plants. The Cedar Avenue Recycling and Transfer Station, the Foster Farms packaging plant, Kinder Morgan Fresno Terminal petroleum products company, the General Coatings Manufacturing Corporation, and the Martin Marietta Fresno Asphalt Company is located within the Plan Area.

Sensitive Receptors

Sensitive receptors include those land uses where exposure to pollutants could result in health-related risks to sensitive individuals, such as children or the elderly. Residential dwellings, schools, hospitals, playgrounds, and similar facilities are of primary concern because of the presence of people particularly sensitive to pollutants and/or the potential for increased and prolonged exposure to pollutants. Rural residential and medium-density residential uses are found throughout the Plan Area, and one school, Orange Center Elementary School, is located on S. Cherry Avenue in the southern portion of the Plan Area. For the purposes of the proposed plan, sensitive receptors includes the land use categories where sensitive receptors live or spend a significant amount of time including residences, schools, playgrounds, child-care centers, hospitals, retirement homes, and convalescent homes. Sensitive receptors are persons or land users that are most sensitive to negative effects of air pollutants. Persons who are sensitive receptors include children, the elderly, the acutely ill, and the chronically ill, which generally aligns with the definition provided by SJVAPCD.

As described above, CalEnviroScreen collects data pertaining to various sources of pollution, known health data, and socioeconomic factors to score communities throughout the state with respect to their level of environmental burden (CalEPA 2023). With a score of 90-100, the Plan Area is a sensitive community already experiencing high levels of air pollution, and it exhibits the highest level of socioeconomic and environmental burden compared to other areas of the state.



Source: Adapted by Ascent Environmental in 2023.

Figure 4.3-1 South Central Specific Plan CalEnviroScreen.04 Results

4.3.3 Environmental Impacts and Mitigation Measures

THRESHOLDS OF SIGNIFICANCE

In its March 2015 GAMAQI, SJVAPCD provides evidence to support the development and applicability of its thresholds of significance for project-generated emissions of criteria air pollutants and precursors, which may be used at the discretion of a lead agency overseeing the environmental review of projects located within the SJVAB. As stated in the GAMAQI, “a Lead Agency may consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the Lead Agency to adopt such thresholds is supported by substantial evidence” (SJVAPCD 2015a: 63–64). CEQA-related air quality thresholds of significance are tied to long-term air quality planning, which focuses on achieving or maintaining attainment designations with respect to the NAAQS and CAAQS for criteria air pollutants, which are scientifically substantiated, numerical concentrations considered to be protective of human health.

These numerical thresholds for construction- and operation-related emissions of criteria air pollutants and precursors would determine whether a project’s discrete emissions would result in a regional contribution (i.e., significant) to the baseline nonattainment status of SJVAPCD. In developing thresholds of significance for individual project emissions, SJVAPCD analyzed emissions values against the SJVAPCD’s offset thresholds to ozone precursors, which, when applied, prevent further deterioration of ambient air quality in the SJVAB. Thresholds for PM₁₀ and PM_{2.5} were adopted from the SJVAPCD’s PM₁₀ New Source Review offset thresholds for stationary sources, which represent the greatest component of SJVAPCD’s long-term regional air quality planning (SJVAPCD 2015a: 82).

Using these parameters, SJVAPCD developed quantitative thresholds of significance for project-level CEQA evaluation that may be used to determine the extent to which a project’s emissions of criteria air pollutants and precursors would contribute to the regional degradation of ambient air quality within the SJVAB. According to SJVAPCD, projects with emissions below these thresholds of significance would demonstrate consistency with SJVAPCD’s air quality plans. Notably, annual mass emissions thresholds of significance are not designed to determine whether a project’s contribution of emissions would directly result in a violation of the NAAQS or CAAQS, which are hourly, concentration-based standards.

SJVAPCD has also developed daily mass emissions screening criteria for ROG, NO_x, CO, SO_x, PM₁₀, and PM_{2.5} to determine whether project emissions would result in a violation of an AAQS. Unlike SJVAPCD’s annual mass emissions thresholds, which are used to evaluate a project’s consistency with long-term regional air quality planning, these daily mass emissions screening criteria serve to determine the location where an exceedance of an AAQS, and resulting adverse health impacts, could occur. Because the NAAQS and CAAQS are concentration-based standards presented hourly, daily mass emissions are a more suitable estimate to determine whether a project would contribute to a violation of an AAQS. Projects that emit emissions below these daily screening criteria would likely not generate emissions in levels that would result in a violation of an AAQS, and air dispersion modeling would not be required. Consequently, projects that emit emissions above these criteria are recommended to perform an ambient air quality analysis (AAQA) to evaluate whether an exceedance, and resulting health impact, would occur.

Notably, in 2019 the Appendix G example checklist questions for air quality of the State CEQA Guidelines were amended to remove criterion item “B” (violate any air quality standard or contribute substantially to an existing or projected air quality violation). SJVAPCD’s 100 pounds per day (lb/day) screening criteria were developed in consideration of this criterion. SJVAPCD’s use of the 100 lb/day screening criteria is not intended to be used to make a CEQA significance determination but is a trigger for the preparation of an AAQA.

Also of note, the 100 lb/day screening criteria are not scaled based on the attainment status of the SJVAB. SJVAPCD’s annual mass emissions thresholds used for CEQA determinations are scaled with the understanding that certain pollutants are of greater concern given the SJVAB’s attainment designations. For example, SJVAPCD’s recommends a 10 ton per year (tpy) threshold for ROG and NO_x, which are precursor emissions to the secondary formation of ozone (a criteria pollutant for which the SJVAB is in severe nonattainment) while also recommending a 100 tpy threshold for

CO with the understanding of the SJVAB's attainment of the AAQS for that pollutant. Therefore, while SJVAPCD's screening criteria are used in this analysis, they are not intended to be used to make significance determinations.

Using federal and state guidance pertaining to TACs, in addition to the findings of several scientific studies, SJVAPCD developed cancer risk and non-cancer health hazard thresholds for TAC exposure. Unlike criteria air pollutants, there is no known safe concentration of TACs for cancer risk. Moreover, TAC emissions contribute to the deterioration of localized air quality. Due to the dispersion characteristics of TACs, emissions generally do not cause regional-scale air quality impacts. SJVAPCD's thresholds are designed to ensure that a source of TACs does not contribute to a localized, significant impact to existing or new receptors.

Based on Appendix G of the CEQA Guidelines and SJVAPCD recommendations, an air quality impact would be significant if development under the proposed plan would do any of the following:

- ▶ conflict with or obstruct implementation of the applicable air quality plan;
- ▶ result in a cumulatively considerable net increase in any criteria pollutant for which the Plan Area is in non-attainment under an applicable federal or state ambient air quality standard:
 - Construction impacts would be significant if construction emissions from development under the proposed plan would exceed SJVAPCD's mass emissions threshold of 10 tpy for ROG and NO_x, 15 tpy for PM₁₀ and PM_{2.5}, and 27 tpy for SO_x. SJVAPCD also recommends that projects compare their on-site emissions to screening criteria of 100 lb/day for ROG, NO_x, CO, SO_x, PM₁₀, and PM_{2.5}.
 - Regional (operational) impacts would be significant if development under the proposed plan generates emissions of ROG and NO_x that exceed 10 tpy, PM₁₀ and PM_{2.5} that exceed 15 tpy, and SO_x that exceed 27 tpy. SJVAPCD also recommends that projects compare their on-site emissions to screening criteria of 100 lb/day for ROG, NO_x, CO, SO_x, PM₁₀, and PM_{2.5};
- ▶ expose sensitive receptors to substantial pollutant concentrations:
 - TAC impacts would be significant if development under the proposed plan would expose the public to substantial levels of TACs so that the probability of contracting cancer for the Maximally Exposed Individual (MEI) exceeds 20 in 1 million or an acute or chronic Hazard Index that equals or exceeds 1 for the MEI for non-carcinogens.
 - Local mobile source impacts would be significant if development under the proposed plan would contribute to CO concentrations that exceed the CAAQS of 9.0 ppm for 8 hours or 20 ppm for 1 hour; or
- ▶ result in other emissions (such as those leading to odors) adversely affecting a substantial number of people:
 - Odor impacts would be significant if development under the proposed plan has the potential to frequently expose members of the public to objectionable odors.

METHODOLOGY

Criteria Air Pollutants

SJVAPCD has established thresholds for determining significance of air pollutant emissions. These thresholds distinguish between a project's short-term emissions from its long-term emissions. The short-term emissions are related to the construction phase of a project, which are recognized to be short in duration. The long-term emissions are related to the activities that will occur on an ongoing basis as a result of project operations.

Impacts are evaluated both on the basis of CEQA Guidelines Appendix G questions and SJVAPCD significance criteria. The impacts evaluated are those involving construction, operational emissions of criteria pollutants [i.e., ROG and NO_x (precursors to ozone), CO, SO₂, PM₁₀, and PM_{2.5}], and cumulative air quality impacts. Because the area is nonattainment for ozone, PM₁₀, and PM_{2.5}, a major criterion for review is whether development under the proposed plan would result in a net increase of pollutants affecting ozone precursor pollutants, PM₁₀, and PM_{2.5}.

Because no specific developments are proposed, modeling is based on reasonable assumptions relative to grading, paving, typical construction activities, and default values in CalEEMod that are based on the location of the proposed plan and land use types. Based on the extended period of development over the planning horizon (approximately 2024–2040) and guidelines developed by the Sacramento Metropolitan Air Quality Management District (SMAQMD), modeling conservatively assumed that 25 percent of the total development would be constructed in year 2024 (worst-case year), and construction of the remaining 75 percent would be evenly distributed over the remaining planning horizon, 2025 to 2040 (SMAQMD 2021). SMAQMD recommends that construction phasing be scheduled in this manner to better represent a more realistic, albeit conservative, scenario wherein site preparation and grading (the construction phases where utilities and infrastructure are constructed generating the greatest level of emissions) are captured within the earliest year of Plan buildout. While SMAQMD is not the air district that governs air permitting and regional air quality planning in the Plan Area, its guidance regarding program-level analyses for general plans and area plans can be reasonably applied to projects outside of its jurisdiction, and the City has done so here.

This assumption was made to characterize a worst-case construction year in the absence of known projects and specific construction phasing. While it is unlikely that 25 percent of all the proposed land uses would be fully constructed within the span of one year, emissions estimates were generated to provide a meaningful, albeit conservative, representation of the level of emissions that could occur from highly intensive construction activity, to then be compared to SJVAPCD's CEQA thresholds of significance. Moreover, 2024 was determined to be the most conservative year for estimating this buildout scenario as heavy-duty and on-road vehicle emissions associated with construction are anticipated to decline into the future from the deployment of various statewide regulations such as the Advanced Clean Fleets regulation and ACC II Program, among others, and can be used to represent the highest level of construction activity and highest emissions for any given year during buildout of the proposed plan. The scenario includes 25 percent of all residential, commercial, and industrial development proposed for the proposed plan.

Operational emissions were estimated for mobile, energy, and area sources. Emissions from energy and area sources were estimated using CalEEMod defaults for heavy- and light industrial, commercial, and residential land uses. Mobile source emissions were estimated using CalEEMod and project-specific trip generation and vehicle miles traveled data. See Appendix B for more details regarding modeling assumptions.

Toxic Air Contaminants

Because no specific developments are proposed and no site-specific construction and operational information is available, and because of the programmatic nature of analyses for a large-scale plan, TACs were evaluated qualitatively. Where future development has the potential to result in TAC exposure from new stationary or mobile sources, potential impacts were identified, and mitigation is included. Available TAC and risk exposure information from published sources (e.g., CalEnviroScreen, General Plan, environmental documents) is incorporated and referenced, as appropriate, to inform the analysis.

Carbon Monoxide

CO impacts are evaluated using SJVAPCD's preliminary screening tool. Based on the CO Protocol Analysis developed by the California Department of Transportation, and due to the fact that increased CO concentrations are usually associated with roadways that are congested and with heavy traffic volume, the SJVAPCD has established that preliminary screening can be used to determine with fair certainty that the effect a project has on any given intersection would not result in a CO hotspot. Therefore, SJVAPCD has established that if neither of the following criteria are met at all intersections affected by the action, then there would be no potential to violate the CO standard:

- ▶ A traffic study for the project indicates that the level of service (LOS) on one or more streets or at one or more intersections in the project vicinity will be reduced to LOS E or F; or
- ▶ A traffic study indicates that the project will substantially worsen an already existing LOS F on one or more streets or at more or more intersections in the project vicinity.

Additionally, concentrations of CO were evaluated using the City of Fresno's General Plan and Development Code Update which determines that a CO hotspot would not occur for roadway intersections that support less than 36,000 peak hour trips. This value was determined by a sensitivity analysis conducted for the General Plan using the CALINE4 CO Hotspot model, which found that intersections that supported this level of trips would result in hourly concentrations of 7.5 ppm and an 8-hour concentration of 6.0, which is well below the NAAQS and CAAQS for CO.

PROPOSED SCSP POLICIES AND DEVELOPMENT STANDARDS

The following policies from the proposed plan relate to the reduction of air pollutant emissions and the protection of human health.

Trucks

- ▶ T-3: Limit truck idling times.

Public Transit

- ▶ T-4: Expand bus area service and frequency.
- ▶ T-5: Provide van shuttles, transit and carpool incentives, and bicycle parking for employees.

Roadway Improvements

- ▶ T-9: Install traffic control or traffic safety measures to include bike lanes.
- ▶ T-11: Install crosswalks and traffic calming measures near schools.
- ▶ T-13: Improve and maintain sidewalks.

Air Quality

- ▶ AQ-1: Require the installation of air filtration systems in businesses to protect homes and schools.
- ▶ AQ-2: Request additional 24-hour air monitors from SJAPCD around distribution centers, major roads near distribution centers, and at receptive school districts.
- ▶ AQ-3: Require the implementation of dust reduction measures near sensitive uses, including the installation of wind barriers and regular street sweeping.

Vehicle/Equipment and Operation Standards

- ▶ AQ-4: Increase electric vehicle charging stations and alternative fuel stations.
- ▶ AQ-5: Seek out funding sources to assist warehouses and industrial uses to transition to near-zero emissions technology.
- ▶ AQ-6: Consider construction of near zero fueling stations (i.e., CNG/Hydrogen).
- ▶ AQ-7: Encourage commercial landscapers to use electric gardening equipment such as lawn mowers and leaf blowers.
- ▶ AQ-8: Ensure loading docks and emission-generating equipment are located away from homes and schools.
- ▶ AQ-9: Incentivize all construction equipment to follow the "Construction Clean Fleet" standards as identified by SJVAPCD under Rule 9510 Indirect Source Review (ISR).
- ▶ AQ-10: Open a dialogue with businesses to encourage changing warehouse shift times so they do not overlap with commute and school traffic times.
- ▶ AQ-11: Conduct a traffic study during high peak times (ex. Tuesday and Saturdays due to Cherry Auction) to include potential road widening plans.

Energy and Green Building

- ▶ EGB-1: Require the reduction of energy consumption and promote energy efficiency through education, conservation programs, building design/operation standards, and incentive programs.

- ▶ EGB-2: Incentivize private solar installations by providing information about financing and by expediting the permit process.
- ▶ EGB-3: Encourage installation of solar panels, battery storage, and zero-emission backup electricity generators at distribution centers.

Community Benefit District

- ▶ CBD-1: Consider a Community Benefit Fund to pay for measures such as air filtration systems, dual-paned windows, parks, job training programs, and job fairs near the Plan Area.

Green Barriers/Tree Coverage/Beautification

- ▶ GB-1: Require buffers between new industrial development and existing neighborhoods.
- ▶ GB-3: Increase coverage of parking lots to avoid the “heat island effect.”
- ▶ GB-4: Create a Green Street Tree Planting Program, prioritizing areas with few trees.

Noise

- ▶ N-3: Protect noise-impacted areas through effective noise mitigation measures such as barriers, berms, design and placement of buildings, sound absorbing materials, and vegetation.

In addition, the SCSP includes regulations and development standards that prohibit certain uses within 1,000 feet of sensitive receptors or require a conditional use permit for such uses (e.g., warehousing uses); require setbacks, screening, and buffer metrics; and require truck routing plans from facility operators that emphasize protection of sensitive receptors. The plan also includes alternative energy development standards that would serve to reduce emissions of criteria pollutants, ozone precursors, and TACs. These include requirements for ZE (zero emission) motorized operational equipment; solar-ready building roofs and solar requirements for buildings over 400,000 square feet; solar-reflective roofing material; EV-ready passenger vehicle parking spaces, including some quick-charge EV; electric TRUs and provision of electrical infrastructure to accommodate them; bicycle racks with electric plugs for e-bikes; cool surface treatments; upsizing of electrical rooms to accommodate additional electrical panels; super-compliant VOC paints and coatings; recycling; and reasonable best efforts to deploy the highest rated CARB Tier technologies during construction.

ISSUES NOT DISCUSSED FURTHER

All issues pertaining to air quality are evaluated.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 4.3-1: Conflict with or Obstruct Implementation of the Applicable Air Quality Plan

Development under the proposed plan would introduce new operational sources of emissions that would exceed SJVAPCD’s mass emissions thresholds of significance which would, in turn, interfere with SJVAPCD’s long-term regional air quality planning. This impact would be **significant**.

SJVAPCD’s current plans include the PM_{2.5} Plan, adopted on November 15, 2018, and the 2016 Ozone Plan, adopted in June 2016. The PM_{2.5} Plan utilizes extensive science and research, state of the art air quality modeling, and best available information to develop a strategy to attain the federal health-based 1997, 2006, and 2012 NAAQS (SJVAPCD 2018). The 2016 Ozone Plan provides a comprehensive strategy to reduce NO_x emissions (which combine with ROG to form ground-level ozone) by 60 percent between 2012 and 2031 to assist SJVAPCD in attaining the 2008 8-hour ozone NAAQS (SJVAPCD 2016).

SJVAPCD applies annual mass emissions thresholds for use in CEQA analyses to determine whether a project would conflict with long-term regional air quality planning in the SJVAB. As discussed under Impact 4.3-2, construction of

development projects under the proposed plan would not result in emissions exceeding SJVAPCD's annual mass emissions thresholds; however, under a worst-case construction scenario, daily mass emissions would exceed SJVAPCD's daily screening criteria. It is important to note for context that the "project" evaluated herein for purposes of CEQA is a "plan" that comprises numerous yet-unknown future projects. The plan, by virtue of its land use designations and zoning, would accommodate specific development types and densities that would be held to development standards, codes, and regulations, but the nature, size, and locations of future development within the Plan Area is yet unknown. Future developments, on a project-level basis, may not individually exceed thresholds and may not conflict with the long-term regional air quality planning in the SJVAB; however, because this programmatic analysis is at the level of a plan, it is inherently cumulative, takes an appropriately conservative approach of estimating emissions comprehensively, and determines that the proposed plan's emissions would conflict with SJVAPCD's 2018 PM_{2.5} Plan and 2016 Ozone Plan. This impact would be **significant**.

Mitigation Measures

Mitigation Measure 4.3-1a: Prepare an Ambient Air Quality Analysis and Mitigation Plan or Voluntary Emissions Reduction Agreement

Prior to future discretionary project approval, and once all feasible on-site reduction measures have been incorporated, development project applicants shall prepare and submit to the Director of the Fresno Planning and Development Department, or designee, an AAQA to determine whether any SJVAPCD annual mass emissions thresholds are exceeded or if a future project's emissions may result in the violation of an AAQS. If no thresholds are exceeded, no further action is necessary. If one or more thresholds are exceeded, prior to the issuance of Certificates of Occupancy, future development will engage in a voluntary emissions reduction agreement (VERA) through coordination with SJVAPCD to reduce emissions to meet SJVAPCD's annual mass emissions thresholds for any pollutant that exceeds the respective threshold. The project applicant shall engage in a discussion with SJVAPCD prior to the adoption of the VERA to ensure that feasible mitigation has been identified to reduce emissions to a less-than-significant level consistent with the direction given in SJVAPCD's GAMAQI. As allowed by SJVAPCD, the project applicant shall be provided the opportunity to perform an additional quantification of the project's operational emissions to estimate the type of reduction needed to reduce emissions to meet SJVAPCD's annual thresholds of significance.

Mitigation Measure 4.3-1b: Use Clean Fleets during Construction

Prior to issuance of future construction contracts, to reduce impacts from construction-related diesel exhaust emissions resulting from development under the SCSP, construction contractors shall demonstrate that they shall use the cleanest available fleet of heavy-duty equipment. This can be accomplished through submitting Construction Clean Fleet paperwork to SJVAPCD. All on-site yard trucks and forklifts shall be powered by electricity where such equipment is readily available in the marketplace as reasonably determined by the City. Electric forklifts will continue to become more available as the requirements of CARB's proposed Zero-Emissions Forklifts Regulation stimulate the production of these forklifts over time. For any on-site equipment that cannot be electric-powered, and diesel-powered equipment is the only available option, construction contractors shall use equipment that either uses only high-performance renewable diesel or meets EPA Tier 4 emissions standards.

Mitigation Measure 4.3-1c: Prohibit Portable Diesel Engines

To reduce diesel exhaust emissions, portable diesel engines shall be prohibited during construction of plan-related development where access to alternative sources of power (e.g., electricity) are available. The applicability of this measure is contingent upon the infrastructure available to support electric-powered diesel engines as well as the availability of such equipment at the time of development application review. This measure shall be enforced through City conditions of approval prior to issuance of construction/building permits for individual development applications.

Mitigation Measure 4.3-1d: Implement Dust Control Measures

To reduce impacts from construction-related fugitive dust emissions resulting from plan-related development, construction contractors shall be required to implement the following dust control measures in accordance with SJVAPCD's Regulation VIII including additional dust reducing measures:

- ▶ All soil being actively excavated or graded shall be sufficiently watered to prevent excessive dust. Watering shall occur as needed with complete coverage of disturbed soil areas. Watering shall take place a minimum of three times daily on disturbed soil areas with active construction activities operations unless dust is otherwise controlled by rainfall or use of a dust suppressant.
- ▶ After active construction activities, soil shall be stabilized with a non-toxic soil stabilizer or soil weighting agent, or alternative soil stabilizing methods.
- ▶ All unpaved construction and operation/maintenance site roads, as they are being constructed, shall be stabilized with a non-toxic soil stabilizer, water, or soil weighting agent.
- ▶ All clearing, grading, earth moving, and excavation activities shall cease during periods of winds greater than 20 miles per hour (averaged over one hour), or when dust plumes of 20 percent or greater opacity impact public roads, occupied structures, or neighboring property or as identified in a plan approved by the SJVACD.
- ▶ All trucks leaving construction sites will cover all loads of soils, sands, and other loose materials, or be thoroughly wetted with a minimum freeboard height of six inches.
- ▶ Areas disturbed by clearing, earth moving, or excavation activities shall be minimized at all times.
- ▶ Stockpiles of soil or other fine loose material shall be stabilized by watering or other appropriate method to prevent wind-blown fugitive dust.
- ▶ All soil storage piles and disturbed areas that remain inactive for longer than 10 days shall be covered or shall be treated with appropriate dust suppressant compounds.
- ▶ Prior to construction, wind breaks (such as chain-link fencing including a wind barrier) shall be installed where appropriate.
- ▶ Where applicable, mowing will be utilized to clear construction areas instead of disking or grading.
- ▶ The proponents/operators of future projects shall use GPS or lasers to level posts, generally avoiding grading except when elevation changes exceed design requirements.
- ▶ When grading is unavoidable, grading is to be phased and done with the application of a non-toxic soil stabilizer or soil weighting agent, or alternative soil stabilizing methods.
- ▶ Where feasible, plant roots shall be left in place where possible to stabilize the soil.
- ▶ Reduce and/or phase the amount of the disturbed area (e.g., grading, excavation) where possible.

After active clearing, grading, and earth moving is completed within any portion of the site, the following dust control practices shall be implemented:

- ▶ Dust suppressant should be used on the same day or day immediately following the cessation of activity for a particular area where further activity is not planned.
- ▶ All unpaved road areas shall be treated with a dust suppressant or graveled to prevent excessive dust.
- ▶ The proponents/operators of future projects shall use dust suppression measures during road surface preparation activities, including grading and compaction.

During all phases of construction, the following vehicular control measures shall be implemented:

- ▶ On-site vehicle speed shall be limited to 15 miles per hour on unpaved areas within individual project sites. Vehicles may travel up to 25 miles per hour on paved roads.

- ▶ Visible speed limit signs shall be posted at main ingress point(s) on site.
- ▶ Streets used by projects during construction shall be kept clean, and project-related accumulated silt shall be removed a minimum of once daily, or as necessary to prevent substantial off-site fugitive dust releases. The use of dry rotary brushes (unless prior wetting) and blower devices is prohibited.
- ▶ If site soils cling to the wheels of the vehicles, then a track out control device, or other such device shall be used on the road exiting the project site, immediately prior to the pavement, to remove most of the soil material from vehicle tires.

This shall be enforced by the City with verification by SJVAPCD.

Mitigation Measure 4.3-1e: Implement Exhaust Control Measures

To reduce impacts from construction-related exhaust emissions, for all construction activities occurring from projects under the proposed plan, construction contractors shall implement the following measures, as recommended by the Sacramento Metropolitan Air Quality Management District, among other air districts:

- ▶ Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes [CCR Title 13, Sections 2449(d)(3) and 2485] as enforced by an identified compliance officer within the construction crew. Idling restrictions shall be enforced by highly visible posting at the site entry, posting at other on-site locations frequented by truck drivers, conspicuous inclusion in employee training and guidance material and owner, operator or tenant direct action as required.
- ▶ Maintain construction equipment and provide current certificate(s) of compliance for CARB's In-Use Off-Road Diesel-Fueled Fleets Regulation [CCR Title 13, Sections 2449 and 2449.1] to SJVAPCD.
- ▶ Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determined to be running in proper condition before it is operated. Documentation of a certified mechanic's inspection and determinations shall be maintained by the Construction Manager and available for City inspection upon reasonable request.

This shall be enforced by the City.

Mitigation Measure 4.3-1f: Reduce Emissions from Architectural Coatings

During construction, to reduce impacts from construction-related ROG emissions leading to ozone formation, for all construction activities occurring from development under the proposed plan, construction contractors shall use low-VOC (i.e., ROG) coatings beyond SJVAPCD's mandatory requirement (i.e., Regulation VIII, Rule 3, "Architectural Coatings"). This shall be enforced by the City with verification by SJVAPCD.

Mitigation Measure 4.3-1g: Incorporate Cool Communities Strategies

Prior to future discretionary project approval, development under the proposed plan shall demonstrate that it has incorporated strategies to cool the urban heat island effect, reduce energy use and ozone formation, and maximize air quality benefits by requiring new development to implement four key strategies: plant trees, selective use of vegetation for landscaping, install cool roofing (i.e., high-albedo), and install cool (i.e., high-albedo) pavements.

Mitigation Measure 4.3-1h: Use Low- or Zero-Emission Heavy-Duty Trucks and Equipment

Future tenants of new and redeveloped commercial and industrial land uses (those over which the City will have discretionary approval) shall ensure that all heavy-duty trucks (Class 7 and 8) domiciled on the project site are model year 2014 or later from start of operations and shall expedite a transition to zero-emission vehicles, with the fleet fully zero-emission by December 31, 2026, or when commercially available for the intended application (as determined by the City based on substantial evidence), whichever date is later. For industrial uses or uses that would require deliveries to/from the site (i.e., at loading docks), all heavy-duty truck fleets associated with operational activities must utilize the cleanest available heavy-duty trucks, including zero and near-zero that meet 0.02 gram per brake horsepower-hour NO_x technologies. For industrial uses or any other use that requires operational on-site equipment (cargo handling, yard hostlers, forklifts, pallet jacks), zero-emissions technologies shall be used. "Domiciled at the

project site" shall mean the vehicle is either (i) parked or kept overnight at the project site more than 70 percent of the calendar year or (ii) dedicated to the project site (defined as more than 70 percent of the truck routes (during the calendar year) that start at the project site even if parked or kept elsewhere). Zero-emission, heavy-duty trucks which require service can be temporarily replaced with model year 2014 or later trucks. Replacement trucks shall be used for only the minimum time required for servicing fleet trucks.

Future tenants of commercial and industrial land uses shall ensure that adequate electrical infrastructure is provided to allow for the transition to electric heavy-duty trucks.

Owners, operators, or tenants shall prohibit the use of diesel generators, except in emergency situations, in which case such generators shall have Best Available Control Technology (BACT) that meets ARB Tier 4 emission standards.

This shall be enforced through oversight by the City and shall be included as part of contractual lease agreement language to ensure the tenants/lessees are informed of all ongoing operational responsibilities.

Mitigation Measure 4.3-1i: Use Low- or Zero-Emission Vehicles

Future tenants of new and redeveloped commercial and industrial land uses within the plan area (those over which the City will have discretionary approval) shall ensure use of a "clean fleet" of vehicles/delivery vans/trucks (Class 2 through 6) as part of business operations as follows: For any vehicle (Class 2 through 6) domiciled at the project site, the following "clean fleet" requirements apply: (i) 33 percent of the fleet shall be zero emission vehicles at start of operations, (ii) 65 percent of the fleet shall be zero emission vehicles by December 31, 2027, (iii) 80 percent of the fleet shall be zero emission vehicles by December 31, 2029, and (iv) 100 percent of the fleet will be zero emission vehicles by December 31, 2031. "Domiciled at the project site" shall mean the vehicle is either (i) parked or kept overnight at the project site more than 70 percent of the calendar year or (ii) dedicated to the project site (defined as more than 70 percent of the truck routes (during the calendar year) that start at the project site even if parked or kept elsewhere). Zero-emission, heavy-duty trucks which require service can be temporarily replaced with model year 2014 or later trucks. Replacement trucks shall be used for only the minimum time required for servicing fleet trucks.

Zero-emission vehicles which require service can be temporarily replaced with alternate vehicles. Replacement vehicles shall be used for only the minimum time required for servicing fleet vehicles. The property owner/tenant/lessee shall not be responsible to meet "clean fleet" requirements for vehicles used by common carriers operating under their own authority that provide delivery services to or from the project site. This shall be enforced through oversight by the City and shall be included as part of contractual lease agreement language to ensure the tenants/lessees are informed of all ongoing operational responsibilities.

Mitigation Measure 4.3-1j: Decarbonize New Residential and Commercial Buildings

To reduce criteria air pollution and greenhouse gas (GHG) emissions and provide savings for project residents, the proposed plan will integrate special energy conservation and production features. All new residential, commercial, and other non-residential structures that do not include unique uses or processes where nonrenewable energy is required based on technological or availability limitation shall be all electric, with natural gas infrastructure extended only to industrial uses. Fully electric development shall be demonstrated to the City prior to the issuance of building permits to construct and shall be subject to City approval.

Mitigation Measure 4.3-1k: Decarbonize New Industrial Use Buildings

For industrial uses that do not include major manufacturing or processing equipment requiring natural gas for processing purposes (e.g., logistics, warehouses, distribution, some research and development), no natural gas infrastructure shall be permitted. Consistency with this measure shall be determined at the development application stage, based on a site-specific feasibility study submitted to the City for approval.

Mitigation Measure 4.3-1l: Reduce Areawide Source Emissions

The use of gasoline-powered landscape equipment within the Plan Area shall be prohibited. This shall be enforced through verification through the City through a development agreement made between future project applicants and the City.

Mitigation Measure 4.3-1m: Reduce Off-Site Emissions

Once all on-site reduction measures (i.e., Mitigation Measure 4.3-1a through 4.3-1i have been exhausted or for uses where further on-site emissions reductions are deemed infeasible, based on environmental review, the development of new or participation in existing off-site emissions reduction strategies/programs (e.g., urban forestry programs, local building retrofit programs, off-site EV charger funding, public transit subsidies) shall be required. This can be implemented in conjunction with Mitigation Measure 4.3-1a through the VERA process, if needed, as overseen by SJVAPCD.

Significance after Mitigation

Implementation of Mitigation Measures 4.3-1a through 4.3-1m would reduce the emissions associated with future development under the proposed plan through the preparation of future AAQAs and VERAs, use of clean fleets during construction, the prohibition of diesel-powered generators during construction, implementation of measures to reduce exhaust and fugitive dust, the planting of vegetation throughout the Plan Area to filter air pollution, inclusion of low-emission vehicles, electric development, use of renewable biogas, the prohibition of landscaping equipment, and the implementation of EV charging infrastructure, where possible. As stated in Mitigation Measure 4.3-1a, all on-site mitigation shall be applied to future development prior to engagement in a VERA through SJVAPCD. Once all on-site mitigation has been applied, future development, as directed by Mitigation Measure 4.3-1a, shall be required to estimate and disclose project-level emissions, and if exceedances of SJVAPCD's thresholds are identified, a VERA shall be required to reduce emissions to levels at or below SJVAPCD's thresholds of significance. Use of a VERA would contractually obligate future project applicants to pay fees to SJVAPCD to be used to finance air pollution reduction programs within the SJVAB to reduce a project's contribution to regional air pollution. Therefore, adherence to Mitigation Measure 4.3-1a, in tandem with Mitigation Measure 4.3-1b through 4.3-1m, would be sufficient to reduce operational emissions to the degree that future development would not conflict with long-term regional air quality planning within the SJVAB. Thus, this impact would be **less than significant** with mitigation.

Impact 4.3-2: Result in a Cumulatively Considerable Net Increase in Any Criteria Pollutant for Which the Project Region Is in Nonattainment under an Applicable Federal or State Ambient Air Quality Standard

In accordance with SJVAPCD guidance, annual and daily construction and operational emissions were quantified for the assumed level of development that would occur under the proposed plan over the planning period (through 2040) based on the high-level understanding of allowable development within the proposed plan. Modeling indicates that development under the proposed plan would not generate construction emissions of criteria air pollutants and ozone precursors exceeding SJVAPCD's annual mass emissions thresholds; however, daily emissions would exceed SJVAPCD's daily mass emissions screening criteria. SJVAPCD's annual thresholds are used for CEQA determinations, and these thresholds are inherently tied to long-term regional air quality planning (i.e., SJVAPCD's air quality management plans) which demonstrates that the proposed plan would not conflict with the applicable air quality plans. Nevertheless, the proposed plan, which comprises many future individual development projects, would generate operational emissions of criteria air pollutants and ozone precursors exceeding SJVAPCD's annual mass emissions thresholds of significance and daily screening criteria. Operation-related emissions of ROG, NO_x, CO, PM₁₀, and PM_{2.5} would exceed SJVAPCD's annual mass emissions thresholds of significance. This impact would be **significant**.

Construction

Although the impacts from construction-related air pollutant emissions would be temporary for any given project under the plan, such emissions for multiple projects over the planning horizon can become a significant cumulative air quality impact. Construction activities such as grading, excavation, building construction, paving, and other construction activities can generate substantial amounts of air pollution. Emissions from construction equipment and vehicle engines also contribute to elevated concentrations of ROG, NO_x, PM₁₀, PM_{2.5}, CO, and SO_x.

During construction of anticipated development under the proposed plan, diesel-powered heavy equipment would likely be operating simultaneously throughout the Plan Area. Emissions from site preparation activities were

estimated using CalEEMod default values for the proposed plan. Exhaust and fugitive dust emissions would be generated by excavation and grading, construction vehicle traffic, wind blowing over exposed earth, construction workers traveling to and from the construction sites, heavy-duty construction equipment operation, and application of architectural coatings.

Dust from construction activities can cause impacts both locally and regionally. The dry climate of the area during the summer months, combined with regional fine, silty soils, create a high potential for dust generation. Increased dustfall and locally elevated PM₁₀ levels near the construction activity are expected. Depending on the weather, soil conditions, the amount of activity taking place at any one time, and the nature of dust control efforts, these impacts could adversely affect existing areas within and near the Plan Area. See the discussion in the "Methodology" section and Appendix B for additional modeling information.

Construction emissions estimates for future development under the proposed plan were modeled using CalEEMod (refer to Appendix B). Based on the outputs of CalEEMod, the proposed plan would produce the emissions shown in Tables 4.3-4 and 4.3-5 estimated as maximum annual and daily values and compared to applicable SJVAPCD thresholds of significance for the initial (assumed to be worst-case) year of the proposed plan (2024) and remaining years through the planning horizon of 2040. Table 4.3-4 provides an estimation of the maximum level of construction emissions assuming that 25 percent of the proposed plan would be constructed within one year, assuming that year to be 2024 (see the discussion under heading, "Methodology," for additional details).

Table 4.3-4 Maximum Emissions of Criteria Pollutants and Precursors Associated with Construction of the Development under the Proposed Plan (Worst-Case Year [Earliest Year of Construction], 2024)

	ROG ¹	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Annual Emissions						
Maximum (tpy)	8.2	5.0	7.6	<1	1.6	0.5
SJVAPCD CEQA Significance Threshold (tpy)	10	10	100	27	15	15
Exceeds Threshold?	No	No	No	No	No	No
Daily Emissions						
Maximum (lb/day)	106	499	161	2.3	127	47
SJVAPCD Screening Criteria (lb/day)	100	100	100	100	100	100
Exceeds Screening Criteria?	Yes	Yes	Yes	No	Yes	No

Notes: tpy = tons per year, lb/day = pounds per day, ROG = reactive organic gases, NO_x = oxides of nitrogen, CO = carbon monoxide, SO_x = sulfur oxides, PM₁₀ = respirable particulate matter, PM_{2.5} = fine particulate matter, SJVAPCD = San Joaquin Valley Air Pollution Control District.

¹ Off-model ROG adjustments were made to scale emissions throughout the building construction and paving phase to more accurately represent future construction phasing.

Source: Modeling performed by Ascent Environmental in 2023.

As shown in Table 4.3-5, annual and daily emissions of ROG, NO_x, CO, SO_x, PM₁₀, and PM_{2.5} would not exceed SJVAPCD's annual mass emissions threshold of significance or daily screening criteria for most of the duration of plan implementation. This level of emissions would not conflict with long-term regional air quality planning in the SJVAB, would not result in a cumulative contribution to air pollution and would not conflict with SJVAPCD's relevant air quality plans. However, under a worst-case construction period, daily mass emissions would exceed SJVAPCD's daily mass emissions screening criteria, which could result in an exceedance of an AAQS, but SJVAPCD's annual emissions thresholds would not be exceeded. Nevertheless, given the programmatic nature of this analysis, and the current nonattainment status of the SJVAB for ozone, PM₁₀, and PM_{2.5}, this analysis conservatively concludes that the proposed plan could contribute construction emissions that would interfere with the attainment status for these pollutants. Therefore, construction of future development implemented under the proposed plan could conflict with long-term regional air quality planning tied to attainment of the NAAQS and CAAQS. As such, the proposed plan's contribution of criteria air pollutants and ozone precursors could result in high concentrations of air pollution that could result in an adverse health outcome.

Table 4.3-5 Maximum Emissions of Criteria Pollutants and Precursors Associated with Construction of Development under the Proposed Plan (2025–2040)

	ROG ¹	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Annual Emissions						
Maximum (tpy)	1.5	0.7	1.1	<1	<1	<1
SJVAPCD CEQA Significance Threshold (tpy)	10	10	100	27	15	15
Exceeds Threshold?	No	No	No	No	No	No
Daily Emissions						
Maximum (lb/day)	18	80	20	<1	19	6
SJVAPCD Screening Criteria (lb/day)	100	100	100	100	100	100
Exceeds Screening Criteria?	No	No	No	No	No	No

Notes: tpy = tons per year, lb/day = pounds per day, ROG = reactive organic gases, NO_x = oxides of nitrogen, CO = carbon monoxide, SO_x = sulfur oxides, PM₁₀ = respirable particulate matter, PM_{2.5} = fine particulate matter, SJVAPCD = San Joaquin Valley Air Pollution Control District.

¹ Off-model ROG adjustments were made to scale emissions throughout the building construction and paving phase to more accurately represent future construction phasing.

This Source: Modeling performed by Ascent Environmental in 2023.

Operation

Implementation of development under the proposed plan would intensify urbanization in the Plan Area, which would in turn increase criteria air pollutants and ozone precursors in an area that is currently designated as an extreme nonattainment area with respect to the NAAQS.

Operational emissions of criteria air pollutants and ozone precursors would be generated from vehicle activity to and from the Plan Area, the combustion of natural gas, use of landscaping equipment, periodic application of architectural coatings, and use of consumer products.

The operational estimate presented in Table 4.3-6 characterizes the level of emissions expected for horizon year Plan Area development of 2,650 acres of heavy industrial, 627 acres of roadways and infrastructure, 715 acres of light industrial, 333 acres of a regional business park, 158 acres of open space, 653 acres of a separate business park, 78 acres of public development, 32 acres of rail development, 270 acres of residential development, 47 acres of general commercial, 3 acres of a neighborhood park, and 0.25 acres of mixed use development.

Operational emissions estimates for the proposed plan were calculated using CalEEMod (Appendix B). Table 4.3-6 summarizes the total modeled operational emissions associated with the proposed plan for the assumed first full year of operation (i.e., 2040) for the mobile, energy, and area sources of pollution.

As shown in Table 4.3-6, emissions of ROG, NO_x, CO, PM₁₀, and PM_{2.5} would exceed SJVAPCD’s annual CEQA mass emissions thresholds as well as its daily screening criteria for all pollutants except SO_x. Subsequent development under the proposed plan would be subject to SJVAPCD’s Rule 9510 for NO_x and PM₁₀ resulting in 33.3 and 50 percent reductions in these pollutants, respectively. Notwithstanding, because the thresholds would be exceeded, the contribution of criteria air pollutants by development in the Plan Area would conflict with SJVAPCD’s long-term regional air quality planning, interfere with the SJVAB’s capacity to attain the NAAQS and CAAQS for ozone, PM₁₀, and PM_{2.5}, and result in potential adverse health outcomes from exposure to air pollution.

Table 4.3-6 Maximum Annual Emissions of Criteria Pollutants and Precursors Associated with Operation of Development under the Proposed Plan (2040)

	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Annual Emissions						
Total (tpy)	91.5	68.2	420	1.5	148	39.6
SJVAPCD CEQA Significance Threshold	10	10	100	27	15	15
Exceeds Threshold?	Yes	Yes	Yes	No	Yes	Yes
Emissions Reductions from Compliance with Rule 9510	-	-22.6	-	-	-74	-
Total (tpy)	91.5	45.6	420	1.5	74	39.6
Exceeds Threshold?	Yes	Yes	Yes	No	Yes	Yes
Daily Emissions						
Maximum (lb/day)	559	360	3,028	9	816	219
SJVAPCD Screening Criteria	100	100	100	100	100	100
Exceeds Screening Criteria?	Yes	Yes	Yes	No	Yes	Yes
Emissions Reductions from Compliance with Rule 9510	-	-120	-	-	-408	-
Total Emissions	559	240	3,028	9	408	219
Exceeds Screening Criteria?	Yes	Yes	Yes	No	Yes	Yes
Maximum (lb/day)	559	360	3,028	9	816	219

Notes: tpy = tons per year, lb/day = pounds per day, ROG = reactive organic gases, NO_x = oxides of nitrogen, CO = carbon monoxide, SO_x = sulfur oxides, PM₁₀ = respirable particulate matter, PM_{2.5} = fine particulate matter, SJVAPCD = San Joaquin Valley Air Pollution Control District.

Source: Modeling performed by Ascent Environmental in 2023.

SJVAPCD recommends that an AAQA be performed for a project if emissions of any criteria air pollutant or ozone precursor exceed 100 lb/day. As shown in Table 4.3-6, maximum daily emissions of ROG, NO_x, CO, PM₁₀, and PM_{2.5} would exceed the 100 lb/day screening criteria set forth by SJVAPCD. However, an AAQA is more appropriate for project-specific analyses and not a specific plan for which development would occur over a broad geography and over several decades. The values presented in Table 4.3-6 are programmatic in nature, as the nature, scale, and locations of development; the types of equipment and activities in which they would engage; their daily and annual activity levels (e.g., stationary source stack location/source type); and their proximity to nearby receptors are unknown at this time. For future development proposed for the proposed plan, an AAQA would likely be prepared if SJVAPCD's daily screening criteria are exceeded (see Mitigation Measure 4.3-1a). However, at this programmatic stage, a meaningful AAQA could not be prepared given that characteristics of future developments are yet unknown. Therefore, an AAQA was not prepared for the proposed plan.

Nevertheless, because modeled worst-day emissions would exceed the daily screening levels, project-generated emissions would be considered significant and could contribute to a violation of an AAQS within the SJVAB.

Because the operational emissions of ROG, NO_x, CO, PM₁₀, and PM_{2.5} of development anticipated to occur in the Plan Area by 2040 would exceed SJVAPCD's annual mass emissions thresholds, this impact would be **significant**.

Conclusion

The proposed plan's construction emissions would not exceed SJVAPCD's respectively mass emissions thresholds but would exceed SJVAPCD's daily mass emission screening criteria. Additionally, the proposed plan's operation emissions of ROG, NO_x, CO, PM₁₀, and PM_{2.5} would exceed SJVAPCD's annual mass emissions thresholds and daily screening criteria. Construction and operational impacts would be **significant**.

Mitigation Measures

Implement Mitigation Measure 4.3-1a through 4.3-1m.

Significance after Mitigation

Implementation of Mitigation Measures 4.3-1a through 4.3-1m would reduce the proposed plan's emissions through the preparation of future AAQAs and VERAs, use of clean fleets during construction, the prohibition of diesel-powered generators during construction, implementation of measures to reduce exhaust and fugitive dust, the planting of vegetation throughout the Plan Area to filter air pollution, inclusion of low-emissions vehicles, electric development, use of renewable biogas, the prohibition of landscaping equipment, and the implementation of EV charging infrastructure, where possible. As stated in Mitigation Measure 4.3-1a, all on-site mitigation shall be applied to future development prior to engagement in a VERA through SJVAPCD. Once all on-site mitigation has been applied, future development, as directed by Mitigation Measure 4.3-1a, shall be required to estimate and disclose project-level emissions, and if exceedances of SJVAPCD's thresholds are identified, a VERA shall be required to reduce emissions to levels at or below SJVAPCD's thresholds of significance. Use of a VERA would contractually obligate future project applicants to pay fees to SJVAPCD to be used to finance air pollution reduction programs within the SJVAB to reduce a project's contribution to regional air pollution. Therefore, adherence to Mitigation Measure 4.3-1a, in tandem with Mitigation Measure 4.3-1b through 4.3-1m, would be sufficient to reduce construction and operation emissions to meet SJVAPCD's operational thresholds of significance. Thus, this impact would be **less than significant** with mitigation.

Impact 4.3-3: Expose Sensitive Receptors to Substantial Pollutant Concentrations

As described in Impacts 4.3-1 and 4.3-2, construction and operation of development assumed in the Plan Area by 2040 would result in exceedance of SJVAPCD daily emissions screening criteria for ROG, NO_x, and CO during worst-case construction, and annual mass emissions and daily screening thresholds for ROG, NO_x, CO, PM₁₀, and PM_{2.5} during operation. This level of emissions can result in adverse human health outcomes, particularly for sensitive receptors, and is determined to be significant. With regard to TACs and resultant cancer risk, specifically, construction of new land uses under the proposed plan, transportation and utility improvements, and the development of new stationary sources of TACs subject to the permitting requirements of SJVAPCD would not result in the exposure of sensitive receptors to an incremental increase in cancer risk greater than 20 in 1 million or a hazard index greater than 1.0. The proposed plan would not result in development of new residential land uses or other sensitive receptors within 500 feet of a freeway or high-volume roadway, which is the setback distance recommended by CARB. The SCSP designates land near SR 99 as heavy industrial, and traffic volumes on SR 41 through the Plan Area do not exceed 100,000 vehicles per day, CARB's threshold for requiring a minimum 500-foot setback. Nevertheless, the development of land uses under the proposed plan with truck routes, operations, and loading near residences could result in the exposure of sensitive receptors to a level of cancer risk greater than 20 in 1 million. This impact would be **significant**.

The Plan Area is located in an environmental justice community as shown in Figure 4.3-1. The California Environmental Protection Agency's CalEnviroScreen tool identifies the surrounding as a high-pollution burdened area within the 90-100 percentile for disadvantaged communities. The proposed plan would introduce new sources of TACs (truck and vehicle traffic, industrial facilities) that could exacerbate the already adverse conditions of the Plan Area.

Criteria Air Pollution

The proposed plan would generate construction emissions in exceedance of SJVAPCD's daily screening criteria and could result in an exceedance of an ambient air quality standard for this reason. The project operational emissions would exceed SJVAPCD's annual mass emissions thresholds of significance and daily screening criteria, therefore resulting in conflicts with the long-term regional air quality planning in the SJVAB. This impact is discussed under Impact 4.3-1 and 4.3-2 above.

New Sensitive Receptors Near Existing TAC Sources

SJVAPCD does not recommend a threshold of significance for evaluating the levels of health risk exposure at sensitive land uses from TAC-emitting vehicle travel on freeways. However, to protect sensitive receptors from TAC-related health risk, CARB recommends that new sensitive receptors not be placed within 500 feet of freeways or urban roads with traffic volumes that exceed 100,000 vehicles per day (CARB 2005: 10). The segments of SR 99 and SR 41 are the highest-volume roadway segments near the Plan Area. SR 99 carries traffic volumes greater than 100,000 vehicles per day within the vicinity of the Plan Area (Caltrans 2022), but land uses near SR 99 are designated for heavy industrial use and would not support sensitive receptors. Traffic volumes on SR 41 through the Plan Area are on the order of 30,000 to 40,000 vehicles per day, below the 100,000 vehicle-per-day CARB threshold for requiring a minimum 500-foot setback. According to the traffic study prepared for the proposed plan, development anticipated under the plan would generate an additional 72,241 trips per day to the Plan Area, which would contribute to even higher volumes of daily trips on SR 99, and SR 41 (TJKM 2023). However, because the proposed plan would not introduce residences within 500 feet from these roadways, it would not result in excessive health risk exposure of sensitive receptors to TAC-emitting vehicles traveling on high-volume roadways. Mobile-source exposure from development under the proposed plan would not generate cancer risk greater than 20 in 1 million or a hazard index greater than 1.0 at locations of sensitive receptors.

In addition, the SCSP features Guiding Principles that include concentrating high intensity uses in the core of the Plan Area away from residential and other sensitive uses and avoiding neighborhood impacts. Specific policies that pertain to protection of sensitive receptors from TACs include T-1: Establish and enforce truck routes to avoid neighborhoods and consider existing roadway capacities and conditions, T-3: Limit truck idling times, AQ-1: Require the installation of air filtration systems in businesses to protect homes and schools, and more.

Construction

Construction of new development and infrastructure under the proposed plan would result in temporary, intermittent emissions of diesel PM from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing); grading; paving; application of architectural coatings; on-road truck travel; and other miscellaneous activities. For construction activity, diesel PM is the primary TAC of concern. On-road diesel-powered haul trucks traveling to and from construction areas to deliver materials and equipment are less of a concern because they would not stay in a single location for long durations.

Diesel PM was identified as a TAC by CARB in 1998. The potential cancer risk from the inhalation of diesel PM, as discussed below, outweighs the potential for all other health impacts (i.e., noncancer risk, short-term acute risk) and health impacts from other TACs (CARB 2003). Regarding exposure of diesel PM, the dose to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher level of health risk for any exposed receptor. Thus, the risks estimated for an exposed individual are higher if a fixed exposure occurs over a longer period. According to the Office of Environmental Health Hazard Assessment, HRAs, which determine the exposure of sensitive receptors to TAC emissions, should be based on a 70- or 30-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the project (OEHHA 2015). Accordingly, it is important to consider that the use of off-road heavy-duty diesel equipment would be limited to the periods of construction, during the multiple-year period when new facilities would be constructed. Studies show that diesel PM is highly dispersive (as an example, diesel PM concentrations decrease by 70 percent at 500 feet from the source), and receptors must be near emission sources to result in the possibility of exposure to concentrations of concern (Zhu et al. 2002). As construction progresses, activity intensity and duration would vary through the Plan Area. As such, no single existing or future receptor (i.e., as part of the proposed plan) would be exposed to construction-related emissions of diesel PM for an extended period; that is, the dose of diesel PM at any one receptor would be limited.

Considering the relatively short duration in which diesel PM-emitting construction activity would take place at any given location in the Plan Area, the distance to the nearest sensitive receptors, and the highly dispersive properties of diesel PM, construction-related TAC emissions for any given project would not expose existing sensitive receptors to an incremental increase in cancer risk greater than 20 in 1 million or a hazard index greater than 1.0. However, if

multiple construction projects were to occur in proximity to each other and to sensitive receptors, TAC emissions could cumulatively combine to generate cancer risk greater than 20 in 1 million or a hazard index greater than 1.0.

Operational Permitted Sources

SJVAPCD is responsible for the control of TACs generated by stationary sources within the City, including any new stationary sources of TACs developed under the proposed plan, such as gasoline stations, backup diesel generators, or industrial emission stacks. As part of the permitting process for new stationary sources of emissions, pursuant to SJVAPCD Rule 2010 ("Permits Required") and Rule 2201 ("New and Modified Stationary Source Review"), SJVAPCD reviews the permit application and determines whether the source would have the potential to generate levels of TACs that would expose the local population to an incremental increase in cancer risk that exceeds 10 in 1 million (i.e., AB 2588 facility prioritization score) or a noncarcinogenic Hazard Index of 1 for the maximally exposed individual. If either of these criteria are exceeded, then SJVAPCD requires that the source incorporate BACT and/or limit its operations to ensure that these criteria would not be exceeded. As a result, it is foreseeable that operation of any single new stationary source would not result in exposure of sensitive receptors to levels of health risk that would exceed SJVAPCD's thresholds of significance. However, should multiple new stationary sources be sited in proximity to one another, the combined emissions could result in higher levels of TAC concentrations resulting in exposure to receptors that could cumulatively combine to generate a cancer risk exceeding 20 in one million or a hazard index greater than 1.0.

Operational Truck Activity

Development of commercial and industrial land uses under the proposed plan would include facilities with loading docks and loading areas where diesel PM-emitting trucks are active on a regular basis. Some of this activity could include trucks with TRUs (which are typically diesel powered), diesel PM from delivery trucks on local roads/truck routes, and diesel PM associated with on-site equipment use (idling, material movement). Although TRUs have relatively small diesel-powered engines, in the normal course of business, their emissions can pose a health risk to nearby receptors (CARB 2005: 11). The exact nature and locations of developments under the proposed plan are unknown, but it is foreseeable that one or more distribution centers could be developed or uses that result in heavy daily truck use. In its *Air Quality and Land Use Handbook*, CARB recommends a setback distance of 1,000 feet between sensitive receptors and truck distribution centers that accommodate more than 100 trucks per day, more than 40 trucks with operating TRUs per day, or where TRU unit operations exceed 300 hours per week (CARB 2005: 15). Developments with new truck loading docks could be constructed in the Plan Area, but specific daily operational emissions levels and proximity to existing or future sensitive receptors are yet unknown. The proposed plan's Development Standards 2 and 3 provide 1,000-foot setback requirements for certain land use types known to generate high levels of truck activity; however, the land uses listed under these standards are not exhaustive. Therefore, it is foreseeable that a land use type not listed under Development Standards 2 and 3 could be sited within 1,000 feet from a receptor. Depending on the location and operation of new facilities with high truck use, these sources could result in substantial TAC concentrations at sensitive receptors. Thus, the operation of trucks accessing the Plan Area could result in exposure to receptors that could cumulatively combine to generate a cancer risk exceeding 20 in one million or a hazard index greater than 1.0.

Carbon Monoxide Hotspots

As discussed under the heading, "Methodology," a CO hotspot could occur if a traffic study for the proposed plan indicates that the LOS on one or more streets or at one or more intersections in the project vicinity would be reduced to LOS E or F. According to the traffic study prepared for the proposed plan, implementation of the proposed plan would not degrade an intersection functioning at level D or higher to level E or F. Segment 3, between Golden State Boulevard south of Jensen Avenue, which is currently operating at Level E, would continue to function at Level E, thus not meeting the criteria of being downgraded to a less efficient LOS. Therefore, implementation of the proposed plan would not lead to a CO hotspot (TJKM 2022).

Summary

The proposed plan is estimated to result in the future development of approximately 12 million square feet (sf) of non-residential (industrial, retail, and office) uses and 91 new residential dwelling units by 2040 in a Plan Area. Details

regarding future projects, their potential diesel truck activities, their proximity to sensitive receptors, frequency of truck activity, and whether visiting trucks would include TRUs are yet unknown. These details would be determined during the site design phase of individual projects. There would be no potential for new residences to be located in proximity to a freeway or high-volume highway, but loading docks and truck activity areas could be located within 1,000 feet of sensitive receptors. The proposed plan's Development Standards 2 and 3 provide 1,000-foot setback requirements for certain land use types known to generate high levels of truck activity; however, the land uses listed under these standards is not exhaustive. Therefore, it is foreseeable that a land use type not listed under Development Standards 2 and 3 could be sited within 1,000 feet from a receptor. Diesel PM emitted by these truck activities could result in the exposure of nearby receptors to levels of health risk that exceed SJVAPCD's recommended threshold of 20 in 1 million and could exacerbate the already existing adverse air quality of the surrounding community. This impact would be **significant**.

Mitigation Measures

Mitigation Measure 4.3-3a: Require Construction Health Risk Assessment

A site-specific HRA shall be required for all construction projects anticipated to last more than six months and located within 1,000 feet of sensitive receptors (as defined by SJVAPCD) regardless of intensity of construction. All recommendations from the HRA shall be enforced as conditions of approval of the development. If the recommendations of the HRA are insufficient to reduce impacts to levels at or below SJVAPCD's threshold of 20 in one million, such development with significant cancer risk (i.e., that exceed that threshold) shall be prohibited.

Mitigation Measure 4.3-3b: Require Operational Health Risk Assessment

A site-specific HRA shall be required for the operation of projects that propose the use of TAC-emitting equipment or industrial processes located within 1,000 feet of sensitive receptors (as defined by SJVAPCD). All recommendations from the HRA shall be enforced as conditions of approval of the development. If the recommendations of the HRA are insufficient to reduce impacts to levels at or below SJVAPCD's threshold of 20 in one million, such development with significant cancer risk shall be prohibited.

Mitigation Measure 4.3-3c: Incorporate Design Features at Truck Loading Areas to Reduce Health Risk Exposure at Sensitive Receptors

Future developments under the plan shall be designed so that truck loading/unloading facilities shall not be located within 1,000 feet of any sensitive receptor unless a qualified, site-specific HRA conducted in accordance with guidance from SJVAPCD and approved by SJVAPCD shows that the associated level of cancer risk at the sensitive receptors would not exceed 20 in 1 million. A truck loading/unloading facility is defined as any truck distribution yard, truck loading dock, or truck loading or unloading area where more than one truck with three or more axles will be present for more than 10 minutes per week, on average; and sensitive receptors include residential land uses, campus dormitories and student housing, residential care facilities, hospitals, schools, parks, playgrounds, and daycare facilities. If the HRA determines that a nearby sensitive receptor would be exposed to an incremental increase in cancer risk greater than 20 in 1 million then design measures shall be incorporated to reduce the level of risk exposure to less than 20 in 1 million. Design measures may include but are not limited to the following:

- ▶ All truck loading/unloading facilities to be equipped with one 110/208-volt power outlet for every two-truck loading/unloading facility. A minimum 2-foot-by-3-foot sign shall be clearly visible at each loading dock that indicates, "Diesel engine idling limited to a maximum of 2 minutes." The sign shall include instructions for diesel trucks idling for more than 2 minutes to connect to the 110/208-volt power to run any auxiliary equipment.
- ▶ The use of electric-powered "yard trucks" or forklifts to move truck trailers around a truck yard or truck loading/unloading facility.
- ▶ The use of buildings or walls to shield commercial activity from nearby residences or other sensitive land uses.
- ▶ The use of EPA-rated Tier 4 Final engines in diesel-fueled construction equipment when construction activities are adjacent to existing sensitive receptors.

- ▶ The planting and maintenance of vegetative buffers between truck loading/unloading facilities and nearby residences, schools, daycare facilities, and any other sensitive receptors. As part of detailed site design, a landscape architect licensed by the California Landscape Architects Technical Committee shall identify all locations where trees should be located, accounting for areas where shade is desired such as along pedestrian and bicycle routes, the locations of solar photovoltaic panels, and other infrastructure.
- ▶ The use of all electrical-powered Transportation Refrigeration Units (TRUs).
- ▶ The use of all electric heavy-duty trucks.

Mitigation Measure 4.3-3d: Protect New and Existing Sensitive Land Uses

To minimize impacts from TAC exposure, for future subsequent development under the proposed plan, the following measures shall be implemented:

- ▶ Avoid siting new sensitive land uses within 500 feet from the centerline of a freeway, unless such development contributes to smart growth, open space, or transit-oriented goals, in which case the development shall include feasible measures such as separation/setbacks, landscaping, barriers, ventilation systems, air filters/cleaners, and/or other effective measures to minimize potential impacts from air pollution.
- ▶ Require new sensitive land uses to include feasible measures such as separation/setbacks, landscaping, barriers, ventilation systems, air filters/cleaners, and/or other effective measures to minimize potential impacts from air pollution.
- ▶ For future development requiring the use of heavy-duty trucks, designate truck routes that avoid sensitive land uses.
- ▶ Require that zoning regulations provide adequate separation and buffering between existing and proposed residential and industrial uses (i.e., a minimum of 1,000 feet).
- ▶ Designate truck routes to avoid residential areas including low-income and minority neighborhoods.

Significance after Mitigation

Implementation of Mitigation Measure 4.3-3a would require future development under the proposed plan to prepare a project-level construction HRA to assess the potential significance of diesel PM generated during construction on nearby sensitive receptors. If a project cannot demonstrate that mitigation or project design commitments are sufficient to reduce cancer risk to below SJVAPCD's threshold of 20 in 1 million, the development would not be permitted. Similarly, Mitigation Measure 4.3-3b would require a future development to evaluate its operational contribution of TACs through the preparation of an HRA. If the findings of the HRA demonstrate that emissions would exceed SJVAPCD's cancer and noncancer thresholds of significance, that development would not be permitted. Mitigation Measure 4.3-3c would ensure that a truck loading/unloading facility would not be located within 1,000 feet of a sensitive receptor (e.g., residence, school, daycare facility), which is the CARB-recommended setback distance (CARB 2005: 15), unless a site-specific, SJVAPCD-approved HRA shows that the associated level of cancer risk at the sensitive receptors would not exceed 20 in 1 million. Implementation of Mitigation Measure 4.3-3d would ensure that new residences would not be located within 500 feet of freeways adjacent to the Plan Area, which is the CARB-recommended setback distance (CARB 2005: 10), unless a site-specific, SJVAPCD-approved HRA shows that the associated level of cancer risk at the sensitive receptors would not exceed 20 in 1 million. In addition, as the projects continue to develop over time within the Plan Area, new TAC sources (stationary and mobile) would likely increase the background risk levels in the area, thus potentially exposing receptors to levels greater than 20 in 1 million. Mitigation Measure 4.3-3d provides guidance for siting new sensitive receptors near truck routes and existing sources of TACs. Additionally, Mitigation Measures 4.3-1b, 4.3-1c, 4.3-1e, 4.3-1h, and 4.3-1i include performance standards that would reduce diesel PM emissions from project construction and operation through the prohibition of diesel-powered generators, limiting construction exhaust emissions, and electrification of trucks and vehicles. Mitigation Measure 4.3-3a and 4.3-3b would require project-level HRAs for construction and operation and includes the requirement that projects resulting in an exceedance of SJVAPCD's thresholds not be approved. Nevertheless, at this programmatic stage, it cannot be assured that future TAC emissions from new development in the Plan Area

would not expose receptors to a substantial level of pollution. Therefore, while Implementation of Mitigation Measure 4.3-3a through 4.3-3d could substantially reduce TAC emissions, at this programmatic stage and in consideration of the proposed plan's potential to cumulatively combine with its own proposed development and other existing development, this impact would be **significant and unavoidable**.

Impact 4.3-4: Result in Other Emissions (Such as Those Leading to Odors) Adversely Affecting a Substantial Number of People

Future development implemented under the proposed plan would introduce construction-related sources of odors; however, these sources would be intermittent and would disperse rapidly from the source. The proposed land uses under the proposed plan could support odor-generating processes; however, these sources would be subject to SJVAPCD's Rule 4102 which would reduce the potential for receptors to be exposed to odors. This impact would be **less than significant**.

Construction

Odorous emissions generated by heavy-duty diesel equipment and the laying of fresh asphalt during future project-related construction activities would be intermittent and temporary and would dissipate rapidly from the source with an increase in distance. Construction of future development implemented under the proposed plan would be implemented over time and any potential odor-generating activities would not occur in a single location, or within proximity to off-site receptors, for an extended period. The type and level of construction activity would be typical of new development on a large site, and associated odor sources would not remain in any one part of the Plan Area throughout all construction periods. Given the temporary and intermittent nature of odor-generating construction activities, construction of the land uses developed under the proposed plan would not expose a substantial number of people to objectionable odors for an extended period. This impact would be **less than significant**.

Operational Odor Sources

Various new commercial and industrial land uses developed under the proposed plan could potentially result in the siting of new sources of odors, including those identified as potential major odor sources by SJVAPCD (SJVAPCD 2015a). It is unknown the exact nature of future development proposed implemented under the proposed plan, so it is foreseeable that the future development may include food manufacturing and processing facilities, coffee roasters, or painting/coating operations, and restaurants. Restaurants, breweries, and coffee roasters may also be developed in commercial areas of the proposed plan. Because no specific projects or sites have been identified for such future uses, however, the degree of impact with respect to potential odors associated with future projects and their effects on adjacent receptors is uncertain. Regardless, emissions of odors would be subject to SJVAPCD's Rule 4102 ("Nuisance"), which prohibits the discharge of air contaminants or other materials that would cause detriment, nuisance, or annoyance to any number of people. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

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4.4 BIOLOGICAL RESOURCES

This section identifies the existing common and sensitive biological resources that are located within the Plan Area, evaluates the potential impacts on these resources that would result from implementation of the proposed plan, and identifies recommended mitigation measures for any significant or potentially significant impacts.

During the public scoping period for this Draft EIR, comments related to biological resources were received inquiring about the existing biological resources within the Plan Area and suggesting that the EIR include an accurate baseline of environmental conditions and sensitive land uses. The comments are addressed in this section of the EIR.

4.4.1 Regulatory Setting

FEDERAL

Federal Endangered Species Act

Pursuant to the federal Endangered Species Act (ESA) (16 U.S. Code Section 1531 et seq.), the U.S. Fish and Wildlife Service (USFWS) regulates the taking of species listed in the ESA as threatened or endangered. In general, persons subject to ESA (including private parties) are prohibited from “taking” endangered or threatened fish and wildlife species on private property, and from “taking” endangered or threatened plants in areas under federal jurisdiction or in violation of state law. Under Section 9 of the ESA, the definition of “take” is to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” USFWS has also interpreted the definition of “harm” to include significant habitat modification that could result in take.

Section 10 of the ESA applies if a non-federal agency is the lead agency for an action that results in take of federally listed species and no other federal agencies are involved in permitting the action. Section 7 of the ESA applies if a federal discretionary action is required (e.g., a federal agency must issue a permit), in which case the involved federal agency consults with USFWS.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA), first enacted in 1918, provides for protection of international migratory birds and authorizes the Secretary of the Interior to regulate the taking of migratory birds. The MBTA provides that it will be unlawful, except as permitted by regulations, to pursue, take, or kill any migratory bird, or any part, nest, or egg of any such bird. Under the MBTA, “take” is defined as “to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or any attempt to carry out these activities.” A take does not include habitat destruction or alteration, as long as there is not a direct taking of birds, nests, eggs, or parts thereof. The current list of species protected by the MBTA can be found in Title 50 of the Code of Federal Regulations (CFR), Section 10.13 (50 CFR 10.13). The list includes nearly all birds native to the United States.

Clean Water Act

Section 404 of the Clean Water Act (CWA) requires project applicants to obtain a permit from U.S. Army Corps of Engineers (USACE) before performing any activity that involves any discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the United States include navigable waters of the United States, interstate waters, tidally influenced waters, and all other waters where the use, degradation, or destruction of the waters could affect interstate or foreign commerce, tributaries to any of these waters, and wetlands that meet any of these criteria or that are adjacent to any of these waters or their tributaries. Many surface waters and wetlands in California meet the criteria for waters of the United States.

In accordance with Section 401 of the CWA, projects that apply for a USACE permit for discharge of dredged or fill material must obtain water quality certification from the appropriate regional water quality control board (RWQCB) indicating that the action would uphold state water quality standards.

STATE

California Endangered Species Act

Pursuant to the California Endangered Species Act (CESA), a permit from the California Department of Fish and Wildlife (CDFW) is required for projects that could result in the “take” of a plant or animal species that is listed by the state as threatened or endangered. Under CESA, “take” is defined as an activity that would directly or indirectly kill an individual of a species, but does not include “harm” or “harass,” as does the federal definition. As a result, the threshold for take is higher under CESA than under the federal ESA. Authorization for take of state-listed species can be obtained through a California Fish and Game Code Section 2081 incidental take permit.

California Fish and Game Code Sections 3503 and 3503.5—Protection of Bird Nests and Raptors

Section 3503 of the Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 of the California Fish and Game Code states that it is unlawful to take, possess, or destroy any raptors (i.e., species in the orders *Falconiformes* and *Strigiformes*), including their nests or eggs. Typical violations include destruction of active nests as a result of tree removal or disturbance caused by project construction or other activities that cause the adults to abandon the nest, resulting in loss of eggs and/or young.

Fully Protected Species under the California Fish and Game Code

Protection of fully protected species is described in Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code. These statutes prohibit take or possession of fully protected species and do not provide for authorization of incidental take.

Native Plant Protection Act

The Native Plant Protection Act (NPPA) (California Fish and Game Code Section 1900 et seq.) allows the California Fish and Game Commission to designate plants as rare or endangered. Sixty-four species, subspecies, and varieties of plants are protected as rare under the NPPA. The act prohibits take of endangered or rare native plants but includes exceptions for agricultural and nursery operations; for emergencies; and, after proper notification of CDFW, for vegetation removal from canals, roads, and other building sites, changes in land use, and other situations.

California Fish and Game Code Section 1602—Streambed Alteration

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports fish or wildlife resources are subject to regulation by CDFW under Section 1602 of the California Fish and Game Code. Under Section 1602, it is unlawful for any person, governmental agency, or public utility to do any of the following without first notifying CDFW:

- ▶ substantially divert or obstruct the natural flow of, or substantially change or use any material from, 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.

The regulatory definition of a stream is a body of water that flows at least periodically or intermittently through a bed or channel that has banks and supports fish or other aquatic life. This definition includes watercourses with a surface or subsurface flow that supports or has supported riparian vegetation (CCR Title 14, Section 1.72). CDFW regulation within altered or artificial waterways is based on the value of those waterways to fish and wildlife. A streambed alteration agreement must be obtained for any diversion or alteration that would substantially adversely affect a fish or wildlife resource in a river, stream, or lake.

Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Act, waters of the state fall under the jurisdiction of the appropriate RWQCB. The Plan Area is within the Central California RWQCB. The RWQCB must prepare and periodically update water quality control plans (basin plans). Each basin plan sets forth water quality standards for surface water and groundwater, as well as actions to

control point and nonpoint sources of pollution to achieve and maintain these standards. The RWQCB's jurisdiction includes federally protected waters as well as areas that meet the definition of "waters of the state." Waters of the state are defined as any surface water or groundwater, including saline waters, within the boundaries of the state. In addition to water quality certifications under Section 401 of the federal CWA, discharges to waters of the state, including wetlands, must meet the RWQCB waste discharge requirements. This issue is addressed comprehensively in Section 4.10, "Hydrology and Water Quality," as well as herein with respect to biological resources.

LOCAL PLANS AND POLICIES

City of Fresno Municipal Code - Tree Preservation

The City of Fresno Municipal Code includes an ordinance regarding tree preservation (Section 13-305) that requires property owners to obtain a permit to remove or maintain street trees. Removed trees will be replaced by the applicant through replanting, or by the City through collection of permit fees.

City of Fresno General Plan - Parks, Open Space, and Schools Element

The approved General Plan is a set of policies and programs that form a blueprint for the physical development of the City. For a description of each of the elements within the approved General Plan, refer to Chapter 3, "Project Description." The following objectives and policies related to biological resources are presented in various elements of the approved General Plan:

Objective POSS-5. Provide for long-term preservation, enhancement, and enjoyment of plant, wildlife, and aquatic habitat.

- ▶ **Policy POSS-5-b: Habitat Conservation Plans.** Participate in cooperative, multi-jurisdictional approaches for area-wide habitat conservation plans to preserve and protect rare, threatened, and endangered species.
- ▶ **Policy POSS-5-c: Buffers for Natural Areas.** Require development projects, where appropriate and warranted, to incorporate natural features (such as ponds, hedgerows, and wooded strips) to serve as buffers for adjacent natural areas with high ecological value.
- ▶ **Policy POSS-5-d: Guidelines for Habitat Conservation.** Establish guidelines for habitat conservation and mitigation programs, including:
 - Protocols for the evaluation of a site's environmental setting and proposed design and operating parameters of proposed mitigation measures.
 - Methodology for the analysis depiction of land to be acquired or set aside for mitigation activities.
 - Parameters for specification of the types and sources of plant material used for any re-vegetation, irrigation requirements, and post-planting maintenance and other operational measures to ensure successful mitigation.
 - Monitoring at an appropriate frequency by qualified personnel and reporting of data collected to permitting agencies.
- ▶ **Policy POSS-5-e: Pursue development of conjunctive habitat and recreational trail uses in flood control and drainage projects.**
 - ▶ Commentary: Establishment of wildlife and aquatic habitat is unsuitable along primary conveyance systems to existing and future water treatment facilities. Certain waterways may be excluded from habitat development for this reason.
- ▶ **Policy POSS-5-f: Regional Mitigation and Habitat Restoration.** Coordinate habitat restoration programs with responsible agencies to take advantage of opportunities for a coordinated regional mitigation program.

4.4.2 Environmental Setting

The Plan Area is relatively flat, with topography that ranges in elevation from approximately 275 to 305 feet above mean sea level. A significant amount of land in the Plan Area is farmland or rural residential lots with large, uneven, and underutilized/underdeveloped parcels. The Plan Area contains substantial urban and developed land in the north and east, with increasing vacant lots and agricultural land in the central, south, and west. Irrigation ditches are located throughout the Plan Area near these active agricultural lands.

LAND COVER TYPES

The majority (approximately 60.80 percent) of the approximately 5,567-acre Plan Area consists of urban (developed) areas containing industrial, commercial, and residential development and associated roads and infrastructure. Urban land is dominant near the intersection of SR 99 and SR 41 extending southeast along SR 99. Lands along the west, south, and eastern margins of the Plan Area are mapped as agricultural land, which comprises approximately 39 percent of the Plan Area. Small discontinuous patches of annual grassland (0.21 percent) and lacustrine (ponded) habitat (0.1 percent) are also present throughout the Plan Area. No sensitive natural communities are mapped or expected to occur. Land cover types are summarized by acreage in Table 4.4-1 and their distribution is illustrated in Figure 4.4-1.

Table 4.4-1 Land Cover Types in the Plan Area

Land Cover Type	Total	Percent Cover
Land Cover Type¹		
Annual Grassland	12 acres	0.21%
Urban	3,385 acres	60.80%
Agricultural Land	2,164 acres	39.00%
Cropland	1 acre	0.01%
Deciduous Orchard	756 acres	13.58%
Dryland Grain Crops	45 acres	0.81%
Evergreen Orchard	104 acres	1.86%
Irrigated Grain Crops	3 acres	0.05%
Irrigated Hayfield	195 acres	3.50%
Irrigated Row and Field Crops	640 acres	11.49%
Vineyard	422 acres	7.59%
Lacustrine	6 acres	0.10%
Grand Total	5,567 acres	
Aquatic²		
Freshwater Emergent Wetland	2 acres	>0.1%
Freshwater Pond	7 acres	>0.1%
Riverine	22 linear miles	N/A

¹ Source: CAL FIRE 2017.

² Source: USFWS 2019.

Urban

The Plan Area includes 3,385 acres of urban (or developed) land, which represents approximately 60.80 percent of the total. This land cover type is characterized by anthropogenic development, and may include areas of ornamental tree groves, street strips, shade trees, lawn, and shrub cover. Urban landscapes show variation in vegetative cover, often with a mixture of native and exotic species. Urban lands have been constructed upon or otherwise covered with

a permanent, unnatural surface (e.g., concrete, asphalt, buildings, homes) or large amounts of debris or other materials. The Plan Area consists predominately of urban areas, which are concentrated along SR 99 and SR 41, especially in areas within the Fresno City limits. Urban land provides poor quality habitat for most common and special-status species. Urban land may contain structures and buildings that provide roosting habitat potentially suitable for bats and nesting habitat for common birds. Urban vegetation types typically contain a mosaic of edge habitats that could be used by some common wildlife species.

Agricultural Land

Agricultural land comprises approximately 39 percent of the Plan Area, and the majority is deciduous orchard (approximately 13.58 percent of the total acreage) and irrigated row and field crops (approximately 11.49 percent of the total acreage). In addition, 7.59 percent of the total acreage is vineyard, 3.50 percent is irrigated hayfield. Less than 2 percent each of the remaining agricultural land is cultivated as evergreen orchard, dryland grain crops, irrigated grain crops, or general cropland.

Most agricultural activity on-site and in the immediate vicinity has consisted of cultivation of orchard or various types of row crops. Land mapped as agricultural may be undeveloped intermittently. Undeveloped agricultural land within the Plan Area is characterized by fallow fields with sparse cover of grassland vegetation. Deciduous orchard communities are typically characterized by flat alluvial soils on valley floors and rolling foothills. Orchard communities are typically comprised of artificially irrigated habitat dominated by one, sometimes several, tree or shrub species planted for cultivation. Trees are typically low and bushy, and the understory is open, with little groundcover. In the Plan Area, deciduous orchards include a variety of fruit trees (e.g., apples, apricots, cherries, citrus, kiwi, peaches, nectarines, pears, persimmons, plums, pluots, pomegranates) or nut trees and shrubs (e.g., almonds, olives, pistachios, walnuts).

Irrigated row and field crops are frequently located in floodplains or upland areas with high soil quality. Irrigated row and field crops include annual and perennial crops, grown in rows, with open space between the rows. Row and field crops are artificially irrigated and feature a moderate disturbance rate by vehicle and pedestrian encroachment typically associated with farming activities. Species composition changes frequently, both by season and by year.

Because irrigated row and field crops contain active agriculture, and are therefore disturbed with altered substrates, this land cover type does not provide suitable habitat for special-status plant species and provides limited habitat for special-status wildlife species.

Annual Grassland

The Plan Area contains approximately 12 acres of annual grassland (0.21 percent of the total Plan Area), located primarily along the east, south, and west boundaries of the Plan Area. Annual grassland in the Plan Area includes a mix of native and nonnative annual grasses, which often occur in association with native and nonnative herbs and forbs. The dominant plant species within the annual grassland vegetation community typically include fescue (*Festuca* spp.), brome (*Bromus* spp.), and wild oats (*Avena* spp.), with black mustard (*Brassica nigra*), dove weed (*Croton setigerus*), and California poppy (*Eschscholzia californica*). Annual grasses germinate with the fall rains, grow during the winter and spring, and wither in the early summer. Annual grasslands in the Plan Area may provide habitat suitable for special-status plant and wildlife species described in Tables 4.4-2 and 4.4-3, presented below.

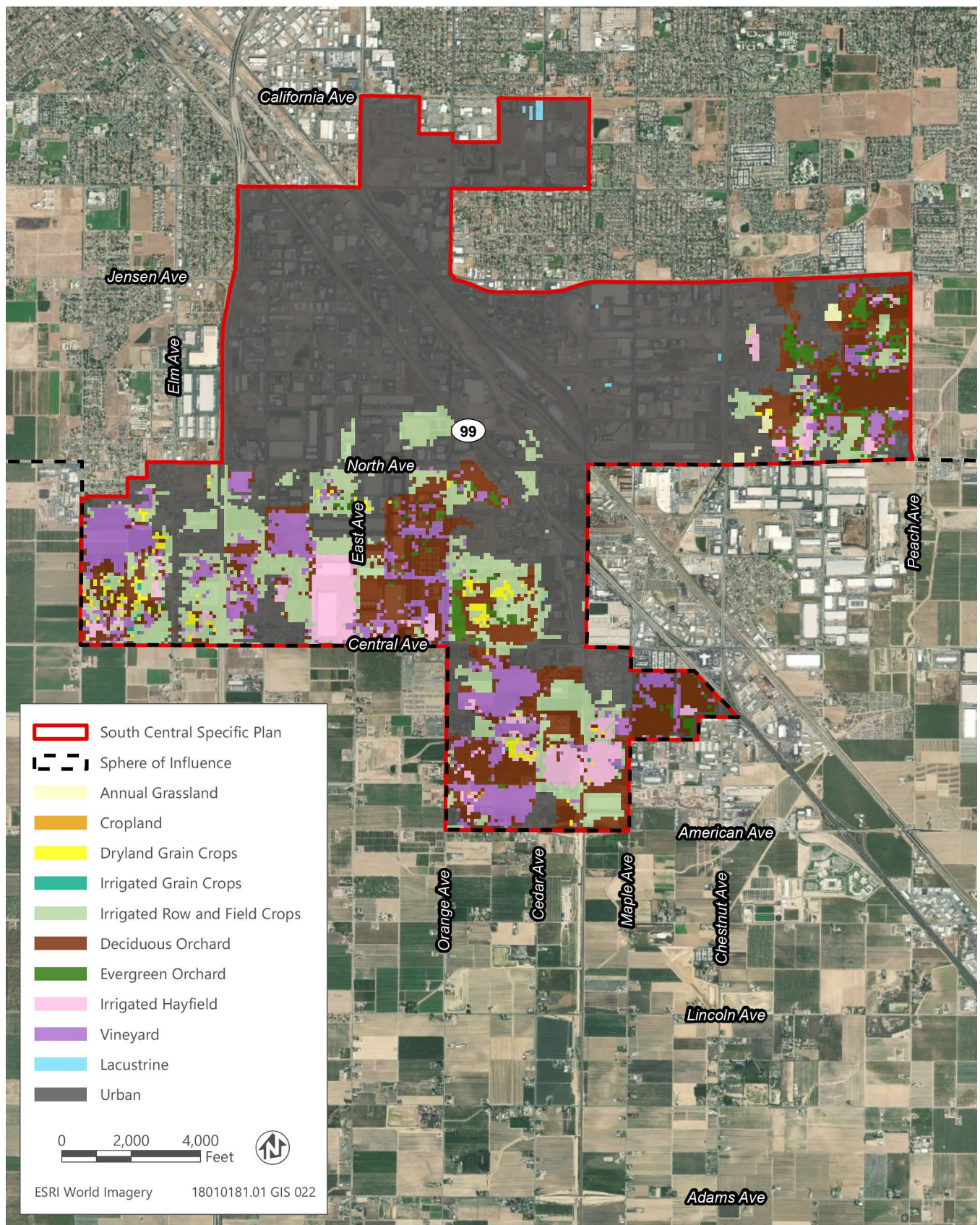
Aquatic Resources

Three major agricultural canals intersect the Plan Area. The Fresno Colony Canal crosses the northern end of the Plan Area, the North Central Canal crosses the center of the Plan Area, and the Central Canal crosses the southern end of the Plan Area. All canals flow from east to west across the Plan Area and are characterized by human-created agricultural water conveyances. No riparian vegetation associated with the canals was observed either during the 2018 site visit, or in review of the satellite imagery of the Plan Area. However, if sufficient vegetation becomes established along these canals to provide habitat and shelter suitable for riparian wildlife, areas around the canals may be considered as riparian habitat.

Some agricultural parcels in the Plan Area contain mapped freshwater emergent wetlands and freshwater ponds, all of which are documented in the National Wetlands Inventory as excavated or human-created (USFWS 2019). Ponds

observed during the 2018 site visit were all dry, and all contained tire track marks indicating that they had been altered recently. Based on spatial and field reconnaissance data, the areas mapped as freshwater emergent wetland and ponds in the Plan Area are artificial or altered seasonally filled wet depressions, which may serve as industrial or agricultural effluent ponds or flood control. Agricultural canals in the Plan Area may drain into ponds or freshwater emergent wetlands; however, no undisturbed streams or rivers occur in the Plan Area. Aquatic habitat in the Plan Area may lack persistent emergent vegetation or may have submerged or floating-leaved aquatic vegetation.

Aquatic habitat with upland vegetation suitable for wildlife to use as cover from predators was not observed during the reconnaissance survey or in a desktop review of mapped aquatic resources in the Plan Area. Most of the canals, ponds, and freshwater emergent wetlands in the Plan Area occurs in urban industrial or agricultural areas with very little vegetative cover and a long history of disturbance. Therefore, these aquatic resources would provide poor-quality habitat to wildlife and plants reliant on aquatic and riparian ecosystems. If and where suitable conditions exist (i.e., undisturbed slopes, emergent vegetation), aquatic habitat in the Plan Area may provide habitat suitable to special-status plant and wildlife species described in Tables 4.4-2 and 4.4-3, presented below.



Data downloaded from CAL FIRE in 2022.

Figure 4.4-1 Land Cover Types Mapped in the Plan Area

SENSITIVE BIOLOGICAL RESOURCES

Sensitive Habitats and Natural Communities

Sensitive habitat types include those that are of special concern to CDFW or that are afforded specific consideration through CEQA, Section 1602 of the California Fish and Game Code, the Porter-Cologne Water Quality Control Act, and Section 404 of the CWA. Sensitive habitats may be of special concern to regulatory agencies and conservation organizations for a variety of reasons, including their locally or regionally declining status, or because they provide important habitat to common and special-status species.

CDFW maintains a list of plant communities that are native to California. Within that list, CDFW identifies sensitive natural communities, which it defines as communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects. These communities may or may not contain special-status species or their habitat. CDFW designates sensitive natural communities based on their state rarity and threat ranking using NatureServe's Heritage Methodology. Natural communities with rarity rank of S1 to S3, where S1 is critically imperiled, S2 is imperiled, and S3 is vulnerable, are considered sensitive natural communities to be addressed in the environmental review processes of CEQA and its equivalents (CDFW 2018). The region around Fresno is known to contain two special-status natural communities: valley oak woodland and northern claypan vernal pool. Neither community occurs in the South Central Specific Plan area. There are no sensitive natural communities within or adjacent to the Plan Area (CNDDDB 2023).

The seasonal wetland and pond habitats in the Plan Area may meet the state definition of wetlands. While the agricultural canals are not vegetated wetlands, they may be subject to regulation under the state's Porter-Cologne Act as non-wetland waters of the state. There are no riparian habitats present in the Plan Area as the agricultural canals are maintained to prevent establishment of riparian vegetation.

Special-Status Species

Special-status species are defined as species that are legally protected or that are otherwise considered sensitive by federal, state, or local resource agencies. Special-status species are species, subspecies, or varieties that fall into one or more of the following categories, regardless of their legal or protection status:

- ▶ officially listed under the California Endangered Species Act (CESA) or under the federal Endangered Species Act (ESA) as endangered, threatened, or rare;
- ▶ a candidate for state or federal listing as endangered, threatened, or rare under CESA or ESA;
- ▶ taxa (i.e., taxonomic category or group) that meet the criteria for listing, even if not currently included on any list, as described in CCR Section 15380 of the State CEQA Guidelines;
- ▶ species identified by CDFW as Species of Special Concern;
- ▶ species listed as Fully Protected under the California Fish and Game Code;
- ▶ species afforded protection under local planning documents; and
- ▶ taxa considered by the CDFW to be "rare, threatened, or endangered in California" and assigned a California Rare Plant Rank (CRPR) of 1A, 1B, 2A, or 2B, defined as follows:
 - CRPR 1A - Plants presumed to be extinct in California;
 - CRPR 1B - Plants that are rare, threatened, or endangered in California and elsewhere;
 - CRPR 2A - Plants presumed to be extinct in California but that are more common elsewhere; and
 - CRPR 2B - Plants that are rare, threatened, or endangered in California but more common elsewhere.

All plants with a CRPR are considered “special plants” by CDFW. The term “special plants” is a broad term used by CDFW to refer to all of the plant taxa inventoried in CDFW’s CNDDDB, regardless of their legal or protection status. Plants ranked as CRPR 1A, 1B, 2A, or 2B typically qualify as endangered, rare, or threatened species within the definition of CEQA Guidelines Section 15380. CDFW recommends that potential impacts on CRPR 1 and 2 species be evaluated in CEQA documents. In general, CRPR 3 (review list) and 4 (watch list) species do not meet the definition of endangered, rare, or threatened pursuant to CEQA Guidelines Section 15380 and/or Section 15125(c). However, these species may be evaluated by the lead agency on a case-by-case basis to determine their local rarity.

The term “California species of special concern” is applied by CDFW to animals not listed under ESA or CESA, but that are considered to be declining at a rate that could result in listing, or that historically occurred in low numbers and known threats to their persistence currently exist. CDFW’s fully protected status was California’s first attempt to identify and protect animals that were rare or facing extinction. Most species listed as fully protected were eventually listed as threatened or endangered under CESA; however, some species remain listed as fully protected but do not have simultaneous listing under CESA. Fully protected species may not be taken or possessed at any time and no take permits can be issued for these species except for scientific research purposes or for relocation to protect livestock.

Tables 4.4-2 and 4.4-3 provide a list of special-status species potentially occurring in the Plan Area vicinity. These lists were developed through a review of biological studies previously conducted in the area and observations made during the 2018 site surveys. CDFW’s CNDDDB (CNDDDB 2023), a statewide inventory of the locations and conditions of the State’s rarest plant and animal taxa and vegetation types, was also reviewed for specific information on documented observations of special-status species previously recorded in the Plan Area vicinity. A 12-quad search radius around the Plan Area was used to identify potential special-status species because it encompasses a sufficient distance to accommodate for local habitat diversity. The CNDDDB is based on actual recorded occurrences and does not constitute an exhaustive inventory of every resource.

Of the 14 special-status plant species that are known to occur within the 12 USGS 7.5-minute quadrangles including and surrounding the Plan Area, only two were determined to have potential to occur in the Plan Area; the other 12 species are not expected to occur because the Plan Area does not contain habitat potentially suitable for the species (Table 4.4-2, CNDDDB 2023, CNPS 2023). Of the 26 special-status wildlife species that could occur within the 12 USGS quadrangles, six species were determined to have potential to occur in the Plan Area based on the presence of habitat potentially suitable for these species (Table 4.4-3, CNDDDB 2023, BIOS 2017a, BIOS 2017b, USFWS 2021).

The species lists in Tables 4.4-2 and 4.4-3 include special-status plant and wildlife species with both scientific and common names, legal status, description of typical habitat association, and the potential for the species to occur in the Plan Area. Most of the special-status species identified in Tables 4.4-2 and 4.4-3 do not occur in the Plan Area or have a low potential for occurrence because the habitat elements they require either were never present or are no longer found on the agricultural or industrial developed portions of south Fresno. Special-status plant and wildlife species that could occur on or adjacent to the Plan Area are evaluated and discussed in further detail below.

Table 4.4-2 Special-Status Plants Known to Occur in the Region and Their Potential to Occur in the Plan Area

Name	Federal Status ¹	State Status ¹	CRPR ¹	Habitat	Potential to Occur in the Survey Area ²
Lesser saltscale <i>Atriplex minuscula</i>	–	–	1B.1	Alkali playa. Chenopod scrub, playas, valley and foothill grassland. In alkali sink and grassland in sandy, alkaline soils. 0–738 feet in elevation. Blooms May–October. Annual.	Not expected to occur: The Plan Area does not contain alkaline soils suitable for this species.
Bristly sedge <i>Carex comosa</i>	–	–	2B.1	Lake margin marshes; site below sea level is on a Delta island. -16–5315 feet in elevation. Blooms May–September. Geophyte.	Not expected to occur: The ponds and excavated wetlands in the Plan Area do not provide habitat conditions suitable for this species.
Succulent owl's-clover <i>Castilleja campestris</i> var. <i>succulenta</i>	FT	SE	1B.2	Endemic to vernal pools. Moist places, often in acidic soils. 66–2313 feet in elevation. Blooms (March), April–May. Annual.	Not expected to occur: The Plan Area does not support vernal pools.
California jewelflower <i>Caulanthus californicus</i>	FE	SE	1B.1	Chenopod scrub, valley and foothill grassland, pinyon and juniper woodland. Sandy soils. 213–6102 feet in elevation. Blooms February–May. Annual.	May occur: This species may be present in annual grassland habitat within the Plan Area. There is one historical known location within the Plan Area, but it is located within central Fresno, where the land use appears to have already been converted to urban use.
Spiny-sepaled button-celery <i>Eryngium spinosepalum</i>	–	–	1B.2	Vernal pools, within grassland. 262–837 feet in elevation. Blooms April–June. Annual/Perennial.	Not expected to occur: The Plan Area does not support vernal pool habitat within grassland suitable for this species.
California satintail <i>Imperata brevifolia</i>	–	–	2B.1	Mesic sites, alkali seeps, riparian areas, springs, meadows, streambanks. 10–4905 feet in elevation. Blooms September–May. Geophyte.	Not expected to occur: The Plan Area does not support wetland or riparian habitat suitable for this species.
Forked hare-leaf <i>Lagophylla dichotoma</i>	–	–	1B.1	Cismontane woodland, valley and foothill grassland. Sometimes clay. 623–1099 feet in elevation. Blooms April–May. Annual.	Not expected to occur: The Plan Area is outside of this species' elevation range.
Alkali-sink goldfields <i>Lasthenia chrysantha</i>	–	–	1B.1	Vernal pools. Alkaline. 0–656 feet in elevation. Blooms February–June. Annual.	Not expected to occur: The Plan Area does not support vernal pool habitat suitable for this species.
Madera leptosiphon <i>Leptosiphon serrulatus</i>	–	–	1B.2	Cismontane woodland, lower montane coniferous forest. Dry slopes; often on decomposed granite in woodland. 984–4265 feet in elevation. Blooms April–May. Annual.	Not expected to occur: The Plan Area is outside of this species' elevation range.
San Joaquin Valley Orcutt grass <i>Orcuttia inaequalis</i>	FT	SE	1B.1	Vernal pools, 33–2477 feet in elevation. Blooms April–September. Annual.	Not expected to occur: The Plan Area does not contain vernal pool habitat suitable for this species
Hairy Orcutt grass <i>Orcuttia pilosa</i>	FE	SE	1B.1	Vernal pools, 148–656 feet in elevation. Blooms May–September. Annual.	Not expected to occur: The Plan Area does not contain vernal pool habitat suitable for this species

Name	Federal Status ¹	State Status ¹	CRPR ¹	Habitat	Potential to Occur in the Survey Area ²
San Joaquin adobe sunburst <i>Pseudobahia peirsonii</i>	FT	SE	1B.1	Valley and foothill grassland, cismontane woodland. Grassy valley floors and rolling foothills in heavy clay soil. 377–2608 feet in elevation. Blooms February–April. Annual.	Not expected to occur: The Plan Area is outside of this species' elevation range.
Sanford's arrowhead <i>Sagittaria sanfordii</i>	–	–	1B.2	Wetland, marshes, and swamps. In standing or slow-moving freshwater ponds, marshes, and ditches. 0–2133 feet in elevation. Blooms May–October (November). Geophyte.	May occur: This species may be present in scattered ponds or agricultural ditches in the Plan Area.
Greene's tuctoria <i>Tuctoria greenii</i>	FE	SR	1B.1	Endemic to vernal pools in open grasslands. 82–4347 feet in elevation. Blooms May–July (September). Annual.	Not expected to occur: The Plan Area does not contain suitable vernal pool habitat for this species

Notes: CRPR = California Rare Plant Rank; CNDDDB = California Natural Diversity Database.

¹ Legal Status Definitions

Federal:

- FE Endangered (legally protected)
- FT Threatened (legally protected)

State:

- SE Endangered (legally protected)
- SR Rare (legally protected)

California Rare Plant Ranks:

- 1B Plant species considered rare or endangered in California and elsewhere (protected under CEQA, but not legally protected under ESA or CESA)
- 2B Plant species considered rare or endangered in California but more common elsewhere (protected under CEQA, but not legally protected under ESA or CESA)

Threat Ranks:

- 0.1 Seriously threatened in California (over 80% of occurrences threatened; high degree and immediacy of threat)
- 0.2 Moderately threatened in California (20-80% occurrences threatened; moderate degree and immediacy of threat)
- 0.3 Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

² Potential for Occurrence Definitions

Not expected to occur: Species is unlikely to be present within the survey area due to poor habitat quality, lack of suitable habitat features, or restricted current distribution of the species.

May occur: Suitable habitat is available within the survey area; however, there are little to no other indicators that the species might be present.

Likely to occur: All of the species life history requirements can be met by habitat present in the survey area, and populations/occurrences are known to occur in the immediate vicinity.

Sources: CNDDDB 2023; CNPS 2023.

Table 4.4-3 Special-Status Wildlife Known to Occur in the Region and Their Potential to Occur in the Plan Area

Name	Federal Status ¹	State Status ¹	Habitat	Potential to Occur in the Survey Area
Invertebrates				
Crotch bumble bee <i>Bombus crotchii</i>	-	SC	Found primarily in California: Mediterranean, Pacific coast, western desert, Great Valley, and adjacent foothills through most of southwestern California. Habitat includes open grassland and scrub. Nests underground.	Not expected to occur: The survey area is within the historic range of this species; however, the population has declined significantly in the central portion of the range including Fresno (Xerces 2018). Two occurrences are present in the vicinity of the Plan Area, but both are greater than 100 years old. A record from 1983 reports the nearest occurrence of crotch bumble bee approximately 25 miles northeast of the Plan Area (CNDDDB 2023).
Monarch - California overwintering population <i>Danaus plexippus</i> pop. 1	FC	-	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby. Milkweed species are the larval host plants.	Not expected to occur: The Plan Area does not contain coastal habitat suitable for overwintering monarch butterflies. Milkweed may be present in undeveloped areas and areas between agricultural fields; milkweed species provide foraging and host plant opportunities for monarch butterflies.
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	FT	-	Riparian scrub. Occurs only in the Central Valley of California, in association with blue elderberry (<i>Sambucus nigra</i> ssp. <i>caerulea</i>). Prefers to lay eggs in elderberries 2-8 inches in diameter; some preference shown for "stressed" elderberries.	Not expected to occur: Although elderberry shrubs with stems greater than 1-inch in diameter may be present in the Plan Area, the Plan Area is outside of this species' known range (USFWS 2021).
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT	-	Valley and foothill grassland, vernal pool, wetland. Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	Not expected to occur: The survey area does not support vernal pool or wetland habitat suitable for this species.
Vernal pool fairy shrimp <i>Lepidurus packardii</i>	FE	-	Valley and foothill grassland, vernal pool, wetland. Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water. Pools commonly found in grass bottomed swales of unplowed grasslands. Some pools are mud-bottomed and highly turbid.	Not expected to occur: The survey area does not support vernal pool or wetland habitat suitable for this species
Reptiles and Amphibians				
Blunt-nosed leopard lizard <i>Gambelia sila</i>	FE	FP, SE	Arid, open areas with patchy or sparse drought-tolerant shrub and herbaceous vegetation less than 2,600 feet in elevation along the San Joaquin Valley. Currently range from Merced to Santa Barbara and Ventura Counties.	Not expected to occur: Areas of grasslands, patches of scrub vegetation, and undeveloped lots within the Plan Area are fragmented from larger areas of natural vegetation communities and isolated from known occurrences of this species.
California tiger salamander <i>Ambystoma californiense</i>	FT	ST	Need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	Not expected to occur: The survey area does not support aquatic habitat suitable for this species.

Name	Federal Status ¹	State Status ¹	Habitat	Potential to Occur in the Survey Area
California red-legged frog <i>Rana draytonii</i>	FT	SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	Not expected to occur: The survey area does not support aquatic habitat suitable for this species.
California glossy snake <i>Arizona elegans occidentalis</i>	–	SSC	Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular Ranges south to Baja California. Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils.	Not expected to occur: The Plan Area is outside of this species' known and predicted range (BIOS 2017a).
Coast horned lizard <i>Phrynosoma blainvillii</i>	–	SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	Not expected to occur: Grassland areas within the Plan Area are fragmented from larger areas of natural vegetation communities and isolated from known occurrences of this species.
Giant gartersnake <i>Thamnophis gigas</i>	FT	ST	Prefers freshwater marsh and low gradient streams. Has adapted to drainage canals and irrigation ditches. This is the most aquatic of the garter snakes in California.	Not expected to occur: The Plan Area is located outside of the species' range.
Northern California legless lizard <i>Anniella pulchra</i>	–	SSC	Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential. Prefers soils with a high moisture content.	Not expected to occur: Grassland areas within the Plan Area are fragmented from larger areas of natural vegetation communities and isolated from known occurrences of this species.
Western pond turtle <i>Actinemys marmorata</i>	–	SSC	An aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6,000 feet elevation. Need basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	May occur: Artificial canals, man-made ponds, and excavated wetlands in the Plan Area may provide suitable aquatic habitat for western pond turtle.
Western spadefoot <i>Spea hammondi</i>	–	SSC	Occurs primarily in grassland habitats but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	Not expected to occur: The Plan Area does not contain vernal pool or seasonal wetland habitat suitable for western spadefoot.
Birds				
Burrowing owl <i>Athene cunicularia</i>	–	SSC	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	May occur: The Plan Area contains suitable overwintering and breeding habitat in open grassland habitat and agricultural areas with a healthy population of California ground squirrels, and many ground squirrel burrows. Burrowing owl are known to occur in the vicinity of the Plan Area (CNDDDB 2023).

Name	Federal Status ¹	State Status ¹	Habitat	Potential to Occur in the Survey Area
Least Bell's vireo <i>Vireo bellii pusillus</i>	FE	SE	Summer resident of southern California in low riparian in vicinity of water or in dry river bottoms; below 2,000 feet. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, coyote brush, mesquite.	Not expected to occur: The Plan Area does not support nesting habitat suitable for this species.
Swainson's hawk <i>Buteo swainsoni</i>	–	ST	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	May occur. The Plan Area may contain nesting habitat (i.e., large trees) potentially suitable for Swainson's hawks. The Plan Area also may provide foraging habitat for Swainson's hawks.
Tricolored blackbird <i>Agelaius tricolor</i>	–	ST, SSC	Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	May occur. The Plan Area may contain nesting habitat (i.e., patches of blackberry along canals, ponds, or excavated wetlands) potentially suitable for tricolored blackbird. The Plan Area also may provide foraging habitat for tricolored blackbird.
White-tailed kite <i>Elanus leucurus</i>	–	FP	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	May occur. The Plan Area may contain nesting habitat (i.e., large trees) potentially suitable for white-tailed kites. Additionally, the Plan Area also may provide foraging habitat for white-tailed kites.
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	–	SE	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	Not expected to occur: The Plan Area does not contain riparian forest habitat suitable for western yellow-billed cuckoo.
Mammals				
American badger <i>Taxidea taxus</i>	–	SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	Not expected to occur: Grassland areas within the Plan Area are fragmented from larger areas of natural vegetation communities and isolated from known occurrences of this species.
Fresno kangaroo rat <i>Dipodomys nitratoides exilis</i>	FE	SE	Alkali sink-open grassland habitats in western Fresno County. Bare alkaline clay-based soils subject to seasonal inundation, with more friable soil mounds around shrubs and grasses.	Not expected to occur: While the Plan Area is within the historic range of Fresno kangaroo rat, currently, there are no known populations of the species within its historical geographic range in Merced, Madera, and Fresno counties.
Pallid bat <i>Antrozous pallidus</i>	–	SSC	Most common in open, dry habitats with rocky areas for roosting. May roost in large trees and abandoned buildings. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	May occur. The Plan Area contains roosting habitat (potentially unoccupied human-made structures) suitable for pallid bats.

Name	Federal Status ¹	State Status ¹	Habitat	Potential to Occur in the Survey Area
San Joaquin kit fox <i>Vulpes macrotis mutica</i>	FE	ST	Annual grasslands or grassy open stages with scattered shrubby vegetation. Need loose-textured sandy soils for burrowing, and suitable prey base.	Not expected occur: San Joaquin kit foxes are unlikely to den within the Plan Area because it is regularly disturbed, surrounded by dense suburban and commercial development, and disconnected from nearby undeveloped habitat suitable for this species. Further, the Plan Area is outside of the species range (BIOS 2017b) and modeled habitat (BIOS 2014), and a recent assessment report for the species does not identify any near Fresno as within the current range of San Joaquin kit fox (USFWS 2020b).
Spotted bat <i>Euderma maculatum</i>	–	SSC	Arid, low desert habitats to high elevation conifer forests. Prominent rock features appear to be a necessary feature for roosting. The winter range and hibernacula are unknown for most of its range, though the species has been captured year-round in the southern part of its range. Roost sites are cracks, crevices, and caves usually high in fractured rock cliffs.	Not expected to occur: The Plan Area is outside of this species' known range (BIOS 2023).
Western mastiff bat <i>Eumops perotis californicus</i>	–	SSC	Many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	Not expected to occur: The Plan Area is within this species' range, and western mastiff bat may fly over or forage in grasslands in the Plan Area. However, no suitable roosting habitat (e.g., tall cliffs, crevices in rock outcroppings, tall buildings) suitable for western mastiff bats is present in the Plan Area.

General references: Unless otherwise noted, all habitat and distribution data provided by CNDDDB.

Note: CNDDDB = California Natural Diversity Database.

¹ Legal Status Definitions

Federal:

- FC Candidate for listing (not legally protected)
- FE Endangered (legally protected)
- FT Threatened (legally protected)

State:

- SC Candidate for listing (legally protected)
- SE Endangered (legally protected)
- ST Threatened (legally protected)
- FP Fully protected (legally protected)
- SSC Species of special concern (no formal protection other than CEQA consideration)

² Potential for Occurrence Definitions

Not expected to occur: Species is unlikely to be present in the Plan Area due to poor habitat quality, lack of suitable habitat features, or restricted current distribution of the species.

May occur: Suitable habitat is available in the Plan Area; however, there are little to no other indicators that the species might be present.

Likely to occur: All of the species' life history requirements can be met by habitat present on the site, and populations/occurrences are known to occur in the immediate vicinity.

Present. Species observed within the Plan Area.

Sources: CNDDDB 2023; USFWS 2023.

4.4.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

This impact evaluation is based on data collected during a reconnaissance-level field survey conducted in December 2018, review of aerial photographs, and information from several previously completed documents that address biological resources in the Plan Area vicinity. The following data, documents, reports, and studies were used in this analysis:

- ▶ results of California Natural Diversity Database (CNDDDB) record search of the Fresno South, Malaga, Fresno North, Clovis, Herndon, Kearney Park, Raisin, Caruthers, Conejo, Selma, Sanger, and Round Mountain U.S. Geological Survey (USGS) 7.5-minute quadrangles (CNDDDB 2023);
- ▶ results of California Native Plant Society (CNPS), Inventory of Rare Plants search of the Fresno South, Malaga, Fresno North, Clovis, Herndon, Kearney Park, Raisin, Caruthers, Conejo, Selma, Sanger, and Round Mountain USGS 7.5-minute quadrangles (CNPS 2023);
- ▶ a list of species and other resources, obtained from USFWS Information for Planning and Consultation (IPaC), that are known or expected to be on or near the Plan Area or could be affected by projects in this location (USFWS 2021);
- ▶ Master Environmental Impact Report General Plan and Development Code Update City of Fresno, Fresno County, California (City of Fresno 2014);
- ▶ aerial photographs of the Plan Area and region;
- ▶ data collected during a reconnaissance-level survey of the Plan Area conducted on December 14, 2018, by an Ascent biologist;
- ▶ City of Fresno General Plan and EIR (July 2021);
- ▶ Fresno County General Plan (October 3, 2000);
- ▶ Fresno County General Plan Background Report (October 3, 2000); and
- ▶ Fresno County General Plan Draft EIR (2000).

THRESHOLDS OF SIGNIFICANCE

An impact related to biological resources would be significant if implementation of the proposed plan would:

- ▶ have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;
- ▶ have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFW or the USFWS;
- ▶ have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- ▶ interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- ▶ conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- ▶ conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

ISSUES NOT DISCUSSED FURTHER

All the issues identified in the thresholds of significance are addressed in the following analysis.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 4.4-1: Result in Substantial Adverse Effect, Either Directly or through Habitat Modification, 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

Future development under the proposed plan may include ground disturbance, vegetation removal, and overall conversion of land cover, which could result in disturbance, injury, or mortality of several special-status plant and wildlife species, if present; reduced reproductive productivity of these species; and contribute to loss of species habitat. This impact would be **potentially significant**.

Tables 4.4-2 and 4.4-3 provide a list of the special-status plant and wildlife species that may occur or are known to occur within the Plan Area. The following two special-status plant species have the potential to occur within the Plan Area:

- ▶ California jewelflower (*Caulanthus californicus*)
- ▶ Sanford's arrowhead (*Sagittaria sanfordi*)

The following six special-status wildlife species have the potential to occur in the Plan Area:

- ▶ western pond turtle (*Actinemys marmorata*)
- ▶ tricolored blackbird (*Agelaius tricolor*)
- ▶ burrowing owl (*Athene cunicularia*)
- ▶ white-tailed kite (*Elanus leucurus*)
- ▶ Swainson's hawk (*Buteo swainsoni*)
- ▶ pallid bat (*Antrozous pallidus*)

Special-Status Plants

Future development under the proposed plan, including ground disturbance associated with construction of roads, parking areas, and buildings, and extension of natural gas, water, sewage, and electrical distribution infrastructure, could result in direct removal of California jewelflower or Sanford's arrowhead, if present, or in habitat alterations or plant damage that leads to the death of special-status plants. Loss of individuals of California jewelflower or Sanford's arrowhead could substantially affect the abundance, distribution, and viability of local and regional populations of these species; thus, this would be a significant impact.

Special-Status Wildlife

Western Pond Turtle

The western pond turtle is found in natural and human-made ponds, streams, creeks, irrigation ditches, and other aquatic areas with abundant emergent vegetation. In muddy ponds, western pond turtles may hibernate underwater during the winter or during drought periods. Turtles lay eggs in uplands above stream or pond margins, and hatchlings may emerge in late summer, or in some cases they may overwinter underground in the nest and emerge in spring. Western pond turtles are known to travel into uplands up to 0.3 mile (approximately 1,600 feet) from aquatic habitat (Reese and Welsh 1997).

Future development under the proposed plan, including ground disturbance associated with construction of roads, parking areas, buildings, and extension of utility infrastructure could result in disturbance to irrigation ditches or other aquatic areas where western pond turtle may be present. Project activities (i.e., vegetation clearing, ground disturbance, staging, heavy equipment use, fill of wetlands and other waters) in aquatic habitat and grasslands within 1,600 feet from aquatic habitat may result in direct loss of western pond turtles and occupied burrows if present. This would be a significant impact.

Burrowing Owl

Burrowing owls require large open expanses of sparsely vegetated areas on gently rolling or level terrain with an abundance of active small mammal burrows. Typical habitat associated with the species includes short-grass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), prairies, coastal dunes, desert floors, and some artificial, open areas as a year-round resident. Burrowing owls may also use golf courses, cemeteries, road easements and rights-of-way within cities, airports, vacant lots in residential areas, and irrigation ditches. Burrowing owls often use existing rodent burrows (or other burrows) for roosting and nesting. They may also use pipes and culverts where burrows are scarce. Annual grassland and open agricultural land in the Plan Area may provide habitat suitable for this species.

Project activities (i.e., ground disturbance, vegetation clearing, heavy equipment use, staging) associated with future construction activities under the proposed plan may result in direct loss of burrowing owl individuals, disturbance to nests, and potential loss of occupied burrows, if present. This would be a significant impact.

Special-Status Birds, Nesting Raptors, and Other Native Nesting Birds

Swainson's hawk, tricolored blackbird, white-tailed kite, and common nesting bird species may be present in the Plan Area. Swainson's hawk and white-tailed kite typically nest in open riparian habitat or in scattered trees or small groves. Adjacent agricultural fields, including row crops and irrigated pastures, and grasslands may be used for foraging. Other common raptor species could nest in trees in the Plan Area, including red-tailed hawk (*Buteo jamaicensis*), and American kestrel (*Falco sparverius*). The tricolored blackbird nests near fresh water, with emergent wetlands with tall, dense cattails or tules, but it can also be found in thickets of willow, blackberry, wild rose, and other tall herbs. Common native nesting birds protected under California Fish and Game Code and the federal MBTA may also be present in the Plan Area.

Development under the proposed plan could include ground disturbance, tree removal, and other vegetation clearing which would require the use of equipment, vehicles, and heavy machinery. These activities could result in direct loss of nests or inadvertent disturbance, injury, or mortality of special-status and common native birds. If present, special-status and common native birds could be disturbed due to the presence of equipment and personnel potentially leading to nest abandonment. Active ground nests could be inadvertently removed and destroyed during ground disturbance activities, if present, potentially resulting in the loss of eggs or chicks. This would be a potentially significant impact.

Pallid Bat

Pallid bats occur in a variety of habitats throughout California and roost in crevices in rocky outcrops and cliffs, caves, mines, trees, and human structures such as bridges, barns, porches, bat boxes, and buildings. This species also has been found roosting on or near the ground under stone piles, rags, and baseboards. Their tendency to roost gregariously, combined with a relative sensitivity of maternity roosts to noise disturbance, makes pallid bats vulnerable to disturbance. Pallid bats are especially sensitive to disturbance during breeding season (October to February) and pupping season (April through early August). While habitat suitable for pallid bat colonies or maternity roosts is uncommon and of low quality in the Plan Area, abandoned buildings in the Plan Area have the potential to serve as habitat suitable for pallid bat roosting.

Development under the proposed plan may include demolition of existing buildings and removal of large trees. If pallid bats are present in buildings during demolition or present in large trees during removal, these activities could result in direct loss of colony roosts or breeding colonies. If present, pallid bats roosts could be disturbed due to direct loss of roosting habitat, or due to the presence of equipment and personnel potentially leading to roost abandonment. Project activities (i.e., noise-producing heavy equipment, ground disturbance, vegetation clearing, staging) may result in maternity or colony roost abandonment to pallid bats, if present. This would be a significant impact.

Mitigation Measures

Mitigation Measure 4.4-1a: Conduct Project-Level Biological Reconnaissance Sensitive Species and Habitats Survey

During the early planning stages of projects under the SCSP, the following measure shall apply:

- ▶ If a project site has natural land cover and is not within existing development with an urban landscape, a data review and biological reconnaissance survey will be conducted within a project site by a qualified biologist prior to project activities (e.g., ground disturbance, vegetation removal, staging, construction). The survey will be conducted no more than one year prior to project implementation. The qualified biologist must be familiar with the life histories and ecology of species in the City of Fresno and must have experience conducting field surveys of relevant species or resources, including focused surveys for individual species, if applicable. The data reviewed will include the biological resources setting, species tables, and habitat information in this EIR. It will also include review of the best available, current data for the area, including vegetation mapping data, species distribution/range information, CNDDDB, CNPS Inventory of Rare and Endangered Plants of California, relevant Biogeographic Information and Observation System (BIOS) queries, and relevant general plans. BIOS is a web-based system that enables the management and visualization of biogeographic data collected by CDFW and partner organizations. The qualified biologist will assess the habitat suitability of the project site for all special-status plant and wildlife species as well as sensitive habitats identified as having potential to occur in the SCSP area (refer to Section 4.4.2, "Environmental Setting"), and will identify bat maternity roosts within the SCSP area. The qualified biologist will also assess the potential for aquatic resources (e.g., wetlands, streams, seeps) or sensitive natural communities to be present within the project site. The biologist will provide a report to the City of Fresno with evidence to support a conclusion as to whether special-status species and sensitive habitats are present or are likely to occur within the project site.
 - If the reconnaissance survey identifies no potential for special-status plant or wildlife species, and no potential sensitive habitats including riparian habitat or wetlands, the City of Fresno will not be required to apply any additional mitigation measures under Impact 4.4-1b through 4.4-1f, 4.4-2, or 4.4-3.
 - If the qualified biologist determines that there is potential for special-status species or sensitive habitats to be present within the project site, the appropriate biological mitigation measures, identified herein shall be implemented.

Mitigation Measure 4.4-1b: Conduct Special-Status Plant Surveys, and Implement Avoidance Measures and Mitigation

If it is determined through implementation of Mitigation Measure 4.4-1a that habitat suitable for special-status plant species is present within a particular project site, the following measures shall be implemented:

- ▶ Before implementation of future project activities in the Plan Area that could affect grasslands suitable for California jewelflower (within natural annual grassland areas), or when projects are proposed that could affect aquatic habitat suitable for Sanford's arrowhead, a qualified botanist shall conduct protocol-level surveys of the project site following survey methods from CDFW's *Protocols for Surveying and Evaluating Impacts on Special-Status Native Plant Populations and Natural Communities* (CDFW 2018 or most recent version). The qualified botanist shall (1) be knowledgeable about plant taxonomy, (2) be familiar with plants of the Central Valley region, including special-status plants and sensitive natural communities, (3) have experience conducting floristic botanical field surveys as described in CDFW 2018, (4) be familiar with the *California Manual of Vegetation* (Sawyer et al. 2009 or current version, including updated natural communities data at <http://vegetation.cnps.org/>), and (5) be familiar with federal and state statutes and regulations related to plants and plant collecting.
 - If special-status plants are not found, the botanist shall document the findings in a report to the City of Fresno, and no further mitigation shall be required.
 - If special-status plants are found during protocol surveys and cannot be avoided by project activities, the applicant shall, in consultation with CDFW or USFWS, as appropriate, depending on species status, develop and implement a site-specific mitigation strategy to compensate for loss of occupied habitat or individuals.

Mitigation measures shall include, at a minimum, preserving and enhancing existing populations outside of the individual development area, establishing populations through seed collection or transplantation from the site that is to be affected, and/or restoring or creating habitat in sufficient quantities to offset loss of occupied habitat or individuals. Potential mitigation sites could include suitable locations within or outside of the project site. Habitat and individual plants lost shall be mitigated at a ratio agreed upon in consultation with CDFW or USFWS, considering acreage as well as function and value at a population scale. Success criteria for preserved and compensatory populations shall include:

- The extent of occupied area and plant density (number of plants per unit area) in compensatory populations shall be equal to or greater than the affected occupied habitat.
- Compensatory and preserved populations shall be self-producing. Populations would be considered self-producing when:
 - plants reestablish annually for a minimum of five years with no human intervention such as supplemental seeding; and
 - reestablished and preserved habitats contain an occupied area and flower density comparable to existing occupied habitat areas in similar habitat types in the project vicinity.
 - If off-site mitigation includes dedication of conservation easements, purchase of mitigation credits, or other off-site conservation measures, the details of these measures shall be included in the mitigation plan, including information on responsible parties for long-term management, conservation easement holders, long-term management requirements, success criteria such as those listed above and other details, as appropriate to target the preservation of long-term viable populations.

Mitigation Measure 4.4-1c: Conduct Western Pond Turtle Preconstruction Surveys, Implement Avoidance Measures, and Relocate Individuals

If it is determined through implementation of Mitigation Measure 4.4-1a that habitat suitable for western pond turtle is present within a particular project site, the following measures shall be implemented:

- ▶ Within 24 hours of commencement of ground disturbing activities in aquatic habitat or in grasslands within 1,600 feet from aquatic habitat, a qualified biologist familiar with the life history of western pond turtle and experienced in performing surveys for western pond turtle shall conduct a focused survey of aquatic and upland habitat suitable for the species within the project site. The qualified biologist shall inspect the project site for western pond turtles as well as suitable burrow habitat.
 - If western pond turtles are not detected during the focused survey, the qualified biologist shall submit a report summarizing the results of the survey to the applicant and the City of Fresno, and further mitigation shall not be required.
 - If western pond turtles are detected, a no-disturbance buffer of at least 100 feet shall be established around any identified nest sites or overwintering sites until the nest is no longer active as determined by a qualified biologist, and no project activities would occur within the no-disturbance buffer. A qualified biologist with an appropriate CDFW Scientific Collecting Permit that allows handling of reptiles shall be present during initial ground disturbance activities and shall inspect the project site before initiation of project activities. If western pond turtles are detected, the qualified biologist shall move the turtles to an area that provides suitable aquatic habitat.

Mitigation Measure 4.4-1d: Conduct Burrowing Owl Survey, Implement Avoidance Measures, and Compensate for Loss of Occupied Burrows

If it is determined through implementation of Mitigation Measure 4.4-1a that habitat suitable for burrowing owl is present within a particular project site, the following measures shall be implemented:

- ▶ If proposed projects within the Plan Area are implemented in habitat suitable for burrowing owls, a qualified biologist shall conduct a focused survey for burrowing owls in areas of habitat suitable for the species on and within 1,640 feet (500 meters) of the Plan Area no less than 14 days before initiating ground disturbance activities using survey methods described in Appendix D of the 2012 Staff Report on Burrowing Owl Mitigation prepared by the California Department of Fish and Game (now CDFW) (CDFG 2012).
- ▶ If no occupied burrows are found, the qualified biologist shall submit a report documenting the survey methods and results to the City of Fresno, and no further mitigation shall be required.
- ▶ If an active burrow is found within 1,640 feet of pending construction activities during the nonbreeding season (September 1 through January 31), the project proponent shall establish and maintain a minimum protection buffer of 164 feet (50 meters) around the occupied burrow throughout construction. The actual buffer size shall be determined by the qualified biologist based on the time of year and level of disturbance in accordance with guidance provided in the Staff Report on Burrowing Owl Mitigation (CDFG 2012). The protection buffer may be adjusted if, in consultation with CDFW, a qualified biologist determines that an alternative buffer shall not disturb burrowing owl use of the burrow because of particular site features or other buffering measures. If occupied burrows are present that cannot be avoided or adequately protected with a no-disturbance buffer, a burrowing owl exclusion plan shall be developed, as described in Appendix E of the 2012 Staff Report. Burrowing owls shall not be excluded from occupied burrows until the project burrowing owl exclusion plan is approved by CDFW. The exclusion plan shall include a compensatory habitat mitigation plan (see below).
- ▶ If an active burrow is found during the breeding season (February 1 through August 31), occupied burrows shall not be disturbed and shall be provided with a protective buffer at a minimum of 164 feet unless a qualified biologist verifies through noninvasive means that either:
 - (1) the birds have not begun egg laying, or
 - (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival.
- ▶ The size of the buffer may be adjusted depending on the time of year and level of disturbance as outlined in the 2012 Staff Report. The size of the buffer may be reduced if a broad-scale, long-term, monitoring program acceptable to CDFW is implemented so that burrowing owls are not adversely affected. Once the fledglings are capable of independent survival, the owls can be evicted, and the burrow can be destroyed per the terms of a CDFW-approved burrowing owl exclusion plan developed in accordance with Appendix E of 2012 Staff Report.
- ▶ If burrowing owls are evicted from burrows and the burrows are destroyed by implementation of project activities, the project proponent shall mitigate the loss of occupied habitat in accordance with guidance provided in the 2012 Staff Report, which states that permanent impacts on nesting, occupied, and satellite burrows, and burrowing owl habitat (i.e., grassland habitat with suitable burrows) shall be mitigated such that habitat acreage and number of burrows are replaced through permanent conservation of comparable or better habitat with similar vegetation communities and burrowing mammals (e.g., ground squirrels) present to provide for nesting, foraging, wintering, and dispersal. The project proponent shall retain a qualified biologist to develop a burrowing owl mitigation and management plan that incorporates the following goals and standards:
 - Mitigation lands shall be selected based on comparison of the habitat lost to the compensatory habitat, including type and structure of habitat, disturbance levels, potential for conflicts with humans, pets, and other wildlife, density of burrowing owls, and relative importance of the habitat to the species throughout its range.
- ▶ If feasible, mitigation lands shall be provided adjacent or proximate to the project site so that displaced owls can relocate with reduced risk of injury or mortality. Feasibility of providing mitigation adjacent or proximate to the

project site depends on availability of sufficient habitat to support displaced owls that may be preserved in perpetuity.

- ▶ If habitat suitable for burrowing owl is not available for conservation adjacent or proximate to the project site, mitigation lands can be secured offsite and shall aim to consolidate and enlarge conservation areas outside of planned development areas and within foraging distance of other conservation lands. Mitigation may be also accomplished through purchase of mitigation credits at a CDFW-approved mitigation bank, if available. Alternative mitigation sites and acreages may also be determined in consultation with CDFW.
- ▶ If burrowing owl habitat mitigation is completed through permittee-responsible conservation lands, the mitigation plan shall include mitigation objectives, site selection factors, site management roles and responsibilities, vegetation management goals, financial assurances and funding mechanisms, performance standards and success criteria, monitoring and reporting protocols, and adaptive management measures. Success shall be based on the number of adult burrowing owls and pairs using the site and if the numbers are maintained over time. Measures of success, as suggested in the 2012 Staff Report, shall include site tenacity, number of adult owls present and reproducing, colonization by burrowing owls from elsewhere, changes in distribution, and trends in stressors.

Mitigation Measure 4.4-1e: Conduct Focused Surveys for Special-Status Birds, Nesting Raptors, and Other Native Nesting Birds, and Implement Protective Buffers

If it is determined through implementation of Mitigation Measure 4.4-1a that habitat for special-status birds, nesting raptors, or other native nesting birds is present within a particular project site, the following measures shall be implemented:

- ▶ To minimize the potential for loss of special-status bird species, raptors, and other native birds (including Swainson's hawk, tricolored blackbird, and white-tailed kite), project activities (e.g., tree removal, vegetation clearing, ground disturbance, staging) shall be conducted during the nonbreeding season (approximately September 1-January 31, as determined by a qualified biologist), if feasible. If project activities are conducted during the nonbreeding season, no further mitigation shall be required. This measure applies to project activities that occur where habitat suitable for nesting is present, as determined by a qualified biologist. Birds may nest on the ground, in bushes, in trees, in structures, and in cavities; therefore, habitat suitable for bird nesting may include portions of the Plan Area that qualify as annual grassland, agricultural land, or riparian habitat.
 - Within 14 days before the onset of project activities during the breeding season (approximately February 1 through September 15, as determined by a qualified biologist), a qualified biologist familiar with birds of California and with experience conducting nesting bird surveys shall conduct focused surveys for special-status birds, other nesting raptors, and other native birds. Surveys shall be conducted in accessible areas within 0.5 mile of the project site for Swainson's hawk, within 500 feet of the project site for other raptor species (white-tailed kite) and special-status birds (tricolored blackbird), and within 50 feet of the project site for non-raptor common native bird nests, unless determined otherwise by a qualified biologist.
 - If no active nests are found, the qualified biologist shall submit a report documenting the survey methods and results to the applicant and the City of Fresno, and no further mitigation shall be required.
 - If active nests are found, impacts on nesting birds shall be avoided by establishing appropriate buffers around active nest sites identified during focused surveys to prevent disturbance to the nest. Project activity shall not commence within the buffer areas until a qualified biologist has determined that the young have fledged, the nest is no longer active, or reducing the buffer would not likely result in nest abandonment.
 - Buffers typically shall be 0.25 mile (or increased to 0.5 mile in areas away from urban development) for Swainson's hawk, and 500 feet for other raptors. Buffer size for non-raptor bird species shall be determined by a qualified biologist. Factors to be considered for determining buffer size shall include presence of natural buffers provided by vegetation or topography, nest height above ground, baseline levels of noise and human activity, species sensitivity, and proposed project activities. Generally, buffer size for these species shall be at least 20 feet. The size of the buffer may be adjusted if a qualified biologist determines that such

an adjustment shall not be likely to adversely affect the nest. Any buffer reduction for a special-status species shall require consultation with CDFW.

- Periodic monitoring of the nest by a qualified biologist during project activities shall be required if the activity has potential to adversely affect the nest, the buffer has been reduced, or if birds within active nests are showing behavioral signs of agitation (e.g., standing up from a brooding position, flying off the nest) during project activities, as determined by the qualified biologist.

Mitigation Measure 4.4-1f: Conduct Pallid Bat Focused Surveys, and Implement Avoidance Measures

If it is determined through implementation of Mitigation Measure 4.4-1a that habitat suitable for pallid bat is present within a particular project site, the following measures shall be implemented:

- ▶ For project activities in habitat suitable for pallid bat roosting (i.e., existing unused or abandoned buildings, large diameter trees), the following measure will apply. Before the start of project activities, a qualified biologist familiar with bats and bat ecology, and experienced in conducting bat surveys, shall conduct surveys for bat roosts in suitable habitat (e.g., abandoned buildings, large tree crevices, tree cavities) within and adjacent to the project site.
 - If no evidence of bat roosts is found, the qualified biologist shall submit a report summarizing the results of the survey to the City of Fresno, and no further study shall be required.
 - If evidence of bat roosts is observed, the species and number of bats using the roost shall be determined by a qualified biologist. Bat detectors shall be used if deemed necessary to supplement survey efforts by the qualified biologist.
 - A no-disturbance buffer of 250 feet shall be established around active pallid bat roosts, and project activities shall not occur within this buffer until after the roosts are unoccupied.
 - If roosts of pallid bat are determined to be present and must be removed, the bats shall be excluded from the roosting site before the building is removed. A program addressing compensation, exclusion methods, and roost removal procedures shall be developed in consultation with CDFW before implementation. Exclusion methods may include use of one-way doors at roost entrances (bats may leave but not reenter) or sealing roost entrances when the site can be confirmed to contain no bats. Exclusion efforts may be restricted during periods of sensitive activity (e.g., during hibernation or while females in maternity colonies are nursing young). The loss of each roost (if any) shall be replaced in consultation with CDFW and may require construction and installation of bat boxes suitable to the bat species and colony size excluded from the original roosting site. If determined necessary during consultation with CDFW, replacement roosts shall be implemented before bats are excluded from the original roost sites. Once the replacement roosts are constructed and it is confirmed that bats are not present in the original roost site by a qualified biologist, the roost structure may be removed.

Significance after Mitigation

Implementation of Mitigation Measure 4.4-1a would reduce significant impacts on California jewelflower and Sanford's arrowhead by requiring protocol-level surveys and implementation of avoidance measures and compensation for impacts if they are present in the Plan Area. Implementation of Mitigation Measure 4.4-1b would reduce potential impacts on western pond turtle by requiring focused surveys for the species, implementation of measures to avoid injury or mortality of western pond turtles if detected, and relocation of individual turtles by a qualified biologist with an appropriate CDFW Scientific Collecting Permit. Implementation of Mitigation Measure 4.4-1c would reduce potential impacts on burrowing owl by requiring focused surveys for the species, implementation of measures to avoid injury or mortality of burrowing owl and destruction of active burrows if detected, and compensation if burrows cannot be avoided. Implementation of Mitigation Measure 4.4-1d would reduce potential impacts on special-status birds, raptors, and other native nesting birds by requiring focused surveys for the nesting birds and implementation of measures to avoid disturbance, injury, or mortality of the species if nests are detected. Implementation of Mitigation Measure 4.4-1e would reduce potential impacts on pallid bat by requiring focused surveys for bat roosts and implementation of no-disturbance buffers around active roosts if feasible, or by excluding bats from the roost during non-sensitive time periods and providing compensatory mitigation with

approval by CDFW. In combination, implementation of Mitigation Measures 4.4-1a (project-level biological reconnaissance survey), 4.4-1b (for California jewelflower and Sanford's arrowhead), 4.4-1c (for western pond turtle), 4.4-1d (for burrowing owl), 4.4-1e (for special-status birds, raptors, and other native nesting birds), and 4.4-1f (for pallid bat) would reduce the potential for impacts to candidate, sensitive, or special-status plant and wildlife species to a **less-than-significant** level within the Plan Area.

Impact 4.4-2: Result in a Substantial Adverse Effect on Any Riparian Habitat or Other Sensitive Natural Community Identified in Local or Regional Plans, Policies, or Regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service

Although aquatic habitat is relatively rare in the Plan Area, development under the proposed plan could affect these areas. Implementation of such projects would result in land conversion and development activities that may include ground disturbance, vegetation removal, and construction, which could result in the degradation or loss of riparian habitat (e.g., reduction of vegetation cover, trampling, alteration of root structure), if it is present on a particular project site. This impact would be **potentially significant**. No other sensitive natural communities have been identified in the Plan Area, and therefore, there is no potential for impacts to other sensitive natural communities.

As described in Section 4.4.2, "Environmental Setting," riparian habitat in the Plan Area is sparse but includes agricultural canals, ponds, and wetlands. Additional aquatic features may be present that were not included in spatial imagery available for review or visible through a review of aerial imagery. Aquatic features in the Plan Area generally are heavily disturbed and support little to no emergent vegetation. However, if sufficient vegetation becomes established over time to provide habitat and shelter suitable for riparian wildlife, areas around the canals may be considered riparian habitat. Collectively, aquatic habitat represents less than 1 percent of the Plan Area. While uncommon in the Plan Area, where aquatic habitats with sufficient vegetative cover are present, they may provide riparian habitat and any disturbance of this habitat would be a significant impact. No other sensitive natural communities have the potential to occur in the Plan Area, and therefore, there is no potential for impacts to sensitive natural communities.

Mitigation Measures

Mitigation Measure 4.4-2: Conduct Surveys for Riparian Habitat and Implement Avoidance Measures

If it is determined through implementation of Mitigation Measure 4.4-1a that riparian habitat is present within a particular project site, the following measures shall be implemented before implementation of project activities:

- ▶ If it is determined that disturbance or fill of state protected streams or riparian habitat cannot be avoided, the project proponent will notify CDFW before commencing activity that may divert the natural flow or otherwise alter or use materials from the bed, bank, or riparian corridor of any waterway that supports fish or wildlife resources. If project activities trigger the need for a Streambed Alteration Agreement, the proponent will obtain an agreement from CDFW before the activity commences. The applicant will conduct project construction activities in accordance with the agreement, including implementing reasonable measures in the agreement necessary to protect fish and wildlife resources, when working within the bed or bank of waterways or in riparian habitats associated with those waterways. These measures may include demarcation of the construction area, biological monitoring, environmental awareness training for construction crews, and compensatory measures (e.g., restoration, long-term habitat management). If riparian habitat is determined to be present within a particular project site and the habitat cannot be avoided, the following measures shall be implemented: A Streambed Alteration Notification will be submitted to CDFW, pursuant to Section 1602 of the California Fish and Game Code. If proposed project activities are determined to be subject to CDFW jurisdiction, the project proponent will abide by the measures to protect fish and wildlife resources required by any executed agreement prior to any vegetation removal or activity that may affect the resource. Measures to protect fish and wildlife resources shall include, at a minimum, a combination of the following mitigation.
- ▶ The project proponent will compensate for the loss of riparian habitat such that no net loss of habitat function and values occurs by:

- restoring riparian habitat function and value within the project site;
 - restoring degraded riparian habitat outside of the project site;
 - purchasing riparian habitat credits at a CDFW-approved mitigation bank; or
 - preserving existing riparian habitat of equal or better value to the affected riparian habitat through a conservation easement at a sufficient ratio to offset the loss of riparian habitat function (at least 1:1).
- ▶ The project proponent will prepare and implement a Compensatory Mitigation Plan that will include the following:
- For preserving existing riparian habitat outside of the project site in perpetuity, the Compensatory Mitigation Plan will include a summary of the proposed compensation lands (e.g., the number and type of credits, location of mitigation bank or easement), parties responsible for the long-term management of the land, and the legal and funding mechanism for long-term conservation (e.g., holder of conservation easement or fee title). The project proponent will provide evidence in the plan that the necessary mitigation has been implemented or that the project proponent has entered into a legal agreement to implement it and that compensatory habitat will be preserved in perpetuity.
 - For restoring or enhancing riparian habitat within the project site or outside of the project site, the Compensatory Mitigation Plan will include a description of the proposed habitat improvements, success criteria that demonstrate the performance standard of maintained habitat function has been met, legal and funding mechanisms, and parties responsible for long-term management and monitoring of the restored or enhanced habitat.
 - Compensatory mitigation may be satisfied through compliance with permit conditions, or other authorizations obtained by the project proponent (e.g., Lake and Streambed Alteration Agreement), if these requirements are equally or more effective than the mitigation identified above.

Significance after Mitigation

Implementation of Mitigation Measure 4.4-2 would reduce significant impacts on riparian habitat to a **less-than-significant** level by requiring surveys of projects under the proposed plan to determine the likelihood of presence of riparian habitat, implementation of avoidance measures, and if impacts cannot be avoided, compensation for permanent loss of these habitats such that there is no net loss.

Impact 4.4-3: Result in a Substantial Adverse Effect on State or Federally Protected Wetlands (e.g., Emergent Wetlands etc.) through Direct Removal, Filling, Hydrological Interruption, or Other Means

Project implementation may include activities resulting in ground disturbance, vegetation removal, and land development, which could result in the loss of state or federally protected wetland habitat, which includes seasonal wetlands. Any project-related loss or alteration or fill of state or federally protected wetlands would be **potentially significant**.

Aquatic habitat within the Plan Area includes ponds, canals, and mapped emergent wetlands (Table 4.4-1). Additional aquatic features may be present that were not included in spatial data available for review or visible through a review of aerial imagery. Canals in the Plan Area may be regulated by the State Water Board under the Porter-Cologne Act. Additionally, CDFW may regulate activities affecting the canals pursuant to California Fish and Game Code 1600 et seq. depending on their habitat value to fish and wildlife resources. Wetlands in the Plan Area would likely be considered state-protected wetland habitat.

Implementation of individual projects under the proposed plan would result in development and possible land cover conversion within the 5,567-acre Plan Area, approximately 61 percent of which would occur within urban/developed land cover types, where wetlands, seeps, and streams are less likely to occur than in agricultural or annual grassland portions of the Plan Area (Table 4.4-1). Ponds, emergent wetlands, and agricultural canals in the Plan Area have a

history of disturbance and generally lack of vegetative cover. Collectively, aquatic habitat represents less than 1 percent of the Plan Area.

Implementation of projects under the proposed plan may include ground disturbance, vegetation removal, and land development. These activities could adversely modify state or federally protected wetlands resulting in loss of wetland function and value by altering wetland hydrology, directly removing wetland vegetation, or filling or dredging wetlands, if these features are present within an individual project area. This would be a potentially significant impact.

MITIGATION MEASURES

Mitigation Measure 4.4-3: Identify State or Federally Protected Wetlands, Implement Avoidance Measures, and Obtain Permits for Unavoidable Impacts on Wetlands

If it is determined through implementation of Mitigation Measure 4.4-1a that state or federally protected wetlands may be present within a particular project site, the following measures shall be implemented:

- ▶ The project proponent will retain a qualified biologist, hydrologist, or wetland ecologist to prepare a formal delineation of the boundaries of aquatic resources within the project site according to methods established in the USACE wetlands delineation manual (Environmental Laboratory 1987) and the Arid West regional supplement (U.S. Army Corps of Engineers 2008). The qualified biologist will also delineate the boundaries of wetlands that may not meet the definition of waters of the United States but that would qualify as waters of the state, according to the state wetland procedures (SWRCB 2021). This delineation report will be submitted by the City of Fresno to USACE and a preliminary jurisdictional determination will be requested. If state or federally protected wetlands are found to be present within a particular project site, the following measures shall be implemented before implementation of project activities:
 - If state or federally protected wetlands are determined to be present within a project site that can be avoided, the qualified biologist will establish a buffer around wetlands and mark the buffer boundary with high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway). The buffer will be a minimum width of 25 feet but may be larger if deemed necessary. The appropriate size and shape of the buffer zone will be determined in coordination with the qualified biologist and will depend on the type of wetland present (e.g., stream, seep, pond), the timing of project activities (e.g., wet or dry time of year), whether any special-status species may occupy the wetland and the species' vulnerability to the project activities, environmental conditions and terrain, and the project activity being implemented.
 - Project activities (e.g., ground disturbance, vegetation removal, staging) will be prohibited within the established buffer. The qualified biologist will periodically inspect the materials demarcating the buffer to confirm that they are intact and visible, and wetland impacts are being avoided.
 - If it is determined that fill of waters of the United States would result from project implementation, the project applicant will submit an aquatic resources delineation report to USACE and the RWQCB and request an approved or preliminary jurisdictional determination. Based on the jurisdictional determination, the project applicant will determine the exact acreage of waters of the United States and waters of the state that would be dredged or filled as a result of project implementation.
 - Authorization for dredge or fill activities will be secured from USACE through the Section 404 permitting process. In association with the Section 404 permit (if applicable) and prior to the issuance of any grading permit, Section 401 Water Quality Certification from the Central Coast RWQCB will be obtained. For impacts on waters of the state that may not be covered by the 401 Water Quality Certification, the project proponent will secure Waste Discharge Requirements, which are described in Section 4.10, "Hydrology and Water Quality."
 - The project applicant will replace on a "no-net-loss" basis (minimum 1:1 ratio) (in coordination with USACE and/or RWQCB) the acreage and function of all wetlands and other waters that would be removed, lost, or degraded as a result of project implementation. Wetland habitat will be replaced at an acreage and location

agreeable to USACE and the RWQCB, and as determined during the CWA Section 401 and Section 404 permitting processes or the waste discharge report.

Significance after Mitigation

Implementation of Mitigation Measure 4.4-3 would reduce significant impacts on state and federally protected wetlands to a **less-than-significant** level by requiring a delineation of aquatic resources, implementation of avoidance measures, and permitting and compensation for unavoidable impacts on state or federally protected wetlands such that there is no net loss of these resources.

Impact 4.4-4: Result in Substantial Interference 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

The majority of the Plan Area is urban and agricultural land cover types, with limited areas of natural vegetation. No known wildlife movement corridors or native wildlife nurseries occur within the Plan Area. Project activities under the proposed plan are not likely to substantially interfere with wildlife movement or impede the use of nursery sites. This would be a **less-than-significant** impact.

A wildlife movement corridor is generally a topographical/landscape feature or movement zone that connects two or more natural habitat areas. Wildlife corridors link areas of suitable wildlife habitat that are separated by variation in vegetation, rugged terrain, human disturbance and habitat fragmentation, or other biophysical factors. Movement corridors may provide favorable locations for wildlife to travel between different habitat areas, such as foraging sites, breeding sites, cover areas, and preferred summer and winter range locations. They may also function as dispersal corridors allowing animals to move between various locations within their range. Therefore, wildlife movement and migration corridors are considered an important ecological resource by CDFW and other agencies and are protected by many local governments in California. Some important areas for habitat connectivity in California were mapped as Essential Connectivity Areas for the California Essential Habitat Connectivity Project, which was commissioned by the California Department of Transportation and CDFW with the purpose of making transportation and land-use planning more efficient and less costly, while helping reduce dangerous wildlife-vehicle collisions (Spencer et al. 2010).

According to the California Essential Habitat Connectivity Project, the Plan Area is not located within a Natural Landscape Block or Essential Habitat Connectivity area (Spencer et al. 2010). Urban or developed land and agricultural land comprise the majority of the Plan Area (see Section 4.4.2, "Environmental Setting"). Urban and agricultural land use areas generally do not provide quality habitat for wildlife migration, as they lack vegetation which wildlife may use for refuge and foraging. Ponds and emergent wetlands in the Plan Area may provide localized habitat for wildlife, but they are isolated and divided by areas of urban or agricultural land use, and therefore do not provide suitable migratory habitat for wildlife. Future development under the proposed plan in urban and agricultural land areas would not interfere substantially with the movement of any native resident or migratory wildlife species because the Plan Area does not currently provide an important connection between any areas of natural habitat that would otherwise be isolated. While wildlife may use the Plan Area for nesting and roosting or may pass through the site occasionally, it is unlikely that the Plan Area functions as a significant wildlife movement corridor or wildlife nursery site due to the lack of high-quality natural habitat and existing development. Therefore, implementation of future development within the Plan Area in associated with the proposed plan would result in less-than-significant impacts on wildlife movement corridors and wildlife nursery sites.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.4-5: Conflict with Any Local Policies or Ordinances Protecting Biological Resources, Such as a Tree Preservation Policy or Ordinance

The City of Fresno Municipal Code, Chapter 13, Article 3, Streets Trees and Parkways, applies to trees in the Plan Area. Future project activities under the proposed plan associated with the proposed plan would comply with the Municipal Code Section 13-305, Tree Preservation, and Section 13-306, Special Tree List. Compliance with Article 3 of Chapter 13 of the City of Fresno Municipal Code would reduce any impacts related to conflicts with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. Therefore, potential impacts to local policies and ordinances protecting biological resources, including the City's public tree ordinance would be **less than significant**.

Future project development under the proposed plan may result in the removal or alteration of existing street and public trees within the boundaries of the Plan Area. Existing preserved trees and landscaped trees within public property, including parkways, must be preserved to beautify the City, purify its air, and provide shade for its inhabitants. Project development within the Plan Area could have the potential to impact trees on public property; however, the future development would be required to comply with Article 3 of Chapter 13 of the City of Fresno Municipal Code, which provides for plans and establishes regulations governing the preservation of trees in public property. Section 13-305, Tree Preservation, of the Municipal Code establishes a policy to utilize whatever techniques, methods, and procedures are required to preserve, whenever feasible, all trees in the City. Section 13-306, Special Tree List, authorizes the Director to develop and maintain a Special Tree List to give such trees special treatment and care to retain and protect them. Compliance with Article 3 of Chapter 13 of the City of Fresno Municipal Code would reduce any impacts related to conflicts with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. Therefore, potential impacts to local policies and ordinances protecting biological resources, including the City's public tree ordinance would be less than significant.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.4-6: Conflict with the Provisions of an Adopted Habitat Conservation Plan, Natural Community Conservation Plan, or Other Approved Local, Regional, or State Habitat Conservation Plan

The Plan Area is not located within the boundaries of any approved or draft Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other adopted local, regional or state HCP that applies to projects covered under the proposed plan. Therefore, the impact related to conflict with the provisions of an adopted HCP or NCCP would be **less than significant**.

The Pacific Gas and Electric Company (PG&E) San Joaquin Valley Operation and Maintenance (O&M) Habitat Conservation Plan (HCP) covers portions of nine counties, including the Plan Area (PG&E 2007). PG&E's O&M HCP applies only to work conducted by PG&E and does not apply to projects conducted under the City of Fresno's South Central Specific Plan. PG&E's O&M HCP proposes some habitat mitigation sites in the region, however, none overlap the Plan Area. Therefore, this HCP does not apply to the proposed plan, and actions conducted under the proposed plan would not result in any conflict with PG&E's HCP.

No other HCPs or NCCP areas overlap the Plan Area, therefore, implementation of projects under this plan would have no impact on adopted HCP, NCCP, or other local plans.

Mitigation Measures

No mitigation is required for this impact.

4.5 CULTURAL AND TRIBAL CULTURAL RESOURCES

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

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

The above definitions are more general definitions of cultural resources, but as discussed below in “Regulatory Setting”, CEQA has specific definitions for each of these terms.

During the public scoping period for the Draft EIR, comments related to cultural and tribal cultural resources were received (see Appendix A). The Native American Heritage Commission (NAHC) requested AB 52 and Senate Bill (SB) 18 compliance information. SB 18 applies to the proposed plan because it would require a General Plan amendment (the trigger for SB 18 compliance), but compliance with SB 18 is not a CEQA requirement and therefore is not discussed in this section. AB 52 compliance is described below. Other comments were received noting that tribal cultural and other potential cultural resources that may occur in the Plan Area that should be evaluated.

4.5.1 Regulatory Setting

FEDERAL

National Register of Historic Places

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

The formal criteria (36 Code of Federal Regulations [CFR] 60.4) for determining NRHP eligibility are as follows:

1. The property is at least 50 years old (however, properties under 50 years of age that are of exceptional importance or are contributors to a district can also be included in the NRHP);
2. It retains integrity of location, design, setting, materials, workmanship, feeling, and associations; and
3. It possesses at least one of the following characteristics:
 - Criterion A Is associated with events that have made a significant contribution to the broad patterns of history (events).
 - Criterion B Is associated with the lives of persons significant in the past (persons).

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

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

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

The National Register Bulletin series was developed to assist evaluators in the application of NRHP criteria. For example, National Register Bulletin #36 provides guidance in the evaluation of archaeological site significance. If a property cannot be placed within a particular theme or time period, and thereby lacks “focus,” it will be unlikely to possess characteristics that would make it eligible for listing in the NRHP.

Section 106 of the National Historic Preservation Act

Federal protection of cultural resources is legislated by (a) the National Historic Preservation Act (NHPA) of 1966 as amended by 16 U.S. Code 470, (b) the Archaeological Resource Protection Act of 1979, and (c) the Advisory Council on Historical Preservation. Section 106 of the NHPA and accompanying regulations (36 CFR Part 800) constitute the main federal regulatory framework guiding cultural resources investigations and require consideration of effects on properties that are listed in or may be eligible for listing in the NRHP. These laws and organizations maintain processes for determination of the effects on historical properties that are listed or determined to be eligible for listing in the NRHP.

Secretary of the Interior’s Standards

The *Secretary of the Interior’s Standards for the Treatment of Historic Properties* (Secretary’s Standards) provides guidance for working with historic properties. The Secretary’s Standards are used by lead agencies to evaluate proposed rehabilitative work on historic properties. The Secretary’s Standards are a useful analytic tool for understanding and describing the potential impacts of proposed changes to historic resources. Projects that comply with the Secretary’s Standards benefit from a regulatory presumption that they would not result in a significant impact on a historic resource.

In 1992 the Secretary’s Standards were revised so they could be applied to all types of historic resources, including landscapes. They were reduced to four sets of treatments to guide work on historic properties: Preservation, Rehabilitation, Restoration, and Reconstruction. The four distinct treatments are defined as follows:

Preservation is defined as the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. It focuses on the maintenance and repair of existing historic materials and retention of a property’s form as it has evolved over time.

Rehabilitation is defined as the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values. It acknowledges the need to alter or add to a historic property to meet continuing or changing uses while retaining the property’s historic character.

Restoration is defined as the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. It depicts a property at a particular period in its history, while removing evidence of other periods.

Reconstruction is defined as the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure, or object for the purpose of replicating its appearance at a specific period of time and in its historic location. It re-creates vanished or non-surviving portions of a property for interpretive purposes.

The Secretary of the Interior's Standards for Rehabilitation are as follows:

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.
6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.
7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
8. Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

STATE

California Environmental Quality Act

CEQA requires public agencies to consider the effects of their actions on "historical resources," "unique archaeological resources," and "tribal cultural resources." Pursuant to CEQA Section 21084.1, a "project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment." Section 21083.2 requires agencies to determine whether projects would have effects on unique archaeological resources. CEQA Section 21084.2 establishes that "[a] project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment." These are the definitions used by the City when determining whether such resources exist and, if they do exist, evaluating the project's impacts on such resources.

Historical Resources

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

- 1) A resource listed in, or determined to be eligible by the State Historical Resources Commission for listing in, the California Register of Historical Resources (CRHR) is considered a historical resource (PRC Section 5024.1).

- 2) A resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g), will be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- 3) Any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource will be considered by the lead agency to be historically significant if the resource meets the criteria for listing in the CRHR (PRC Section 5024.1).
- 4) The fact that a resource is not listed in or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to PRC Section 5020.1[k]), or not identified in a historical resources survey (meeting the criteria in PRC Section 5024.1[g]) does not preclude a lead agency from determining that the resource may be a historical resource as defined in PRC Sections 5020.1(j) or 5024.1.

Unique Archaeological Resources

CEQA also requires lead agencies to consider whether projects would affect unique archaeological resources. CEQA Section 21083.2(g) states that "unique archaeological resource" means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets one or more of the following criteria:

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

Tribal Cultural Resources

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

- a) "Tribal cultural resources" are either of the following:
 - 1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
 - A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.
 - B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
 - 2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.
- b) A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.
- c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

CEQA Section 21080.3

AB 52, signed by the California Governor in September of 2014, established a new class of resources under CEQA: "tribal cultural resources," defined in CEQA Section 21074. Pursuant to CEQA Sections 21080.3.1, 21080.3.2, and 21082.3, lead agencies undertaking CEQA review must, upon written request of a California Native American tribe, begin consultation before the release of an EIR, negative declaration, or mitigated negative declaration. CEQA Sections 21080.3.1 and 21080.3.2 state that within 14 days of determining that a project application is complete, or to undertake a project, the lead agency must provide formal notification, in writing, to the tribes that have requested notification of proposed projects in the lead agency's jurisdiction. If it wishes to engage in consultation on the project, the tribe must respond to the lead agency within 30 days of receipt of the formal notification. The lead agency must begin the consultation process with the tribes that have requested consultation within 30 days of receiving the request for consultation. Consultation concludes when either (1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource, or (2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached.

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

- (1) Avoidance and preservation of the resources in place, including, but not limited to, planning and construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
- (2) Treating the resource with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
 - (A) Protecting the cultural character and integrity of the resource.
 - (B) Protecting the traditional use of the resource.
 - (C) Protecting the confidentiality of the resource.
- (3) Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
- (4) Protecting the resource.

CEQA Section 21083.2

Treatment options under CEQA Section 21083.2(b) to mitigate impacts to archaeological resources include activities that preserve such resources in place in an undisturbed state. CEQA Section 21083.2 states:

- (a) As part of the determination made pursuant to Section 21080.1, the lead agency shall determine whether the project may have a significant effect on archaeological resources. If the lead agency determines that the project may have a significant effect on unique archaeological resources, the environmental impact report shall address the issue of those resources. An environmental impact report, if otherwise necessary, shall not address the issue of nonunique archaeological resources. A negative declaration shall be issued with respect to a project if, but for the issue of nonunique archaeological resources, the negative declaration would be otherwise issued.
- (b) If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. Examples of that treatment, in no order of preference, may include, but are not limited to, any of the following:
 - (1) Planning construction to avoid archaeological sites.
 - (2) Deeding archaeological sites into permanent conservation easements.

- (3) Capping or covering archaeological sites with a layer of soil before building on the sites.
- (4) Planning parks, greenspace, or other open space to incorporate archaeological sites.
- (c) To the extent that unique archaeological resources are not preserved in place or not left in an undisturbed state, mitigation measures shall be required as provided in this subdivision.
- (d) Excavation as mitigation shall be restricted to those parts of the unique archaeological resource that would be damaged or destroyed by the project.
- (e) In no event shall the amount paid by a project applicant for mitigation measures required pursuant to subdivision (c) exceed the following amounts:
 - (1) An amount equal to one-half of 1 percent of the projected cost of the project for mitigation measures undertaken within the site boundaries of a commercial or industrial project.
 - (2) An amount equal to three-fourths of 1 percent of the projected cost of the project for mitigation measures undertaken within the site boundaries of a housing project consisting of a single unit.
 - (3) If a housing project consists of more than a single unit, an amount equal to three-fourths of 1 percent of the projected cost of the project for mitigation measures undertaken within the site boundaries of the project for the first unit plus the sum of the following:
 - (A) Two hundred dollars (\$200) per unit for any of the next 99 units.
 - (B) One hundred fifty dollars (\$150) per unit for any of the next 400 units.
 - (C) One hundred dollars (\$100) per unit in excess of 500 units.
- (f) Unless special or unusual circumstances warrant an exception, the field excavation phase of an approved mitigation plan shall be completed within 90 days after final approval necessary to implement the physical development of the project or, if a phased project, in connection with the phased portion to which the specific mitigation measures are applicable. However, the project applicant may extend that period if he or she so elects. Nothing in this section shall nullify protections for Indian cemeteries under any other provision of law.

California Register of Historical Resources

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

California Historical Landmarks—buildings, structures, sites, or places that have been determined to have statewide historical significance—are also automatically listed in the CRHR. California Points of Historical Interest are sites, buildings, features, or events that are of local (city or county) significance. Points of Historical Interest designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the CRHR.

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

The CRHR uses four evaluation criteria:

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

Criterion 4. Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.

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

California Native American Historical, Cultural, and Sacred Sites Act

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

Health and Safety Code Section 7050.5

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

Public Resources Code Section 5097

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

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

LOCAL

City of Fresno General Plan

The City of Fresno General Plan contains the following policies that are relevant to cultural resources (City of Fresno 2020):

Objective HCR-1: Maintain a comprehensive, citywide preservation program to identify, protect and assist in the preservation of Fresno's historic and cultural resources.

- ▶ **Policy HCR-1-c: Historic Preservation Ordinance.** Maintain the provisions of the City's Historic Preservation Ordinance, as may be amended, and enforce the provisions as appropriate.

Objective HCR-2: Identify and preserve Fresno's historic and cultural resources that reflect important cultural, social, economic, and architectural features so that residents will have a foundation upon which to measure and direct physical change.

- ▶ **Policy HCR-2-a: Identification and Designation of Historic Properties.** Work to identify and evaluate potential historic resources and districts and prepare nomination forms for Fresno's Local Register of Historic Resources and California and National registries, as appropriate.
- ▶ **Policy HCR-2-b: Historic Surveys.** Prepare historic surveys according to California Office of Historic Preservation protocols and City priorities as funding is available.
- ▶ **Policy HCR-2-c: Project Development.** Prior to project approval, continue to require a project site and its Area of Potential Effects (APE), without benefit of a prior historic survey, to be evaluated and reviewed for the potential for historic and/or cultural resources by a professional who meets the Secretary of Interior's Qualifications. Survey costs shall be the responsibility of the project developer. Council may, but is not required, to adopt an ordinance to implement this policy.

- ▶ **Policy HCR-2-d: Native American Sites.** Work with local Native American tribes to protect recorded and unrecorded cultural and sacred sites, as required by State law, and educate developers and the community-at-large about the connections between Native American history and the environmental features that characterize the local landscape.
- ▶ **Policy HCR-2-f: Archaeological Resources.** Consider State Office of Historic Preservation guidelines when establishing CEQA mitigation measures for archaeological resources.
- ▶ **Policy HCR-2-g: Demolition Review.** Review all demolition permits to determine if the resource scheduled for demolition is potentially eligible for listing on the Local Register of Historic Resources. Consistent with the Historic Preservation Ordinance, refer potentially eligible resources to the Historic Preservation Commission and as appropriate to the City Council.
- ▶ **Policy HCR-2-k: City-owned Resources.** Maintain all City-owned historic and cultural resources in a manner that is consistent with the U.S. Secretary of the Interior’s Standards for the Treatment of Historic Properties, as appropriate.
- ▶ **Policy HCR-2-n: Property Database and Informational System.** Identify all historic resources within the city designated on the Local, State, or National register, and potential significant resources (building, structure, object or site) in existence for at least 45 years, and provide this information on the City’s website.
- ▶ **Objective HCR-3:** Promote a “New City Beautiful” ethos by linking historic preservation, public art, and planning principles for Complete Neighborhoods with green building and technology.
- ▶ **Policy HCR-3-c: Context Sensitive Design.** Work with architects, developers, business owners, local residents and the historic preservation community to ensure that infill development is context-sensitive in its design, massing, setbacks, color, and architectural detailing.

Objective HCR-4: Foster an appreciation of Fresno’s history and cultural resources.

- ▶ **Policy HCR-4-c: Training and Consultation.** Provide training, consultation, and support in collaboration with Historic Preservation Commissioners to community members regarding Fresno’s history, use of the U.S. Secretary of the Interior’s Standards, and the California Historical Building Code, as time and resources allow.
- ▶ **Policy HCR-4-f: Context Sensitive Design.** Work with architects, developers, business owners, local residents and the historic preservation community to ensure that infill development is context-sensitive in its design, massing, setbacks, color, and architectural detailing.

Municipal Code

Historic Preservation Ordinance

The City of Fresno has established a Local Register of Historic Resources through the City’s Historic Preservation Ordinance (Fresno Municipal Code, Chapter 12, Article 16). The Local Register of Historic Resources encompasses the adopted designations of Historic Resources and Local Historic Districts. The Historic Preservation Ordinance is used to provide local levels of control over the historical aesthetics of cultural resources within the City and to ensure that the potential impact on locally significant historical resources that may be the subject of redevelopment is given reasonable consideration. The purpose of the ordinance is to:

continue to preserve, promote and improve the historic resources and districts of the City of Fresno for educational, cultural, economic and general welfare of the public; to continue to protect and review changes to these resources and districts which have a distinctive character or a special historic, architectural, aesthetic or cultural value to this city, state and nation; to continue to safeguard the heritage of this city by preserving and regulating its historic buildings, structures, objects, sites and districts which reflect elements of the city’s historic, cultural, social, economic, political and architectural history; to continue to preserve and enhance the environmental quality and safety of these landmarks and districts; to continue to establish, stabilize and improve property values and to foster economic development. (Article 16 Section 12-1602[a])

The ordinance provides legislative mechanisms to protect certain historical resources. Local registers of identified historical resources are known, including:

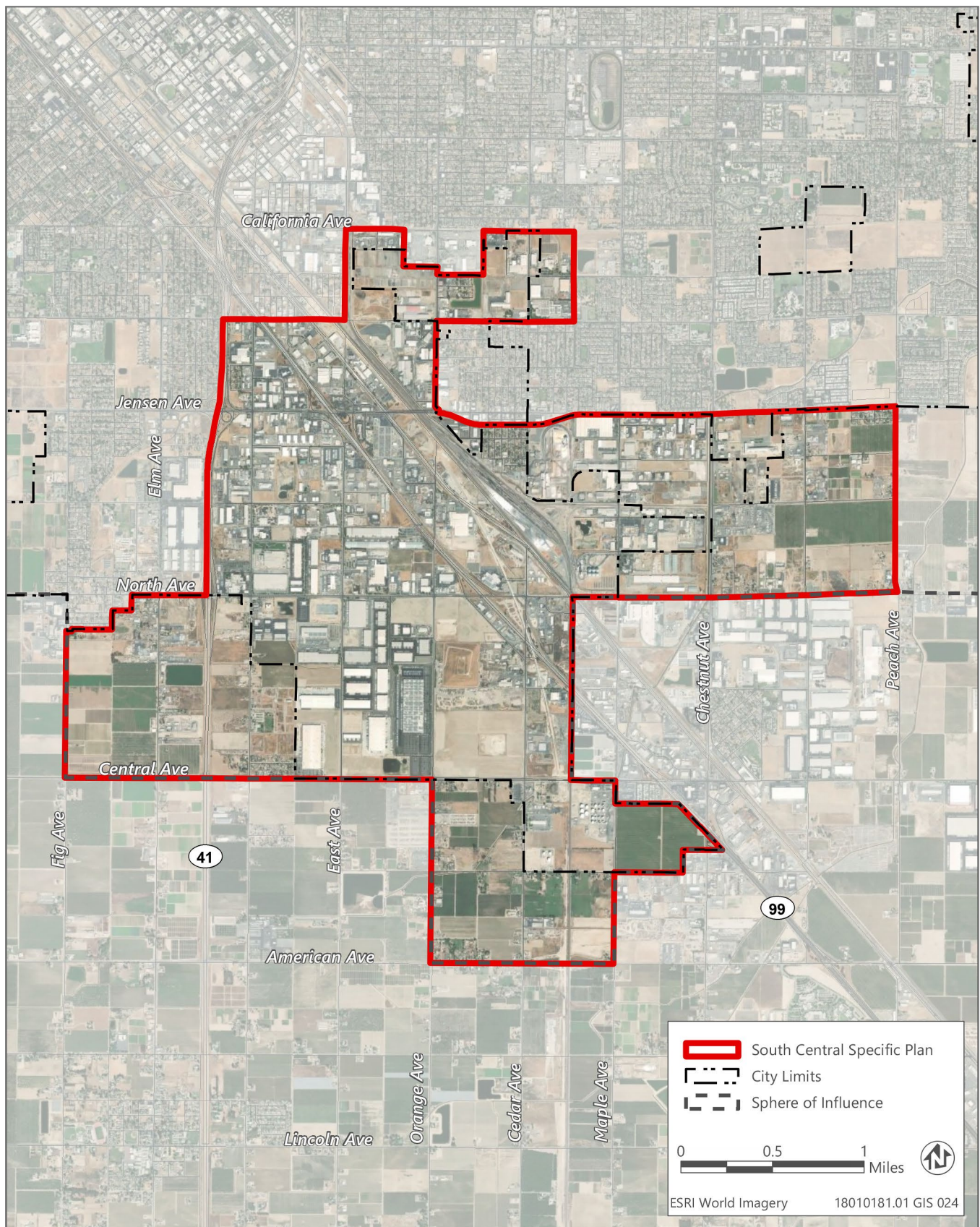
1. **Heritage Properties.** These are defined as a resource which is worthy of preservation because of its historical, architectural or aesthetic merit but which is not proposed for and is not designated as an Historic Resource under the ordinance.
2. **Historic Resources.** These are defined as any building, structure, object or site that has been in existence more than fifty years and possesses integrity of location, design, setting, materials, workmanship, feeling and association, and is associated with events that have made a significant contribution to the broad patterns of city history, or is associated with the lives of persons significant in our past, or embodies the distinctive characteristics of a type, period or method of construction, or represents the work of a master or possesses high artistic values; or has yielded, or may be likely to yield, important information in prehistory or history; and has been designated as such by the Council pursuant to the provisions of the Ordinance.
3. **Local Historic Districts.** These are defined as any finite group of resources related to one another in a clearly distinguishable way or any geographically definable area which possesses a significant concentration, linkage or continuity of sites, buildings, structures or objects united historically or aesthetically by plan or physical development. The Local Historic District must be significant as well as identifiable and it must meet the Local Register Criteria for listing on that Register. Contributors to Historic Districts are defined as any Historic Resource that contributes to the significance of the specific Local Historic District or a proposed National Register Historic District under the criteria set forth in the Ordinance.
4. **National Register of Historic Districts,** which shall mean any finite group of resources related to one another in a clearly distinguishable way or any geographically definable area which possesses a significant concentration, linkage or continuity of sites, buildings, structures or objects united historically or aesthetically by plan or physical development. A National Register Historic District must be significant as well as identifiable and it must meet National Register Criteria for listing on that Register. Contributors to a National Register Historic District are defined as any individual Historic Resource which contributes to the significance of a National Register Historic District under the criteria set forth in the Ordinance.

Certified Local Government

The Certified Local Government (CLG) Program is administered by the State Historic Preservation Office (SHPO). When a lead agency becomes a CLG it agrees to carry out the intent of and serve as a local steward of the NHPA and the Secretary of the Interior's Standards. In meeting those standards, SHPO serves as an advisor. The use of the NRHP/CRHR criteria and the Secretary of the Interior Standards integrates local, state, and federal levels of review. It brings clarity to the question of what resources are significant when it comes to CEQA and Section 106 of the NHPA. Adopting the Secretary of the Interior's Standards will allow the use of categorical exemptions under CEQA, and likely result of findings of no adverse effect under Section 106. The use of these criteria and standards make environmental review faster, more efficient, and reduces costs and delays. The City has been certified as a CLG since September 1996.

4.5.2 Environmental Setting

The SCSP Area is approximately 5,567 acres located in the southern portion of the City of Fresno (Figure 4.5-1). Of the 5,567 acres, approximately 627 acres consists of roadways and infrastructure, leaving 4,940 acres of developed and developable land area. The Plan Area is generally located south of California Avenue, north of American Avenue, and between Fig and Peach Avenues. It is largely within the Fresno city limits and includes areas in unincorporated Fresno County within Fresno's SOI. Land within the SOI is anticipated to become part of the city of Fresno in the future, but no annexation is currently proposed, nor would any of these areas be rezoned as part of the project. Instead, upon a proposal to annex unincorporated land into the city, the City of Fresno would prezone the land in a manner consistent with the General Plan land use designation. Once annexation occurs, County zoning would no longer apply, and the zoning established in the pre-zoning would take effect.



Source: Adapted by Ascent in 2023.

Figure 4.5-1 South Central Specific Plan Area

The Plan Area includes a mix of land uses including industrial, warehouse, commercial, residential, religious, educational, and public. Major transportation networks such as SR 41, SR 99, and BNSF and UP rail lines traverse the Plan Area, and land has been cleared and construction is underway for the future state high speed rail line.

REGIONAL PRECONTACT HISTORY

- ▶ The Plan Area is situated within the City of Fresno in California's Central Valley, holds significant historic value. The Central Valley region of California was one of the most densely populated areas in North America during precontact times. Early work conducted by Sacramento Junior College and the University of California, Berkeley in the first 40 years of the 20th Century within the region resulted in the development of the Central California Taxonomic System and a tripartite classification scheme (Early, Middle, and Late Periods). In 2007, this classification system was updated based on the findings of studies since the 1940s and results based on new technologies such as Carbon 14 dating and obsidian hydration. The resulting new classification system is briefly described below (NIC 2021: 8).
- ▶ **Paleo-Indian and Lower Archaic Period (11,500–5550 cal B.C.E.)** sites are not well represented in the Central Valley. This is likely due to the fact that large segments of the Late Pleistocene landscape throughout the valley have been buried or removed by periodic episodes of deposition and erosion, in particular the formation of the Sacramento–San Joaquin Delta about 6,000 years ago. The archaeological evidence that is available for this early period is primarily defined by basally thinned, fluted projectile points found in sites located in and around Fresno and in Kern County on the ancient shoreline of Buena Vista Lake. These points are morphologically similar to well-dated Clovis points found elsewhere in North America (NIC 2021: 9).
- ▶ **Middle Archaic Period/Windmill Pattern (5550–550 cal B.C.E.)** sites are characterized by extended burials orientated to the west, specialized grave goods, baked clay balls, charmstones, and exotic lithic materials. Year-round settlements with seasonal forays into the foothills resulted in the acquisition of a varied subsistence resource base that was dominated by fish and acorn acquisition. However, archaeological evidence shows heavy exploitation of elk, deer, antelope, rabbits, waterfowl, and numerous additional floral and faunal species (NIC 2021: 9).
- ▶ **Upper Archaic Period/Berkeley Pattern (550 cal B.C.E. – 1100 cal. C.E.)** artifact assemblages show a dramatic increase in the use of mortar and pestle groundstone technology, possibly related to an expanded reliance on acorns as a staple food resource. Flexed burials, with various orientations are common, as well as specialized bone tools, numerous distinctive shell beads and ornaments, and stone tools unique to the period frequently occur on sites dated to this time (NIC 2021: 9).
- ▶ **Emergent Period/Augustine Pattern (1100 cal. C.E. – Historic Era Contact)** cultural manifestations are distinguished by the presence of shaped mortars and pestles, the use of bow and arrow technology and the introduction of the harpoon, particularly during early phases of this period. Bone awls are common. There is an increased usage of shell for decorative items and as money for exchange. Ground stone technologies included mundane items such as handstones and pestles as well as more exotic times such as tubular pipes and charmstones. Mortuary practices can be highly variable; pre-interment pit burning, cremations, and flex burials are all associated with this period (NIC 2021: 10).

ETHNOGRAPHY

The Plan Area is within the ethnographic territory of the Northern Valley Yokuts. The Northern Valley Yokuts primarily occupied the lands along the San Joaquin River, starting in the north at the Calaveras River and extending southward to the upper San Joaquin River, and from the crest of the Coast (Diablo) Range in the east to the Sierra Nevada foothills in the west.

The Northern Valley Yokuts diet was comprised of seasonally available resources obtained by hunting, fishing, and gathering. A wide variety of tools and implements were used by the Northern Valley Yokuts to collect, process, and cook their food. Fishing and hunting tools included harpoons, hooks, nets, bows and arrows, traps, and blinds, as well

as tule rafts for navigating waterways. Sharpened digging sticks and woven tools such as seed beaters, burden baskets, and carrying nets were used to collect plant resources. Stone mortars and pestles, bedrock and portable mortars, possibly wooden mortars, stone knives, and scrapers. Various bone tools were used to process resources, including hides for clothing, bedding, and other related household items. Clay was used for cooking, waterproofing basketry, and net weights. Additional items, such as marine shell beads, basketry materials, chalk, and obsidian were obtained through trade. Northern Valley Yokuts constructed many types of shelters and storage facilities, including conical huts, shade structures, sweat house pits, and acorn granaries. The primary building materials used were willow and tule.

Today, the descendants of these first peoples live throughout the Fresno area, including on the Tule River Reservation near Porterville, Picayune Rancheria at Coarsegold in Madera County, Santa Rosa Rancheria in Kings County, and Table Mountain Rancheria near Friant in Fresno County (NIC 2021: 12).

REGIONAL HISTORY

The historic evolution of Fresno, California, reflects the culture of the groups who settled in the region over time, which was first settled by the North Valley Yokuts, then followed by Euro-American settlement in the mid-1800s. Fresno's growing population was largely due to the construction of the Central Pacific Railroad, World War I, and World War II.

Early Settlements: The Yokuts were the first residents of the area that would become the City of Fresno, followed by the Mexicans and the Americans. There were no missions in the San Joaquin Valley but there were small Mexican era settlements such as Pueblo de las Junta, located at the confluence of the San Joaquin River and the Fresno Slough. The Spanish and Mexican influence is indicated through place names such as "Fresno," which means "ash tree" and which was first applied to the Fresno River (City of Fresno 2014: 8-4). Following the Gold Rush of 1849, miners were drawn to the southern gold fields, and cattle ranchers and dryland farmers moved into the area.

Development Stage: In 1870, the Central Pacific Railroad began its diagonal push down the San Joaquin Valley, reaching what is now Fresno in late April 1872. In that same year, the Contract and Finance Company, a subsidiary of the railroad, laid out the town of Fresno in a rigid "gridiron" plan. Fresno continued to grow slowly until extensive irrigation efforts, such as the 28-mile Enterprise Canal and Miller and Lux's 67-mile San Joaquin and Kings River Canal were established. Soon after, people from around the United States and from Europe came by rail to settle in the region, establishing agricultural colonies and livestock operations, as well as numerous individual family farms serviced by a lacework of canals, laterals, and irrigation ditches. As a result of this population boom, Fresno was incorporated as a city in 1885, and by 1890, had a population of over 10,000. By 1900, Fresno was the market center of what is now the richest farming region in the United States (City of Fresno 2014: 8-5).

Post-war Periods: Fresno continued to grow following World War I, and in 1930, the City had a population of 52,513. While the Great Depression brought hardship to the City, it also resulted in the construction of a series of major civic buildings in the City, such as the complex of buildings at Fresno's Chandler Airfield/Fresno Municipal Airport built by the Works Progress Administration between 1936 and 1937 (City of Fresno 2014: 8-5).

During and after World War II, a surge of returning servicemen and homeless transients arrived in the City, looking for agricultural work, creating a severe housing shortage. This led to the development of a series of suburban housing tracts and associated infrastructure outside of the City, including the Herndon-Kearney 230 kilovolt Transmission Line between 1943 and 1964 which brought power to agricultural, commercial, and residential to developments in the northwestern portion of the City (NIC 2021: 18-19).

Following World War II, the passage of the G.I. Bill (VA Home Loan Guaranty Program) enabled returning veterans to purchase homes and establish businesses, prompting another period of rapid expansion. The Mayfair subdivision, completed in 1947, included Fresno's first suburban shopping mall and ushered in an era of development at the suburban fringe. Between 1940 and 1950, the city's population grew by 30,000, with much of the growth accommodated in new auto-oriented suburbs. The Interstate Highway Act of 1956, which led to the development of Golden State Boulevard and SR 99, served to spur development of suburbs, and ultimately led to the economic decline of many inner cities. Manchester Center followed in 1955, with Fig Garden Village in 1956. Six blocks of the

Downtown were converted to a pedestrian mall in 1964, with a design by landscape architect Garrett Eckbo (City of Fresno 2014: 8-6). However, like so many other cities across the country, the suburban flight of the 1960s eventually lead to the decline of the downtown area.

Today, Fresno is home to a diverse population, which includes descendants from the City's earliest pioneers and recently arrived immigrants. Although farming and ranching remain at the economic forefront, its place in the center of California has allowed it to also become a hub for industrial complexes and distribution centers, continuing the City's legacy as a major center of commerce in California.

RECORDS SEARCHES AND CONSULTATION

Record Searches

On April 17, 2023, a records search of the Plan Area was conducted at the Southern San Joaquin Valley Information Center (SSJVIC), at California State University, Bakersfield. The following information was reviewed as part of the records search:

- ▶ NRHP and CRHR,
- ▶ California Office of Historic Preservation Historic Property Directory,
- ▶ California Inventory of Historic Resources, and
- ▶ California State Historic Landmarks.

The records search review revealed that 27 previous studies of cultural resources have been conducted within the Plan Area. All studies were completed between 1981 and 2022 and are primarily small or linear efforts. Therefore, much of the Plan Area has not been subject to survey.

The records search at the SSJVIC also revealed that 33 resources comprised of three historic-era archaeological sites, one historic district (comprised of built-environment features), and 29 built-environment features have been previously recorded within the Plan Area. Although none of these resources have been evaluated for CRHR-eligibility, 24 of the 29 built environment features have been evaluated and determined ineligible for NRHP-listing.

In addition, the local register for the City of Fresno was reviewed for potential historical resources (City of Fresno 2024). No historical resources were identified within the Plan Area.

Native American Consultation

Pursuant to AB 52, the City mailed notification letters to the following 17 tribal representatives, as identified by NAHC, on June 26, 2023:

- ▶ Big Sandy Rancheria of Western Mono Indians; Elizabeth Kipp, Chairperson
- ▶ Cold Springs Rancheria of Mono Indians; Carol Bill, Chairperson
- ▶ Cold Springs Rancheria of Mono Indians; Jared Aldern
- ▶ Dumna Wo-Wah Tribal Government; Robert Ledger, Chairperson
- ▶ Kings River Choinumni Farm Tribe; Stan Alec
- ▶ North Valley Yokuts Tribe; Katherine Perez, Chairperson
- ▶ North Valley Yokuts Tribe; Timothy Perez
- ▶ Picayune Rancheria of Chukchansi Indians; Claudia Gonzales, Chairwoman
- ▶ Picayune Rancheria of Chukchansi Indians; Heather Airey, Tribal Historic Preservation Officer
- ▶ Santa Rosa Rancheria Tachi Yokut Tribe; Leo Sisco, Chairperson
- ▶ Table Mountain Rancheria; Brenda Lavell, Chairperson

- ▶ Table Mountain Rancheria; Bob Pennell, Cultural Resources Director
- ▶ Traditional Choinumni Tribe; David Alvarez, Chairperson
- ▶ Tule River Indian Tribe; Kerri Vera, Environmental Department
- ▶ Tule River Indian Tribe; Neil Peyron, Chairperson
- ▶ Tule River Indian Tribe; Joey Garfield, Tribal Archaeologist
- ▶ Wuksache Indian Tribe/Eshom Valley Band; Kenneth Woodrow, Chairperson

Table Mountain Rancheria responded to the City's notification on July 20, 2023, stating that the plan area lies within their cultural area of interest. The Rancheria did not formally request consultation, but requested the results of the SSJVIC records search be sent to them and that the City contact them to set a meeting date. The City made attempts to contact Table Mountain Rancheria by phone and email, but no responses were received. No responses from the other 16 tribal representatives were received for AB 52 consultation.

4.5.3 Impacts and Mitigation Measures

METHODOLOGY

To evaluate the potential impacts of the SCSP on archaeological, historical, and tribal cultural resources, the proposed activities of the plan were considered in relation to known resources or the potential for unknown resources. The analysis is informed by the provisions and requirements of federal, state, and local laws and regulations that apply to cultural resources. In determining the level of significance, the analysis assumes that the proposed plan would comply with relevant federal and state laws, regulations, and ordinances.

In addition, according to PRC Section 15126.4(b)(1), if a project adheres to the Secretary of the Interior's Standards for the Treatment of Historic Properties, the project's impact "will generally be considered mitigated below the level of a significance and thus is not significant."

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

THRESHOLDS OF SIGNIFICANCE

An impact on cultural resources would be significant if implementation of the proposed plan would:

- ▶ 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 dedicated cemeteries.

An impact on tribal cultural resources would be significant if implementation of the proposed plan would:

- ▶ cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe; and that is:
 - i) listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k), or
 - ii) a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

ISSUES NOT DISCUSSED FURTHER

All the issues identified in the thresholds of significance are addressed in the following analysis.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 4.5-1: Cause a Substantial Adverse Change in the Significance of a Historical Resource

Under the proposed plan, land use designations in the Plan Area would be revised. Development associated with implementation of the proposed plan could result in damage to or destruction of historic buildings and structures, thereby resulting in a substantial adverse change in the significance of a historical resource as defined in Section 15064.5. This impact would be **potentially significant**.

Historical (or architectural) resources include standing buildings (e.g., houses, barns, cabins) and intact structures (e.g., dams, bridges). As discussed above in Section 4.5.2, "Environmental Setting," the SSJVIC records search revealed one previously recorded historic-era district (comprised of built environment features) and 29 built-environment features within the Plan Area. Although none of these resources have been evaluated for CRHR-eligibility, 24 of the 29 built environment features have been evaluated and determined ineligible for NRHP-listing. The demolition, alteration, or disturbance of existing features, buildings, and structures could result in changes to or destruction of historic resources if they meet the definition of historical resource under Section 15064.5(a) of the CEQA Guidelines.

Of the 4,940-acre Plan Area available for development, approximately 3,632 acres is developed as industrial, commercial, and other land uses, and approximately 1,308 acres is open space and farmland. Approximately 700 acres of the Plan Area would be developed or redeveloped with non-residential uses, primarily industrial, by the year 2040. These plan elements could be sited in areas with known, recorded historical buildings or structures, or in areas with resources that have not yet been evaluated for historical significance and/or resources that may become historic during the planning period.

While none of the identified historic structures are presently proposed for replacement, if in the course of subsequent development it is determined that renovation of any of the buildings is infeasible, replacement may become necessary. Therefore, there is the potential for new development to adversely affect buildings, structures, or other resources that are known to be or could potentially be historically significant.

As discussed in Section 4.5.1 above, the City has developed various objectives (HCR-1 through HCR-4) containing policies (HCR-1-c, HCR-2-a, HCR-2-b, HCR-2-c, HCR-2-g, HCR-2-k, HCR-2-n, HCR-3-c, HCR-4-c, and HCR-4-f) for the protection and preservation of historical resources, and to foster appreciation of history and cultural resources (see Section 4.5.1 for reference). In addition, the City has established a Local Register of Historic Resources through the City's Historic Preservation Ordinance. Although no historical resources listed in the Local Register are located within the Plan area, it is possible that previously unrecorded buildings and structures could be listed as a local historical resource could potentially be historically significant.

Damage to or destruction of a building or structure that is a designated historic resource, eligible for listing as a historic resource, or a potential historic resource that has not yet been evaluated could result in a change in its historical significance. Therefore, impacts on historical resources would be **potentially significant**.

Mitigation Measures

Mitigation Measure 4.5-1: Conduct Project-Specific Surveys and Identify and Implement Measures to Protect Identified Historic Resources

During project-specific environmental review of development under the proposed plan, before altering or otherwise affecting a building or structure that is 50 years old or older, the City shall require project applicants to retain a qualified architectural historian meeting the Secretary of Interior's Professional Qualifications Standards to record the building or structure on a California Department of Parks and Recreation DPR 523 form or equivalent documentation,

if the building has not previously been evaluated. Its significance shall be assessed and documented by a qualified architectural historian in accordance with the significance criteria set forth for historic resources under CEQA Guidelines Section 15064.5. The evaluation process shall include the development of appropriate historical background research as context for the assessment of the significance of the structure in the history of the City and the region. For buildings, structures, and other resources determined through this evaluation process not to meet the CEQA historical resource criteria, no further mitigation is required.

For any building, structure, and or other resource that qualifies as a historic resource, the architectural historian and the future project-specific applicant shall consult to consider measures that would enable projects under the proposed plan to avoid direct or indirect impacts to the historic building or structure. These could include preserving the building on site, using it "as is," or other measures that would not materially alter the historically significant components of the building or structure. If the project cannot feasibly avoid modifications to the historically significant features of the historic building or structure, the following measures shall be undertaken as appropriate:

- 1) If the building or structure can be preserved on-site, but remodeling, renovation or other alterations are required, this work shall be conducted in compliance with *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* (NPS 2017).
- 2) If a significant historic building or structure is proposed for major alteration or renovation, or to be moved and/or demolished, the City shall ensure that a qualified architectural historian thoroughly documents the building and associated landscaping and setting. Documentation shall include still and video photography and a written documentary record of the building to the standards of the Historic American Building Survey or Historic American Engineering Record, including accurate scaled mapping, architectural descriptions, and scaled architectural plans, if available. A copy of the record shall be provided to the City. The record shall be accompanied by a report containing site-specific history and appropriate contextual information. This information shall be gathered through site specific and comparative archival research, and oral history collection as appropriate.
- 3) If preservation and reuse at the site are not feasible, the historical building shall be documented as described in item (2) and, when physically and financially feasible, be moved and preserved or reused.

Significance after Mitigation

Implementation of Mitigation Measure 4.5-1 would reduce potentially significant impacts on historic resources because actions would be taken to record, evaluate, avoid, or otherwise treat the resource appropriately, in accordance with pertinent laws and regulations. However, State CEQA Guidelines Section 15126.4(b)(2) notes that in some circumstances, documentation of a historical resource shall not mitigate the effects of demolition of that resource to a less-than-significant level because the historic resources would no longer exist. Therefore, because the potential for permanent loss of a historic resource or its integrity cannot be precluded, the proposed plan's impacts on historic resources would be **significant and unavoidable**.

Impact 4.5-2: Cause a Substantial Adverse Change in the Significance of an Archaeological Resources

Future development under the proposed plan could be located in areas that contain known or unknown archaeological resources and ground-disturbing activities could result in discovery or damage of yet undiscovered archaeological resources as defined in State CEQA Guidelines Section 15064.5. This impact would be **potentially significant**.

The SSJVIC records search revealed three previously recorded historic-era sites (comprised of foundations, trash scatters, wells, walls, railroad grade, and standing structures) within the Plan Area. No precontact archaeological sites have been previously recorded within the Plan Area. As previously described, much of the Plan Area has not been subject to survey; the following archaeological site types may be encountered throughout un-surveyed portions of the county:

- ▶ surface scatters of lithic artifacts and projectile points;
- ▶ bedrock milling stations;
- ▶ historic artifact features and buried deposits of historic debris;
- ▶ building foundations and associated deposits (homes, businesses, barns, mills, etc.);
- ▶ water related (ditches, canals);
- ▶ transportation (roads, trails); and
- ▶ ranching and agriculture (terracing, fences, corrals, water troughs).

As discussed in section 4.5.1 above, the City has developed Objective HCR-2 containing policies (HCR-2-c, HCR-2-f, HCR-2-k, and HCR-2-n) for the protection and preservation of archaeological resources (see Section 4.5.1 for reference). Although previously unrecorded archaeological resources could be uncovered during ground disturbing activities, which could potentially be archaeologically significant.

The Plan Area includes a mix of land uses including industrial, warehouse, commercial, residential, religious, educational, and public. Future development under the proposed plan would result in ground disturbance within the Plan Area that could damage or destroy previously undiscovered archaeological resources (precontact and historic era), which would be a **potentially significant** impact.

Mitigation Measures

Mitigation Measure 4.5-2a: Identify and Protect Unknown Archaeological Resources

During project-specific environmental review of development under the proposed plan, the developer shall define each project's area of effect for archaeological resources in consultation with a qualified archaeologist, as defined by the Secretary of Interior. Once the exact locations of project-specific areas have been determined and before commencement of earth-disturbing activities, a records search shall be conducted to determine if there are any known archaeological resources located in the disturbance area. A pedestrian survey shall also be conducted for archaeological resources. In the event of a surface find, materials will be evaluated and recorded on standard Department of Parks and Recreation primary record forms (DPR 523) in accordance with national and state criteria. Avoidance of archaeological resources would be the preferred alternative to reduce impacts to unknown archaeological resources. A recommendation of eligibility/ineligibility to the NRHP and CRHR shall be completed for any surface finds and for any resources identified by the records search. The survey and report shall be completed by a qualified archaeologist who meets the Secretary of the Interior's professional qualifications for Archaeology. The report will include recommendations for minimizing potential adverse effects to any significant resources identified.

The developer shall follow recommendations identified in the report, which may include activities such as subsurface testing, implementing a Worker Environmental Awareness Program, avoidance of sites, construction monitoring by a qualified archaeologist, or notification of the geographically and culturally affiliated Native American tribe to extend an invitation for construction monitoring.

Mitigation Measure 4.5-2b: Protect Known Unique Archaeological Resources

For an archaeological site that has been determined by a qualified archaeologist to qualify as a unique archaeological resource through the process set forth under Mitigation Measure 4.5-2a, and where it has been determined under Mitigation Measure 4.5-2a that avoidance or preservation in place is not feasible, a qualified archaeologist, in consultation with the City, and Native American tribes as applicable, shall:

- 1) Prepare a research design and archaeological data recovery plan for the recovery that shall capture those categories of data for which the site is significant and implement the data recovery plan before or during development of the site.
- 2) Perform appropriate technical analyses, prepare a full written report and file it with the appropriate information center, and provide for the permanent curation of recovered materials.

- 3) If, in the opinion of the qualified archaeologist and in light of the data available, the significance of the site is such that data recovery cannot capture the values that qualify the site for inclusion on the CRHR, the applicant shall reconsider project plans in light of the high value of the resource, and implement more substantial modifications to the project that would allow the site to be preserved intact, such as project redesign, placement of fill, or project relocation or abandonment. If no such measures are feasible, the City shall implement Mitigation Measure 4.5-2c.

Mitigation Measure 4.5-2c: For All Ground-Disturbing Construction Activities, Halt Ground Disturbance upon Discovery of Subsurface Archaeological Features

If any precontact or historic-era subsurface archaeological features or deposits, including locally darkened soil ("midden"), that could conceal cultural deposits are discovered during construction, all ground-disturbing activity within 30 meters (approximately 100 feet) of the resources shall be halted and a qualified professional archaeologist shall be retained to assess the significance of the find. If the qualified archaeologist determines the archaeological material to be Native American in nature, the City shall contact the appropriate Native American tribe for their input on the preferred treatment of the find. If the find is determined to be significant by the archaeologist (i.e., because it is determined to constitute a unique archaeological resource), the archaeologist shall develop, and the City shall implement, appropriate procedures to protect the integrity of the resource and ensure that no additional resources are affected. Procedures could include but would not necessarily be limited to preservation in place (which shall be the preferred manner of mitigating impacts to archaeological sites), archival research, subsurface testing, or contiguous block unit excavation and data recovery (when it is the only feasible mitigation, and pursuant to a data recovery plan). No further grading shall occur in the area of the discovery until the City approves the measures to protect these resources. Any precontact archaeological artifacts recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study.

Significance after Mitigation

Implementation of Mitigation Measures 4.5-2a through 4.5-2c would reduce potentially significant impacts on archaeological resources to less-than-significant levels because mitigation would be developed in coordination with the appropriate federal, state, and/or local agency(ies) and tribes to avoid, move, record, or otherwise treat the archaeological resource appropriately, in accordance with pertinent laws and regulations. Therefore, the proposed plan's impact would be **less than significant**.

Impact 4.5-3: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource

Pursuant to AB 52, the City sent letters inviting tribal consultation to the tribal contacts identified by NAHC. Table Mountain Rancheria responded. Although no tribal cultural resources, defined by CEQA Section 21074, have been identified within the Plan Area, it is possible that tribal cultural resources could be identified during analysis of subsequent projects. Compliance with CEQA Section 21080.3.2 and Section 21084.3(a) would render this impact **less than significant**.

As discussed above in Section 4.5.2, "Environmental Setting," on June 26, 2023, the City sent letters providing formal notification of the opportunity for tribal consultation to the tribal representatives listed above. Table Mountain Rancheria responded, stating that the Plan Area lies within their cultural area of interest. Although the Rancheria did not formally request consultation under AB 52, the tribe requested a meeting. The City made attempts to contact the tribe, but response was received from Table Mountain Rancheria. No responses were received from the other 16 tribal contacts identified by the NAHC.

Although no tribal cultural resources, defined by CEQA Section 21074, have been identified within the Plan Area, it is possible that tribal cultural resources could be identified during analysis of subsequent projects. Implementation of projects contemplated in the proposed plan may require subsequent discretionary approvals and site-specific project-level analyses to fulfill CEQA requirements, which may include additional AB 52 consultation and identification of tribal cultural resources. California law recognizes the need to protect tribal cultural resources from inadvertent destruction, and the procedures for the treatment of tribal cultural resources are contained in CEQA Section 21080.3.2 and Section 21084.3(a).

Within 14 days of the City determining that it may undertake a project not otherwise statutorily or categorically exempt from CEQA, the City must provide formal notification, in writing, to the California Native American tribes that are traditionally and culturally affiliated with the geographic area of the project and/or that have requested notification of projects in the lead agency's jurisdiction. If any affiliated tribe wishes to engage in consultation on the project, the tribe must respond within 30 days of receipt of the formal notification. The City would be required to begin the consultation process with the tribes that have requested consultation within 30 days of receiving the request for consultation. Consultation concludes when either: (1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect is determined to exist, on a tribal cultural resource, or (2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached.

In addition, the City has developed Objective HCR-2 containing policies (HCR-2-c and HCR-2-d) for the protection of Native American sites (see Section 4.5.1 for reference).

While no specific resources have been identified through consultation with affiliated tribes, it is possible that unknown tribal cultural resources may be present within the Plan Area. Site-specific development projects would be reviewed on a project-by-project basis pursuant to CEQA which, for projects not otherwise exempt from CEQA, would include AB 52 consultation that could lead to the identification of potential site-specific tribal resources. All future development projects would be required to comply with local policy HCR-2-d which requires to work with local Native American tribes to protect recorded and unrecorded cultural and sacred sites. In addition, compliance with CEQA Section 21080.3.2 and Section 21084.3(a) site-specific project-level analyses shall continue to provide an opportunity to avoid or minimize the disturbance of tribal cultural resources, and to appropriately treat any remains that are discovered. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.5-4: Disturb Human Remains

Based on the records research, no evidence suggests that any precontact or historic-era marked or un-marked human interments are present within or in the immediate vicinity of the Plan Area. However, ground-disturbing construction activities could uncover previously unknown human remains. In the event that human remains are encountered, the impact would be **potentially significant**.

Based on documentary research, no evidence suggests that any precontact or historic-era marked or un-marked human interments are present within or in the immediate vicinity of the Plan Area. However, the location of grave sites and Native American remains can occur outside of identified cemeteries or burial sites. Therefore, there is a possibility that unmarked, previously unknown Native American or other graves could be present within the Plan Area and could be uncovered by project-related construction activities. This impact would be **potentially significant**.

Mitigation Measures

Mitigation Measure 4.5-4: Protect Known and Unknown Human Remains

If any human remains are unearthed during excavation and grading activities of any future project developed under the proposed plan, all activity shall cease immediately within 50 meters (165) feet of the discovery. Pursuant to Health and Safety Code Section 7050.5, no further disturbance shall occur until the county coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98(a). If the remains are determined to be of Native American descent, the coroner shall notify NAHC within 24 hours. NAHC shall then contact the most likely descendent of the deceased Native American, who shall then serve as the consultant on how to proceed with the remains. Pursuant to PRC Section 5097.98(b), upon the discovery of Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment.

Significance after Mitigation

Implementation of Mitigation Measures 4.5-4 would reduce potentially significant impacts on human remains to less-than-significant levels because mitigation would be developed in coordination with the appropriate federal, state, and/or local agency(ies) and tribes to avoid, move, record, or otherwise treat the discovery human remains appropriately, in accordance with pertinent laws and regulations. Therefore, the proposed plan's impact would be **less than significant**.

4.6 ENERGY

This section was prepared pursuant to CEQA Guidelines Section 15126 and Appendix F of the CEQA guidelines, which require that EIRs include a discussion of the potential energy impacts of projects. The analysis considers whether implementing the proposed plan would result in inefficient, wasteful, and unnecessary consumption of energy.

Comments on the NOP to this EIR expressed concerns regarding energy consumption during construction and operation of the proposed plan and recommended mitigation to minimize energy consumption and improve energy efficiency.

4.6.1 Regulatory Setting

Energy conservation is embodied in many federal, state, and local statutes and policies. At the federal level, energy standards apply to numerous products (e.g., the US Environmental Protection Agency's [EPA's] EnergyStar™ program) and transportation (e.g., fuel efficiency standards). At the state level, Title 24 of the California Code of Regulations sets forth energy standards for buildings. Further, the state provides rebates/tax credits for installation of renewable energy systems and offers the Flex Your Power program that promotes conservation in multiple areas. At the local level, individual cities and counties establish policies in their general plans and climate action plans related to the energy efficiency of new development and land use planning and to the use of renewable energy sources.

FEDERAL

Energy Policy and Conservation Act, and CAFE Standards

The Energy Policy and Conservation Act of 1975 established nationwide fuel economy standards to conserve oil. Pursuant to this act, the National Highway Traffic and Safety Administration, part of the US Department of Transportation, is responsible for revising existing fuel economy standards and establishing new vehicle economy standards.

The Corporate Average Fuel Economy (CAFE) program was established to determine vehicle manufacturer compliance with the government's fuel economy standards. Compliance with the CAFE standards is determined based on each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the country. EPA calculates a CAFE value for each manufacturer based on the city and highway fuel economy test results and vehicle sales. The CAFE values are a weighted harmonic average of the EPA city and highway fuel economy test results. The most recent CAFE standards are for model years (MYs) 2024–2026. The amended CAFE standards increase in stringency for both passenger cars and light trucks, by 8 percent per year for MYs 2024–2025, and by 10 percent per year for MY 2026. The National Highway Traffic Safety Administration currently projects that the standards will require, on an average industry fleet-wide basis, roughly 49 miles per gallon in MY 2026 (49 Code of Federal Regulations Section 531 et seq.). Based on information generated under the CAFE program, the US Department of Transportation is authorized to assess penalties for noncompliance. Under the Energy Independence and Security Act of 2007 (described below), the CAFE standards were revised for the first time in 30 years.

Energy Policy Act of 1992 and 2005

The Energy Policy Act of 1992 (EPAAct) was passed to reduce the country's dependence on foreign petroleum and improve air quality. EPAAct includes several parts intended to build an inventory of alternative fuel vehicles (AFVs) in large, centrally fueled fleets in metropolitan areas. EPAAct requires certain federal, state, and local government and private fleets to purchase a percentage of light-duty AFVs capable of running on alternative fuels each year. In addition, financial incentives are also included in EPAAct. Federal tax deductions are allowed for businesses and individuals to cover the incremental cost of AFVs. States are also required by the act to consider a variety of incentive programs to help promote AFVs. The Energy Policy Act of 2005 provides renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants,

and loan guarantees for clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 is designed to improve vehicle fuel economy and help reduce US dependence on oil. It represents a major step forward in expanding the production of renewable fuels, reducing dependence on oil, and confronting global climate change. The Energy Independence and Security Act of 2007 increases the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022, which represents a nearly five-fold increase over current levels; and reduces US demand for oil by setting a national fuel economy standard of 35 miles per gallon by 2020—an increase in fuel economy standards of 40 percent.

By addressing renewable fuels and the CAFE standards, the Energy Independence and Security Act of 2007 builds upon progress made by the Energy Policy Act of 2005 in setting out a comprehensive national energy strategy for the 21st century.

STATE

Warren-Alquist Act

The 1975 Warren-Alquist Act established the California Energy Resources Conservation and Development Commission, now known as the California Energy Commission (CEC). The act established state policy to reduce wasteful, uneconomical, and unnecessary uses of energy by employing a range of measures. The California Public Utilities Commission regulates privately owned utilities in the energy, rail, telecommunications, and water fields.

State of California Energy Action Plan

CEC is responsible for preparing the state energy plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The current plan is the 2003 California Energy Action Plan (2008 update). The plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero-emission vehicles and addressing their infrastructure needs; and encouragement of urban design that reduces vehicle miles traveled (VMT) and accommodates pedestrian and bicycle access.

California Energy Efficiency Strategic Plan

September 18, 2008, the California Public Utilities Commission (CPUC) adopted California's first Long-Term Energy Efficiency Strategic Plan, presenting a roadmap for energy efficiency in California.²⁰ The Plan articulates a long-term vision and goals for each economic sector and identifies specific near-term, mid-term, and long-term strategies to assist in achieving those goals. The Plan also reiterates the following four specific programmatic goals known as the "Big Bold Energy Efficiency Strategies" that were established by the CPUC in Decisions D.07-10-032 and D.07-12-051: in which the state has ambitious goals for the development of zero net energy buildings. These include:

- ▶ All new residential construction will be zero net energy (ZNE) by 2020.
- ▶ All new commercial construction will be ZNE by 2030
- ▶ 50 percent of commercial buildings will be retrofit to ZNE by 2030
- ▶ 50 percent of new major renovations of state buildings will be ZNE by 2025.

Assembly Bill 2076: Reducing Dependence on Petroleum

Pursuant to AB 2076 (Chapter 936, Statutes of 2000), CEC and the California Air Resources Board (CARB) prepared and adopted a joint agency report in 2003, *Reducing California's Petroleum Dependence*. Included in this report are recommendations to increase the use of alternative fuels to 20 percent of on-road transportation fuel use by 2020 and 30 percent by 2030, significantly increase the efficiency of motor vehicles, and reduce per capita VMT (CEC and CARB 2003). A performance-based goal of AB 2076 was to reduce petroleum demand to 15 percent below 2003 demand by 2030.

Integrated Energy Policy Report

Senate Bill (SB) 1389 (Chapter 568, Statutes of 2002) required CEC to “conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. The Energy Commission shall use these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state’s economy, and protect public health and safety” (Public Resources Code Section 25301[a]). This work culminated in the Integrated Energy Policy Report (IEPR).

CEC adopts an IEPR every 2 years and an update every other year. The 2021 IEPR is the most recent IEPR. The 2021 IEPR provides a summary of priority energy issues currently facing the state, outlining strategies and recommendations to further the state’s goal of ensuring reliable, affordable, and environmentally responsible energy sources. The report contains an assessment of major energy trends and issues within California’s electricity, natural gas, and transportation fuel sectors. The report provides policy recommendations to conserve resources, protect the environment, ensure reliable, secure, and diverse energy supplies, enhance the state’s economy, and protect public health and safety. Topics covered in the 2021 IEPR include building decarbonization, coordination between state energy agencies, decarbonizing the state’s natural gas system, increasing transportation efficiencies, improving energy reliability and an assessment of the California Energy Demand Forecast (CEC 2022a).

Renewables Portfolio Standard

The state passed legislation referred to as the Renewables Portfolio Standard that requires increasing use of renewable energy to produce electricity for consumers. California utilities are required to generate 33 percent of their electricity from renewables by 2020 (SB X1-2 of 2011); 52 percent by 2027 (SB 100 of 2018); 60 percent by 2030 (also SB 100 of 2018); and 100 percent by 2045 (also SB 100 of 2018). On September 16, 2022, SB 1020 was signed into law. This bill supersedes the goals of SB 100 by requiring that eligible renewable energy resources and zero-carbon resources supply 90 percent of all retail sales of electricity to California end-use customers by December 31, 2035, 95 percent of all retail sales of electricity to California end-use customers by December 31, 2040, 100 percent of all retail sales of electricity to California end-use customers by December 31, 2045, and 100 percent of electricity procured to serve all state agencies by December 31, 2035.

Senate Bill 350: Clean Energy and Pollution Reduction Act of 2015

The Clean Energy and Pollution Reduction Act of 2015 (SB 350) requires that the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources be increased to 50 percent by December 31, 2030. It also establishes energy efficiency targets that achieve statewide, cumulative doubling of the energy efficiency savings in electricity and natural gas end uses by the end of 2030.

Assembly Bill 1007: State Alternative Fuels Plan

AB 1007 (Chapter 371, Statutes of 2005) required CEC to prepare a state plan to increase the use of alternative fuels in California. CEC prepared the State Alternative Fuels Plan in partnership with CARB and in consultation with other state, federal, and local agencies. The plan presents strategies and actions California must take to increase the use of alternative nonpetroleum fuels in a manner that minimizes the costs to California and maximizes the economic benefits of in-state production. The plan assessed various alternative fuels and developed fuel portfolios to meet California’s goals to reduce petroleum consumption, increase alternative fuel use, reduce greenhouse gas (GHG) emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

California Building Energy Efficiency Standards and California Green Building Standards (Title 24, Part 6 and Part 11)

The energy consumption of new residential and nonresidential buildings in California is regulated by the state's Title 24, Part 6, Building Energy Efficiency Standards (California Energy Code). The California Energy Code was established by CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption and to provide energy efficiency standards for residential and nonresidential buildings. The CEC updates the California Energy Code every 3 years with more stringent design requirements for reduced energy consumption, which results in the generation of fewer GHG emissions.

The current California Energy Code will require builders to use more energy-efficient building technologies for compliance with increased restrictions on allowable energy use. The core focus of the building standards has been efficiency, but the 2019 Energy Code ventured into on-site generation by requiring solar photovoltaic (PV) on new homes, providing significant GHG savings. The most recent is the 2022 California Energy Code which advances the on-site energy generation progress started in the 2019 California Energy Code by encouraging electric heat pump technology and use, establishing electric-ready requirements when natural gas is installed, expanding solar PV system and battery storage standards, and strengthening ventilation standards to improve indoor air quality. CEC estimates that the 2022 California Energy Code will save consumers \$1.5 billion and reduce GHG emissions by 10 million metric tons of carbon dioxide-equivalent over the next 30 years (CEC 2022b).

The California Green Building Standards Code, referred to as CALGreen, was added to Title 24 as Part 11, first in 2009 as a voluntary code, which then became mandatory effective January 1, 2011 (as part of the 2010 California Building Standards Code). The current version is the 2022 CALGreen Code, which took effect on January 1, 2023. As compared to the 2019 CALGreen Code, the 2022 CALGreen Code strengthened sections pertaining to EV and bicycle parking, water efficiency and conservation, and material conservation and resource efficiency, among other sections of the CALGreen Code. The CALGreen Code sets design requirements equivalent to or more stringent than those of the California Energy Code for energy efficiency, California Plumbing Code for water efficiency and waste diversion, and California Building Code for indoor air quality. These codes are adopted by local agencies that enforce building codes and used as guidelines by state agencies for meeting the requirements of Executive Order B-18-12.

AB 1279 and 2022 Scoping Plan for Achieving Carbon Neutrality

On September 16, 2022, the state legislature passed AB 1279 which codified stringent emissions targets for the state of achieving carbon neutrality and an 85-percent reduction in 1990 emissions level by 2045. CARB released the Final 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) on November 16, 2022, as also directed by AB 1279 (CARB 2022). The 2022 Scoping Plan traces the pathway for the state to achieve its carbon neutrality and an 85-percent reduction in 1990 emissions goal by 2045 using a combined top down, bottoms up approach using various scenarios. The 2022 Scoping Plan calls for the transition from fossil fuels to fully electric, decarbonized energy to power buildings and zero-emission vehicles. CARB adopted the 2022 Scoping Plan on December 16, 2022.

Senate Bill 375 of 2008

SB 375, signed into law in September 2008, aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. It requires metropolitan planning organizations (MPOs) to adopt a Sustainable Communities Strategy or Alternative Planning Strategy, showing prescribed land use allocation in each MPO's Regional Transportation Plan. CARB, in consultation with the MPOs, is to provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks for 2020 and 2035. Implementation of SB 375 will have the co-benefit of reducing California's dependency on fossil fuels and making land use development and transportation systems more energy efficient.

California Energy Efficiency Action Plan

The 2019 California Energy Efficiency Action Plan has three primary goals for the state: double energy efficiency savings by 2030 relative to a 2015 base year (per SB 350), expand energy efficiency in low-income and disadvantaged communities, and reduce greenhouse gas emissions from buildings. This plan provides guiding principles and recommendations on how the state would achieve those goals. These recommendations include:

- ▶ identifying funding sources that support energy efficiency programs,
- ▶ identifying opportunities to improve energy efficiency through data analysis,
- ▶ using program designs as a way to encourage increased energy efficiency on the consumer end,
- ▶ improving energy efficiency through workforce education and training, and
- ▶ supporting rulemaking and programs that incorporate energy demand flexibility and building decarbonization. (CEC 2019).

LOCAL

City of Fresno General Plan

The City of Fresno General Plan establishes the following policies related energy that is relevant to the proposed plan:

- ▶ **Policy RC-4-a: Support Regional Efforts.** Support and lead, where appropriate, regional, State and federal programs and actions for the improvement of air quality, especially the SJVAPCD's efforts to monitor and control air pollutants from both stationary and mobile sources and implement Reasonably Available Control Measures in the Ozone Attainment Plan.
- ▶ **Policy RC-4-e: Support Employer-Based Efforts.** Support and promote employer implementation of staggered work hours and employee incentives to use carpools, public transit, and other measures to reduce vehicular use and traffic congestion.
- ▶ **Policy RC-5-c: GHG Reduction through Design and Operations.** Increase efforts to incorporate requirements for GHG emission reductions in land use entitlement decisions, facility design, and operational measures subject to City regulation through the following measures and strategies:
 - Promote the expansion of incentive-based programs that involve certification of projects for energy and water efficiency and resiliency. These certification programs and scoring systems may include public agency "Green" and conservation criteria, Energy Star™ certification, CALGreen Tier 1 or Tier 2, Leadership in Energy Efficient Design (LEED™) certification, etc.
 - Promote appropriate energy and water conservation standards and facilitate mixed-use projects, new incentives for infill development, and the incorporation of mass transit, bicycle and pedestrian amenities into public and private projects.
 - Require energy and water audits and upgrades for water conservation, energy efficiency, and mass transit, pedestrian, and bicycle amenities at the time of renovation, change in use, change in occupancy, and change in ownership for major projects meeting review thresholds specified in an implementing ordinance.
 - Incorporate the City's "Guidelines for Ponding Basin/Pond Construction and Management to Control Mosquito Breeding" as conditions of approval for any project using an on-site stormwater basin to prevent possible increases in vector-borne illnesses associated with global climate change.
 - Periodically evaluate the City's facility maintenance practices to determine whether there are additional opportunities to reduce GHGs through facility cleaning and painting, parks maintenance, road maintenance, and utility system maintenance.
 - Periodically evaluate standards and mitigation strategies for highly vehicle-dependent land uses and facilities, such as drive-through facilities and auto-oriented development.

City of Fresno Climate Action Plan

The City of Fresno first adopted its Greenhouse Gas Reduction Plan (GHGRP) in 2014. The City updated its GHGRP in 2021 to extend its GHG reduction targets beyond 2020 to align with state reduction targets for 2030 (as mandated by SB 32) and 2035 (to align with the horizon year of the General Plan). The GHGRP estimates forecasted emissions in

the City using a business-as-usual model that does not account for various statewide regulations that will reduce emissions in the City.

4.6.2 Environmental Setting

ELECTRICITY AND NATURAL GAS USE

Electric services and natural gas are provided by Pacific Gas and Electric Company (PG&E) for the proposed plan. In 2021, PG&E provided its customers enrolled in PG&E's base plan with an energy portfolio composed of 47.7 percent eligible renewable energy, 4 percent large hydroelectric power, 18.9 percent natural gas, and 39.3 percent nuclear power (PG&E 2022). PG&E also offers its customers the option to enroll in a 50- or 100-percent renewable energy plan through its Solar Choice Program.

ENERGY USE FOR TRANSPORTATION

In 2021, the transportation sector comprised the largest end-use sector of energy in the state totaling 37.8 percent, followed by the industrial sector totaling 23.2 percent, the commercial sectors at 19 percent, and the residential sector of 20 percent. On-road vehicles use about 83 percent of the petroleum consumed in California (EIA 2023a). According to CEC's most recent California Annual Retail Fuel Outlet Report Results (CEC-A15), reported retail gasoline and diesel sales within Fresno County were 298 million gallons of gasoline and 65 million gallons of diesel in 2022 (CEC 2023). The California Department of Transportation projects that 522 and 168 million gallons of gasoline and diesel, respectively, will be consumed in Fresno County in 2025 (Caltrans 2008).

ENERGY USE AND CLIMATE CHANGE

Scientists and climatologists have produced substantial evidence that the burning of fossil fuels by vehicles, power plants, industrial facilities, residences, and commercial facilities has led to an increase of the earth's temperature (IPCC 2014; OPR et al. 2018). For an analysis of GHG production and the proposed plan's contribution to climate change, see Section 4.8, "Greenhouse Gas Emissions and Climate Change."

COMMERCIAL AND RESIDENTIAL ENERGY USE

Homes built between 2000 and 2015 used 14 percent less energy per square foot than homes built in the 1980s, and 40 percent less energy per square foot than homes built before 1950. However, the increased size of newer homes has offset these efficiency improvements. Primary energy consumption in the residential sector totaled 21 quadrillion British thermal units in 2009 (the latest year the US Energy Information Administration's [EIA's] *Residential Energy Consumption Survey* was completed), equal to 54 percent of consumption in the buildings sector and 22 percent of total primary energy consumption in the United States. Energy consumption increased by 24 percent from 1990 to 2009. When electrical system energy losses are included, the residential and commercial sectors accounted for about 22 percent and 18 percent respectively—40 percent combined—of total U.S. energy consumption in 2022 (EIA 2023b).

ALTERNATIVE FUELS

A variety of alternative fuels are used to reduce demand for petroleum-based fuel. The use of these fuels is encouraged through various statewide regulations and plans (e.g., Low Carbon Fuel Standard, AB 32 Scoping Plan). Conventional gasoline and diesel may be replaced (depending on the capability of the vehicle) with many transportation fuels, including:

- ▶ biodiesel,
- ▶ electricity,

- ▶ ethanol (E-10 and E-85),
- ▶ hydrogen,
- ▶ natural gas (methane in the form of compressed and liquefied natural gas),
- ▶ propane,
- ▶ renewable diesel (including biomass-to-liquid),
- ▶ synthetic fuels, and
- ▶ gas-to-liquid and coal-to-liquid fuels.

California has a growing number of AFVs through the joint efforts of CEC, CARB, local air districts, federal government, transit agencies, utilities, and other public and private entities. In 2022, California contained approximately 45,000 alternative fueling stations (AFDC 2023).

4.6.3 Impacts and Mitigation Measures

METHODOLOGY

Levels of construction- and operation-related energy consumption by the proposed plan, measured in megawatt-hours of electricity, million British thermal units (MMBTU) of natural gas, gallons of gasoline, and gallons of diesel fuel. Energy consumption estimates were calculated using the California Emissions Estimator Model (CalEEMod) version 2022.1.1.19 computer program. Where specific information was not known, CalEEMod default values based on the proposed plan's location were used. VMT associated with the proposed plan was provided in the traffic study prepared for the proposed plan (TJKM 2023). See Appendix B for a detailed list of assumptions and calculations. Construction of proposed plan development was modeled in two parts: a worst-case construction scenario in 2024 assuming 25 percent of Plan Area construction anticipated during the planning period would occur in a single year, and assuming the remainder of construction would be evenly distributed over the remaining years, between 2025 and 2040. (See Section 3.2, "Air Quality" for a detailed discussion of construction assumptions.)

THRESHOLDS OF SIGNIFICANCE

An energy impact would be significant if implementation of the proposed plan would:

- ▶ result in a wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation or
- ▶ conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

PROPOSED SCSP POLICIES AND DEVELOPMENT STANDARDS

The following policies from the proposed plan relate to energy.

Trucks

- ▶ **Policy T-3:** Limit truck idling times.

Public Transit

- ▶ **Policy T-4:** Expand bus area service and frequency.
- ▶ **Policy T-5:** Provide van shuttles, transit and carpool incentives, and bicycle parking for employees.

Roadway Improvements

- ▶ **Policy T-9:** Install traffic control or traffic safety measures to include bike lanes.

- ▶ **Policy T-11:** Install crosswalks and traffic calming measures near schools.
- ▶ **Policy T-13:** Improve and maintain sidewalks.

Vehicle/Equipment and Operation Standards

- ▶ **Policy AQ-4:** Increase electric vehicle charging stations and alternative fuel stations.
- ▶ **Policy AQ-5:** Seek out funding sources to assist warehouses and industrial uses to transition to near-zero emissions technology.
- ▶ **Policy AQ-6:** Consider construction of near zero fueling stations (i.e., CNG/Hydrogen).
- ▶ **Policy AQ-7:** Encourage commercial landscapers to use electric gardening equipment such as lawn mowers and leaf blowers.

Energy and Green Building

- ▶ **Policy EGB-1:** Require the reduction of energy consumption and promote energy efficiency through education, conservation programs, building design/operation standards, and incentive programs.
- ▶ **Policy EGB-2:** Incentivize private solar installations by providing information about financing and by expediting the permit process.
- ▶ **Policy EGB-3:** Encourage installation of solar panels, battery storage, and zero-emission backup electricity generators at distribution centers.

Water

- ▶ **Policy W-5:** Require new development to implement water conservation measures and to contribute towards expanded and upgraded facilities.
- ▶ **Policy W-6:** Reduce water consumption through education, conservation standards, landscaping standards, retrofit programs, and incentive programs.

In addition, the SCSP includes alternative energy development standards that would serve to reduce energy consumption. These include requirements for ZE (zero emission) motorized operational equipment; solar-ready building roofs and solar requirements for buildings over 400,000 square feet; solar-reflective roofing material; EV-ready passenger vehicle parking spaces, including some quick-charge EV; electric TRUs and provision of electrical infrastructure to accommodate them; bicycle racks with electric plugs for e-bikes; cool surface treatments; upsizing of electrical rooms to accommodate additional electrical panels; super-compliant VOC paints and coatings; recycling; and reasonable best efforts to deploy the highest rated CARB Tier technologies during construction.

ISSUES NOT DISCUSSED FURTHER

All the identified thresholds are addressed in the following analysis.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 4.6-1: Result in Wasteful, Inefficient, or Unnecessary Consumption of Energy during Project Construction or Operation

Construction and operation of development under the proposed plan would result in an increase in energy demand, short-term during construction and long-term during individual project operations. Regarding construction, development of individual projects would involve typical construction methods and approaches. Only the necessary amount of energy needed to complete individual projects would be used and there is no evidence to suggest any project would result in wasteful, inefficient, or unnecessary consumption. Operation of projects under the proposed plan would involve a mix of land uses (primarily industrial, retail, and office, with smaller amounts of residential) which would contribute to the local economy, create new jobs, and reduce VMT, and therefore fuel consumption, within the Plan Area compared to existing conditions, all of which are goals of the General Plan. Nevertheless, the proposed plan would allow for development that is not inherently energy efficient (i.e., decarbonized development, EV charging infrastructure to support use of EVs); therefore, operation of the proposed plan would result in the wasteful, inefficient, or unnecessary use of energy. This impact would be **significant**.

Construction-Related Energy

Most of the construction-related energy consumption for developments under the plan though the planning period would be associated with the use of off-road equipment and the transport of equipment and materials using on-road haul trucks. An estimated 368,156 gallons of gasoline and 1,242,151 gallons of diesel fuel would be used during the construction of anticipated development. (See Appendix B for a summary of construction calculations.) The energy needs for construction of anticipated development would occur over the course of the planning period through 2040 are not anticipated to require additional capacity or substantially increase peak or base period demands for electricity and other forms of energy. Gasoline and diesel would also be consumed during worker commute trips. Energy would be required to transport demolition waste and excavated materials. All construction equipment exceeding 50 horsepower would comply with the statewide standard of restricting idling time to no more than 5 minutes. The one-time energy expenditure required to construct proposed plan development (spread over the planning period) would be nonrecoverable. However, there is no evidence to suggest that construction-related energy demand associated with the proposed plan would be atypical. Nonrenewable energy would not be consumed in a wasteful, inefficient, or unnecessary manner during the proposed plan's construction (which would be more costly and likely avoided) when compared to other construction activity in the region. Additionally, as shown in Appendix B, on-road gasoline and diesel fuel consumption associated with construction activity would go down each year as vehicle fleets become more fuel-efficient over time. Table 4.6-1 summarizes total construction gasoline and diesel fuel consumption.

Table 4.6-1 Construction Fuel Consumption by Year

Construction Year (worst-case)	Diesel (Gallons)	Gasoline (Gallons)
2024	442,135	95,886
2025–2040	800,016	272,270
Total	1,242,151	368,156

Source: Calculations prepared by Ascent Environmental in 2023.

Building Energy

Operation of developments under the proposed plan would involve the use of energy to operate various land uses (e.g., industrial land uses, office buildings, retail establishments, residences). Individual projects would, at a minimum, be built to comply with the 2022 California Energy Code, which includes standards for building energy efficiency. It requires the use of efficient electric heat pumps, establishes electric-ready requirements for new homes, expands solar PV and battery storage standards, and strengthens ventilation standards (CEC 2022b). As the Plan Area is developed through 2040, the California Energy Code will continue to be updated on a triennial basis with the expectation that the mandatory requirements of the code will require increasingly more stringent energy efficiency requirements. This would result in increased building energy efficiency over time as the Plan Area continues to be

developed. Indirect energy use would include wastewater treatment and solid waste removal. Total energy demand associated with proposed plan development through the horizon year of 2040 is estimated at 245,543 megawatt-hours per year. Natural gas demand for operation would be approximately 492,427 MMBTU. For a list of assumptions related to operational energy, see Appendix B. See Table 4.6-2 for an estimate of the proposed plan's operational building energy needs.

Table 4.6-2 Operational Building Energy Consumption

Land Use/Energy Type	Energy Consumption	Units
Single Family Residential		
Electricity	851	MWh/year
Natural Gas	3,541	MMBTU/year
Supermarket		
Electricity	50,840	MWh/year
Natural Gas	28,913	MMBTU/year
Office Park		
Electricity	13,571	MWh/year
Natural Gas	23,117	MMBTU/year
Industrial Park		
Electricity	101,445	MWh/year
Natural Gas	172,804	MMBTU/year
General Heavy Industry		
Electricity	74,147	MWh/year
Natural Gas	256,065	MMBTU/year
General Office Building		
Electricity	4,689	MWh/year
Natural Gas	7,988	MMBTU/year
Total		
Electricity	245,543	MWh/year
Natural Gas	492,427	MMBTU/year

Notes: MWh/year = megawatt-hours per year; MMBTU = million British thermal units.

Source: Calculations prepared by Ascent Environmental in 2023.

Transportation Energy

Operation of proposed plan developments would result in vehicle trips related to employee commutes from various land uses (e.g., industrial, retail, office) and trips generated by residences. Annual VMT associated with the proposed plan would be 412,612,060 and would result in additional fuel demand of 9,158,521 gallons of gasoline per year and 2,218,171 gallons of diesel per year. Operational transportation-related fuel estimates are summarized in Table 4.6-3.

Table 4.6-3 Operational Mobile Fuel Consumption

Source	Gasoline (gal/year)	Diesel (gal/year)	Electricity (kWh/year)	Natural Gas (gal/year)
Mobile (Total for Project)	9,158,521	2,218,171	2,084,761	50,301

Notes: gal/year = gallons per year; kWh/year = kilowatt-hours per year.

Source: Calculations prepared by Ascent Environmental in 2023.

Implementation of the proposed plan would result in an increase in VMT compared to the baseline conditions, but because it would create jobs and reduce destination distances in the region, it would lead to a reduction in transportation-related energy consumption compared to existing conditions and 2040 no project conditions. As detailed in Table 4.15-1 of Section 4.15, "Transportation and Circulation," the proposed plan is anticipated to generate 29.87 VMT per service population, a decrease from both 2015 existing conditions and 2040 no project conditions. Under the 2040 proposed plan scenario, VMT per service population would be approximately 15 VMT per service population lower, or 33 percent lower, than 2015 existing conditions. Because VMT in the Plan Area would decrease, less fuel would be consumed for transportation purposes resulting in increased transportation-related energy efficiency.

Conclusion

Construction and operation of proposed plan development would result in increased use of electricity, natural gas, gasoline, and diesel. Development is anticipated to be typical of proposed industrial, retail, and office land uses and, similarly, energy consumption would be typical of such uses. Only the amount of fuel necessary to complete construction of proposed plan developments would be used. Operation of plan development would align with the goals of the General Plan by reducing VMT, creating jobs, and contributing to the local economy. Nevertheless, the proposed plan would allow for development that is not inherently energy efficient (i.e., decarbonized development, EV charging infrastructure to support use of EVs); therefore, operation of the proposed plan would result in the wasteful, inefficient, or unnecessary use of energy. This impact would be **significant**.

Mitigation Measures

Implement Mitigation Measures 4.3-1b, 4.3-1c, 4.3-1g, 4.3-1h, 4.3-1i, 4.3-1j, 4.3-1k, and 4.3-1l.

Mitigation Measure 4.6-1a: Require Electric Vehicle Infrastructure

To reduce criteria air pollution and GHG emissions, all future commercial and residential development shall be designed to meet the most ambitious electric vehicle infrastructure voluntary requirements of the most recent version of the CALGreen Code in effect at the time of project approval. This measure is subject to change depending on future updates to the CALGreen Code. Compliance with this measure shall be demonstrated to the City prior to the issuance of building permits to construct and shall be subject to City approval.

Mitigation Measure 4.6-1b: Incorporate Cool Communities Strategies

Development under the proposed plan shall incorporate strategies to cool the urban heat island, reduce energy use and ozone formation, and maximize air quality benefits by requiring new development to implement four key strategies: plant trees, selective use of vegetation for landscaping, install cool roofing, and install cool pavements.

Mitigation Measure 4.6-1c: Use Renewable Natural Gas

To reduce upstream GHG emissions and promote renewable energy resources, require proposed industrial land uses that are determined to require natural gas, to source renewable natural gas. Use of renewable natural gas reduces upstream GHG emissions by avoiding the potential for fugitive methane to be released from methane producing facilities and actions. Consistency with this measure requires a site-specific feasibility assessment to demonstrate that natural gas is required, and to determine availability of renewable gas sources, subject to City review and approval. Renewable natural gas is captured from wastewater treatment plants, dairies, and landfills and may be processed for uses that typically rely on fossil fuel natural gas, thus avoiding the global warming potential of fugitive methane emissions from these sources.

Mitigation Measure 4.6-1d: Require On-Site Clean Energy

Prior to future discretionary project approval, new developments shall demonstrate their capacity to include energy production and storage features on-site, including but not limited to, on-site solar, parking canopies with solar, and battery storage. The amount of on-site renewable energy that is needed for future development shall be based on the energy needs of the proposed development, and shall be capable of serving, at a minimum, 50 percent of the energy demand needed to operate the proposed project. Consistency with this measure shall be determined based

on a site-specific study required at the time of development approval that demonstrates available and feasible technology appropriate for the specific proposed use, or cannot be met, subject to City approval.

Significance after Mitigation

Implementation of Mitigation Measures 4.3-1b, 4.3-1c, 4.3-1g, 4.3-1h, 4.3-1i, 4.3-1j, 4.3-1k, and 4.3-1l, 4.6-1a, 4.6-1b, 4.6-1c, and 4.6-1d reduce the proposed plan's energy demand through the provision of EV infrastructure that meets the Tier 2 requirements of the CALGreen Code; inclusion of low-emission vehicles, electric development, on-site renewable energy, and use of renewable biogas; and use of clean construction fleets.

While the City cannot guarantee future industrial businesses would source their natural gas from renewable resources due to limitations regarding enforceability and availability of renewable natural gas to power heavy industrial processes, which could comprise the majority of the proposed plan, implementation of Mitigation Measures 4.3-1b, 4.3-1c, 4.3-1g, 4.3-1h, 4.3-1i, 4.3-1j, 4.3-1k, and 4.3-1l, 4.6-1a, 4.6-1b, 4.6-1c, and 4.6-1d would be sufficient to reduce this impact to a less-than-significant level if otherwise not prescribed. Thus, this impact would be **less than significant with mitigation**.

Impact 4.6-2: Conflict with or Obstruct a State or Local Plan for Renewable Energy or Energy Efficiency

The proposed plan would result in a reduction in VMT per service population relative to existing conditions and 2040 no project conditions through the implementation of policies that would improve conditions for the use of alternative modes of transportation and, therefore, promote the reduction of VMT. Additionally, the proposed plan would meet the mandatory EV charging requirements of the CALGreen Code and therefore promote the use of EVs.

Implementing the proposed plan would also result in new development that would, at minimum, comply with 2022 California Energy Code Standards, and with the progressively more stringent requirements of future Energy Code standards. However, the proposed plan does not include any policies that address building zero net energy (ZNE) for future land uses. Because the proposed plan does not include policies pertaining to ZNE for residential and nonresidential development, the proposed plan would conflict with the energy-related measures of the City's GHGRP, which requires that commercial projects achieve ZNE electricity. Therefore, the proposed plan would not be consistent with the GHGRP. This impact would be **significant**.

As discussed in Section 4.6.1, "Regulatory Setting," the City of Fresno adopted its most recent update to its GHGRP in 2021. The GHGRP includes GHG emission reduction targets, strategies, and implementation measures developed to help the City reach these targets. Reduction strategies address GHG emissions associated with transportation and land use, water, waste management and recycling, agriculture, open space, and energy. The GHGRP includes various policies that relate to energy consumption. The GHG reduction strategies identified in the GHGRP relies upon the General Plan and additional local measures as the basis of the development related strategies to reduce GHG emissions as well as energy consumption.

Development of the land uses under the proposed plan would meet the mandatory EV charging requirements of the CALGreen Code. This would be consistent with General Plan Policy RC-8-j.

As detailed in the discussion of Impact 4.6-1, implementing the proposed plan would result in a decrease in Plan Area VMT per service population and therefore fossil fuel combustion, relative to existing and no project conditions. This is because implementation of the proposed plan would create job-generating development that will reduce vehicle travel and fossil fuel consumption by shortening trips and potentially increasing the viability of alternate modes of transportation, including transit. This would be consistent with General Plan Policies RC-2-a, UF-1-c, UF-12-a, UF-12-b, UF-12-d, LU-3-b, and Objective-UF 12 and would serve to reduce energy associated with gasoline and diesel fuel use. Additionally, the proposed plan would be consistent with General Plan Policies MT-1-g, MT-2-c, and MT-8-a as they support the use of alternate modes of transportation to reduce VMT.

The proposed plan would be required, at minimum, to comply with the 2022 California Energy Code requirements for new development. As the California Energy Code is updated on a triennial basis, buildings would become more efficient over time as they are required to comply with the increasingly stringent standards of each iteration of the

Energy Code. However, the GHGRP recommends that commercial projects (such as those included in the proposed plan) achieve ZNE electricity. The proposed plan does not include policies that achieve ZNE for residential and nonresidential development. Therefore, the proposed plan would not be considered consistent with the GHGRP.

Conclusion

The proposed plan would be consistent with the GHGRP by including policies which would implement a mix of land uses (though mostly industrial), install EV chargers in quantities which would comply with the minimum CALGreen requirements, and reduce VMT. However, the proposed plan does not include policies that would achieve ZNE for residential and nonresidential development and would therefore not be consistent with the GHGRP which requires that commercial projects achieve ZNE electricity. Therefore, this impact would be **significant**.

Mitigation Measures

Implement Mitigation Measures 4.3-1b, 4.3-1c, 4.3-1g, 4.3-1h, 4.3-1i, 4.3-1j, 4.3-1k, 4.3-1l, 4.6-1a, 4.6-1b, 4.6-1c, and 4.6-1d.

Significance after Mitigation

Implementation of Mitigation Measures 4.3-1b, 4.3-1c, 4.3-1g, 4.3-1h, 4.3-1i, 4.3-1j, 4.3-1k, and 4.3-1l, 4.6-1a, 4.6-1b, 4.6-1c, and 4.6-1d reduce the proposed plan's energy demand through the provision of EV infrastructure that meets the Tier 2 requirements of the CALGreen Code; inclusion of low-emission vehicles, electric development, on-site renewable energy, and use of renewable biogas; and use of clean construction fleets.

While the City cannot guarantee future industrial businesses would source their natural gas from renewable resources due to limitations regarding enforceability and availability of renewable natural gas to power heavy industrial processes, which could comprise the majority of the proposed plan, implementation of Mitigation Measures 4.3-1b, 4.3-1c, 4.3-1g, 4.3-1h, 4.3-1i, 4.3-1j, 4.3-1k, and 4.3-1l, 4.6-1a, 4.6-1b, 4.6-1c, and 4.6-1d would be sufficient to reduce this impact to a less-than-significant level if otherwise not prescribed. Thus, this impact would be **less than significant with mitigation**.

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4.7 GEOLOGY, SOILS, AND MINERAL RESOURCES

This section describes applicable regulations and existing environmental conditions relative to geology, soils, mineral resources, and paleontological resources in the Plan Area. It also includes an analysis of environmental impacts on these resources that would result from implementation of the proposed plan and identifies recommended mitigation measures for any significant or potentially significant impacts. The primary sources of information used for this analysis are the City of Fresno General Plan (City of Fresno 2022), the Program Environmental Impact Report (PEIR) prepared for the General Plan (City of Fresno 2020), and the Fresno County Multi-Jurisdictional Hazard Mitigation Plan (Fresno County 2018).

During the public scoping period for the Draft EIR, two comment letters were received regarding the topic of geology and soils. In response to the NOP, a comment letter from community members within the Plan Area expressed concerns regarding various environmental topics, including concerns related to septic system failures. In addition, the State of California Department of Justice submitted a comment letter that generally states that warehouse projects may result in significant environmental impacts to various resources, including geology, but does not identify any specific concerns related to this topic area.

4.7.1 Regulatory Setting

FEDERAL

No federal policies or regulations pertaining to geology, soils, and mineral resources are applicable to the proposed plan.

STATE

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 (Alquist-Priolo Act) (PRC Sections 2621–2630) intends to reduce the risk to life and property from surface fault rupture during earthquakes by regulating construction in active fault corridors and by prohibiting the location of most types of structures intended for human occupancy across the traces of active faults. The act defines criteria for identifying active faults, giving legal support to terms such as “active” and “inactive,” and establishes a process for reviewing building proposals in earthquake fault zones. Under the Alquist-Priolo Act, faults are zoned and construction along or across these zones is strictly regulated if they are “sufficiently active” and “well defined.” A fault is considered sufficiently active if one or more of its segments or strands shows evidence of surface displacement during Holocene time (defined for purposes of the act as within the last 11,000 years). A fault is considered well defined if its trace can be clearly identified by a trained geologist at the ground surface or in the shallow subsurface, using standard professional techniques, criteria, and judgment (Bryant and Hart 2007). Before a project can be permitted in a designated Alquist-Priolo Earthquake Fault Zone, cities and counties must require a geologic investigation to demonstrate that proposed buildings would not be constructed across active faults. The law addresses only the hazard of surface fault rupture and is not directed toward other earthquake hazards.

Seismic Hazards Mapping Act

The intention of the Seismic Hazards Mapping Act of 1990 (PRC Section 2690–2699.6) is to reduce damage resulting from earthquakes. While the Alquist-Priolo Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including ground shaking, liquefaction, and seismically induced landslides. The act’s provisions are similar in concept to those of the Alquist-Priolo Act: The State is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other corollary hazards,

and cities and counties are required to regulate development within mapped Seismic Hazard Zones. Under the Seismic Hazards Mapping Act, permit review is the primary mechanism for local regulation of development.

California Building Code

The California Building Code (CBC) (CCR Title 24) is based on the International Building Code. The CBC has been modified from the International Building Code for California conditions to include more detailed or more stringent regulations. Specific minimum seismic safety and structural design requirements are set forth in Chapter 16 of the CBC. The CBC identifies seismic factors that must be considered in structural design. Chapter 18 of the CBC regulates the excavation of foundations and retaining walls, whereas Chapter 18A regulates construction on unstable soils, such as expansive soils and areas subject to liquefaction. Appendix J of the CBC regulates drainage and erosion control during grading activities. The CBC contains a provision that provides for a preliminary soil report to be prepared to identify "the presence of critically expansive soils or other soil problems which, if not corrected, would lead to structural defects" (CBC Chapter 18 Section 1803.1.1.1).

National Pollutant Discharge Elimination System Permit Program

As a result of the 1972 Federal Water Pollution Control Act, subsequently known as the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program was established for the purpose of reducing point sources of water pollution, which may include eroded sediment from construction sites and disturbed areas. NPDES permits are required for any 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. The NPDES permit program in California is administered by the State Water Resources Control Board and by the nine Regional Water Quality Control Boards (RWQCBs) that issue NPDES permits and enforce regulations within their respective regions. The following discussion includes a summary of NPDES permits applicable to the proposed plan, as they relate to geology and soils. Section 4.10, "Hydrology and Water Quality," provides additional discussion of the NPDES permit program as it relates to water quality.

NPDES Construction General Permit

Dischargers whose projects disturb one or more acres of soil or whose projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the NPDES General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit Order 2009-0009-DWQ (Construction General Permit). Construction activity subject to the Construction General Permit includes clearing, grading, and disturbances to the ground such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility.

The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP), which outlines controls designed to prevent harmful pollutants, including soil erosion, from being washed by stormwater runoff into local water bodies. For projects in Fresno County, the SWPPP must be submitted to the Central Valley RWQCB. Examples of erosion control measures that may be implemented at construction sites include covering disturbed areas with mulch, temporary seeding, soil stabilizers, binders, fiber rolls or blankets, temporary vegetation, and permanent seeding. Sediment control best management practices (BMPs) are a secondary means of preventing storm water contamination and may include installing silt fences or placing straw wattles below slopes. All measures must be periodically inspected, maintained, and repaired to ensure that receiving water quality is protected.

NPDES Municipal Separate Storm Sewer Systems Permit

The City of Fresno is covered under the General Permit for Discharges from Municipal Separate Storm Sewer Systems (MS4), Order R5-2016-0040 (MS4 Permit). The MS4 permit specifies "Planning and Land Development Requirements," which are intended to minimize the generation and discharge of pollutants in storm water from the MS4 system and minimize the potential of storm water discharges from causing altered flow regimes and excessive downstream erosion in receiving waters. The MS4 permit identifies control measures for new and redevelopment projects, which include defined criteria for Priority Development Projects, source and treatment control measures, numeric sizing

criteria, erosion control and sediment management, maintenance agreement and transfers, low impact development, hydromodification management practices, coordination, enforcement and tracking, and the implementation of best management practices to promote infiltration. Mitigation funding, regional storm water mitigation and alternatives to onsite low impact development and hydromodification measures options are also described.

Under the MS4 Permit, Priority Development Projects are required to incorporate appropriate storm water mitigation measures into the respective design plans. Priority Development Projects include the following: (1) single-family hillside residences, including development on any natural slope that is twenty-five percent or greater); (2) residential subdivisions of ten or more units; (3) 100,000-square-foot industrial/commercial development; (4) automotive repair shops; (5) restaurants; (6) parking lots with 5,000 square feet or more or with 25 or more parking space; and (7) redevelopment projects that are within one of these categories are included if the redevelopment adds or creates at least 5,000 square feet of impervious surface to the original developments; if the addition constitutes less than 50 percent of the original development, the design standard only applies to the addition. For these Priority Development Projects, the MS4 Permit specifies minimum management practices, control techniques, and design and engineering methods to reduce pollutant discharges from areas of new development and redevelopment. These stormwater management strategies are intended to reduce water pollution from point sources, such as pollution caused by soil erosion or loss of topsoil. Project applicants must demonstrate that post-project conditions are expected to approximate the pre-project erosive effect of sediment transporting flows in receiving waters. In addition, project applicants must demonstrate that project design features will be protective of the natural drainage systems from erosion, incision, and sedimentation that can occur as a result of flow increases from impervious surfaces and damage stream habitat in natural drainage systems.

State Laws Pertaining to Paleontological Resources

Section 5097.5 of the California Public Resources Code prohibits “knowing and willful” excavation, removal, destruction, injury, and defacement of any “vertebrate paleontological site, including fossilized footprints,” on public lands, except where the agency with jurisdiction has granted express permission. As used in this section, “public lands” means lands owned by, or under the jurisdiction of, the state, or any city, county, district, authority, or public corporation, or any agency thereof.

LOCAL

San Joaquin Valley Air Pollution Control District Rules and Regulations

As discussed in Section 4.3, “Air Quality,” the San Joaquin Valley Air Pollution Control District (SJVAPCD) has adopted rules and regulations regarding dust control. Although these rules and regulations were adopted for the purpose of reducing air pollutant emissions in the form of fugitive dust, these rules and regulations have the added benefit of stabilizing soils at construction sites in a manner that reduces the potential for wind erosion and sedimentation. The following discussion includes a summary of SJVAPCD rules applicable to the proposed plan, as they relate to geology and soils. Section 4.3, “Air Quality,” provides additional discussion of these rules as they relate to air pollution. The following rules and regulations are applicable to the proposed plan:

- ▶ Regulation VIII/Rule 8011: This rule requires project proponents to control fugitive dust emissions from sources that include construction sites; excavation and earthmoving activities; bulk material handling, storage, and transport; and vehicle movement on unpaved roads. Dust control may be achieved by applying water before and during earthwork and onto unpaved traffic areas, phasing work to limit dust, setting up wind fences to limit wind-blown dust, applying dust suppressants and establishing vegetative cover on areas of disturbed land, and limiting vehicle speeds on unpaved roads.
- ▶ Rule 8021: This rule requires project proponents to obtain approval of a Dust Control Plan prior to commencing construction activities for any project that meets the following thresholds: (1) non-residential projects that include 5 or more acres of disturbed surface area; (2) residential projects that include 10 or more acres of disturbed surface area; and (3) projects that involve the movement of 2,500 cubic yards or more of bulk material on any three days of the project, consecutive or otherwise, regardless of disturbed surface area. Projects subject to Dust

Control Plan requirements must also maintain records of the implemented dust control practices. Projects that do not meet these thresholds, but will disturb more than one acre of surface area require the submittal of a construction notification at least 48 hours prior to commencing construction activities.

City of Fresno General Plan

The Noise and Safety Element of the General Plan identifies natural safety hazards, including geologic and seismic hazards, that exist within the city and establishes preventative and responsive objectives, policies, and programs to mitigate potential impacts. The following objective and policies are applicable to the proposed plan:

Objective NS-2: Minimize risks of property damage and personal injury posed by geologic and seismic risks.

- ▶ **Policy NS-2-a: Seismic Protection.** Ensure seismic protection is incorporated into new and existing construction, consistent with the Fresno Municipal Code.
- ▶ **Policy NS-2-b: Soil Analysis Requirement.** Identify areas with potential geologic and/or soils hazards, and require development in these areas to conduct a soil analysis and mitigation plan by a registered civil engineer (or engineering geologist specializing in soil geology) prior to allowing on-site drainage or disposal for wastewater, stormwater runoff, or swimming pool/spa water.

The Public Utilities and Services Element of the General Plan provides a framework for the City to manage infrastructure and services, including septic systems. While this objective and policies were adopted for purposes of protecting groundwater quality, they also serve to prevent contamination of soils. The following objective and policies are applicable to the proposed plan:

Objective PU-5: Preserve groundwater quality and ensure that the health and safety of the entire Fresno community is not impaired by use of private, on-site disposal systems.

- ▶ **Policy PU-5-a: Mandatory Septic Conversion.** Continue to evaluate and pursue where determined appropriate the mandatory abatement of existing private wastewater disposal (septic) systems and mandatory connection to the public sewage collection and disposal system.
- ▶ **Policy PU-5-b: Non-Regional Treatment.** Discourage, and when determined appropriate, oppose the use of private wastewater (septic) disposal systems, community wastewater disposal systems, or other nonregional sewage treatment and disposal systems within or adjacent to the Metropolitan Area if these types of wastewater treatment facilities would cause discharges that could result in groundwater degradation.

The Resource Conservation and Resilience Element of the General Plan establishes objectives and policies for the conservation of natural resources in the city, including mineral resources. The following objective and policy are applicable to the proposed plan:

Objective RC-10: Conserve aggregate mineral resources within the Planning Area, as identified by the Division of Mines and Geology, and allow for responsible extraction to meet Fresno's needs.

- ▶ **Policy RC-10-d: Manage MRZ-2 Areas.** Prohibit land uses and development projects that preclude mineral extraction in potential high-quality mineral resource areas designated MRZ-2 by the California Department of Conservation Division of Mines and Geology.

Fresno Municipal Code

The City of Fresno Municipal Code includes various sections related to geologic and soil hazards and erosion control, which are summarized as follows:

- ▶ Sections 11-101 and 11-102 include, by incorporation, the adopted 2022 CBC and the City's amendments.
- ▶ Sections 12-1022 and 12-1023 require subdividers to submit grading plans and a soils report to the City of Fresno Planning and Development Department for verification prior to Final Map approval.
- ▶ Section 15-2304 requires that landscape plans be submitted with permit applications, which would identify proposed landscape elements and measures to control erosion.

4.7.2 Environmental Setting

REGIONAL GEOLOGY

The Plan Area is within the Great Valley geomorphic province, which is an alluvial plain that is approximately 50 miles wide and 400 miles long in central California. The Great Valley is a trough in which sediments have been deposited almost continuously since the Jurassic period (about 160 million years ago). The Plan Area is within the southern extent of the Great Valley, which is comprised of the San Joaquin Valley and is drained by the San Joaquin River (CGS 2002). The San Joaquin Valley is bordered to the north by the Sacramento Valley portion of the Great Valley, to the east by the Sierra Nevada, to the west by the Coast Ranges, and to the south by the Transverse Ranges. The San Joaquin sedimentary basin is separated from the Sacramento basin to the north by the buried Stockton arch and associated Stockton Fault (City of Fresno 2020).

LOCAL GEOLOGY

The Plan Area is located in the southern and southeastern portion of the city of Fresno, which is set on gently southwest-sloping alluvial fans and plains formed by the San Joaquin and Kings rivers (City of Fresno 2020). Based on geologic mapping by the California Geological Survey, the Plan Area is underlain with Quaternary Period (2.58 million years ago to present) deposits, consisting of (1) alluvium, lake, playa and terrace deposits; unconsolidated and semi-consolidated and (2) older alluvium, lake, playa, and terrace deposits (CGS 2015).

TOPOGRAPHY AND DRAINAGE

The majority of the Plan Area is relatively flat, with the natural topography generally trending from the northeast towards the southwest. Elevations range from approximately 260 to 320 feet above mean sea level. The historically natural, agricultural, and constructed flow for drainage channels predominately follows the northeast to southwest trend. However, because portions of the Plan Area were historically developed for agricultural use, there are also many subchannels designed to transport water in a northwest-southeast direction.

GROUNDWATER

Within the city of Fresno, groundwater has been encountered near the surface in the vicinity of existing ponds, lakes, ditches, and canals, to depths greater than 100 feet below the ground surface. Review of groundwater elevation data from the California Department of Water Resources dating from the 1950s to 2019 indicates that depth to groundwater in the City of Fresno ranged from 0 feet to greater than 100 feet below the ground surface (City of Fresno 2020).

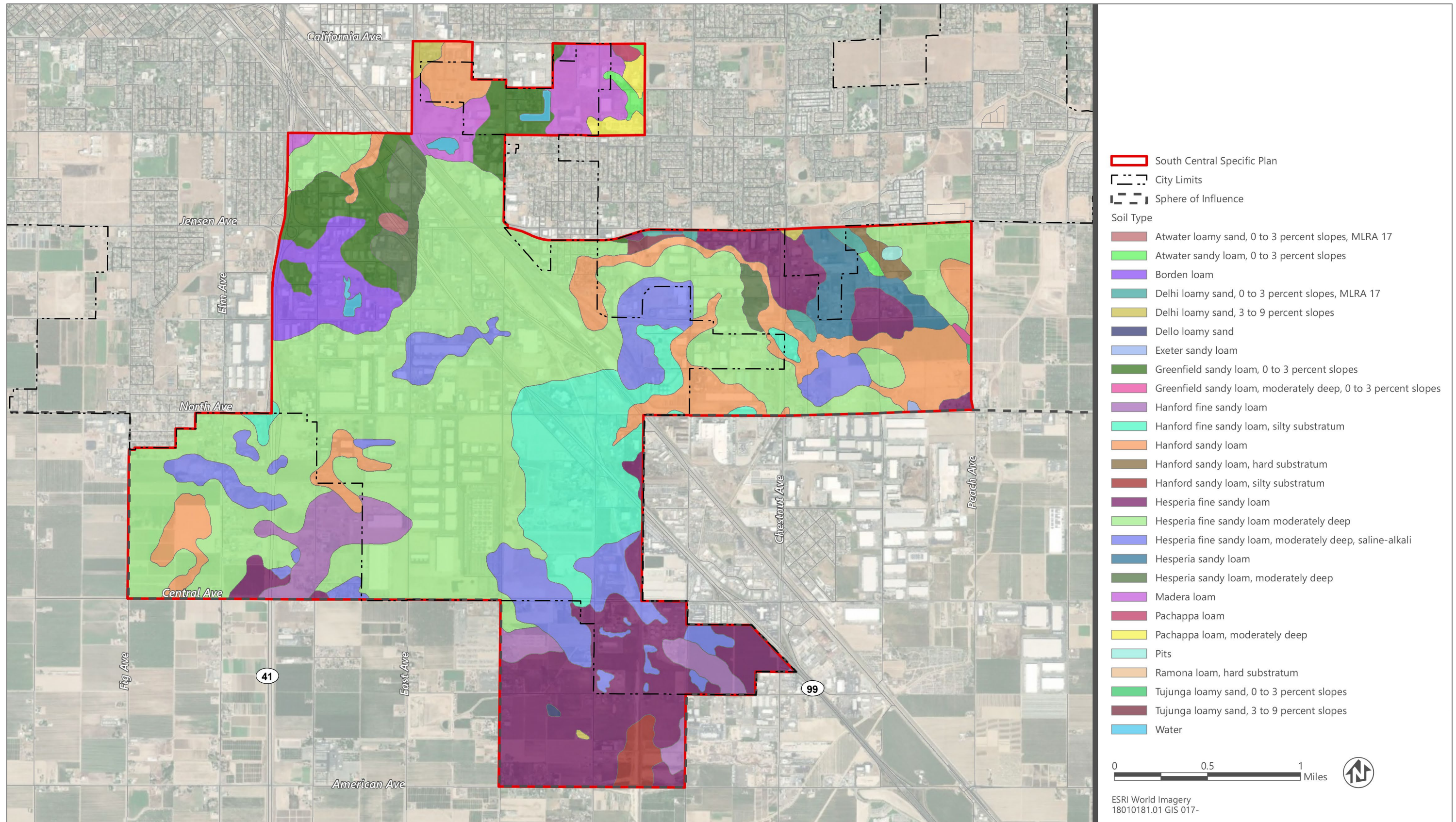
SOILS

Table 4.7-1 presents a summary of the soil series present in the Plan Area. As shown in Table 4.7-1, the dominant soil series are Hesperia, which makes up 64 percent of the Plan Area, and Hanford, which makes up 22 percent of the Plan Area. Both of these soil series have a negligible to low surface runoff potential and moderately rapid to rapid permeability. Soil types in the Plan Area are shown in Figure 4.7-1.

Table 4.7-1 Soil Types

Soil Series	Description	Permeability	Surface Runoff Potential	Percent of Plan Area
Atwater	Very deep, well-drained soils formed in granitic alluvium.	Moderately rapid	Slow	<1%
Borden	Moderately well- to well-drained fine-loamy soil.	Moderately slow to slow	Slow	3%
Delhi	Very deep, somewhat excessively drained soils formed in wind-modified material weathered from granitic rock sources and found on floodplains, alluvial fans, and terraces.	Rapid	Negligible to slow	<1%
Dello	Very deep, very poorly drained soils that formed in alluvium from granitic rock sources.	Rapid	Slow	<1%
Exeter	Moderately deep, moderately well-drained soils that formed in alluvium mainly from granitic sources and found on alluvial fans and stream terraces.	Slow to moderately slow	Slow to medium	<1%
Greenfield	Deep, well-drained soils that formed in moderately coarse and coarse textured alluvium derived from granitic and mixed rock sources and found on alluvial fans and terraces.	Moderately rapid	Slow to medium	5%
Hanford	Very deep, well-drained soils that formed in moderately coarse textured alluvium dominantly from granite and found on stream bottoms, floodplains, and alluvial fans.	Moderately rapid	Negligible to low	22%
Hesperia	Very deep, well-drained soils that formed in alluvium derived primarily from granite and related rocks and found on alluvial fans	Rapid	Negligible to low	64%
Madera	Moderately deep to hardpan, well- or moderately well-drained soils that formed in old alluvium derived from granitic rock sources and found on undulating low terraces.	Very slow	Medium to very slow	3%
Pachappa	Well-drained soils developed from moderately coarse textured alluvium and found on gently sloping alluvial fans and flood plains.	Moderate	Very slow	<1%
Ramona	Well-drained, fine-loamy soil.	Moderately slow	Slow to Rapid	<1%
Tujunga	Very deep, somewhat excessively drained soils that formed in alluvium from granitic sources and found on alluvial fans and floodplains, including urban areas.	NA	Negligible to low	<1%

Source: Natural Resources Conservation Service n.d.



Source: adapted by Ascent in 2023

Figure 4.7-1 Soil Types in the South Central Specific Plan Area

EROSION

Erosion is the general process whereby rocks and soils are broken down, removed by weathering, or fragmented and then deposited in other places by water or air. The rate of erosion depends on many variables, including the soil or rock texture and composition, soil permeability, slope, extent of vegetative cover, and precipitation amounts and patterns. Erosion increases with increasing slope and precipitation and with decreasing vegetative cover, which includes areas where protective vegetation has been removed by fire, construction, or cultivation.

Based on maps provided in the Fresno County Multi-Hazard Mitigation Plan, the Plan Area is not within an area of steep slopes or within a generalized erosion hazard area (Fresno County 2018: Figure 4.25 and Figure 4.26). Areas with moderately high to high erosion potential in Fresno County include areas of certain soil types in the Sierra Nevada and the foothills that generally coincide with slopes that exceed 30 percent. Within the valley, areas with severe erosion potential include areas around and east of the Fresno Slough and areas along the San Joaquin River Bluff. In western Fresno County, areas located primarily west of Interstate 5 in the Coast Range foothills are also subject to moderate to severe erosion potential.

SUBSIDENCE

Land subsidence is the gradual settling or sinking of an area with very little horizontal motion. Subsidence can be induced by both natural and human phenomena. Natural phenomena include shifting of tectonic plates and dissolution of limestone resulting in sinkholes. Subsidence related to human activity includes pumping water, oil, and gas from underground reservoirs; collapse of underground mines; drainage of wetlands; and soil compaction. Based on maps provided in the Fresno County Multi-Hazard Mitigation Plan, the Plan Area is not within an area of subsidence. The nearest areas of subsidence are located in western Fresno County, over 20 miles west and southwest of the Plan Area (Fresno County 2018: Figure 4.23).

EXPANSIVE SOILS

Expansive soils (also known as shrink-swell soils) are soils that contain expansive clay minerals that can absorb significant amounts of water. The presence of these clay minerals makes the soil prone to large changes in volume in response to changes in water content. When an expansive soil becomes wet, water is absorbed and it increases in volume, and as the soil dries it contracts and decreases in volume. This repeated change in volume over time can produce enough force and stress on buildings, underground utilities, and other structures to damage foundations, pipes, and walls.

The Fresno County Multi-Hazard Mitigation Plan identifies generalized locations within Fresno County where soils exhibit moderately high to high expansion potential. Expansive soils within Fresno County generally occur in a northwest-southeast-trending belt approximately parallel to the Friant-Kern Canal and Sierra Nevada foothills in Kings Canyon National Park in the Sierra Nevada, along the Fresno Slough from Madera County to Kings County, and roughly parallel to the San Luis Drain west of the community of Tranquility and the City of San Joaquin. Soils with moderately high to high expansion potential are not located within the Plan Area (Fresno County 2018: Figure 4.29).

MASS WASTING AND LANDSLIDES

Mass wasting refers to the collective group of processes that characterize down slope movement of rock and unconsolidated sediment overlying bedrock. These processes include landslides, slumps, rockfalls, flows, and creeps. Many factors contribute to the potential for mass wasting, including geologic conditions as well as the drainage, slope, and vegetation of the site.

The Fresno County Multi-Hazard Mitigation Plan identifies areas within Fresno County with moderate to high risk of landslide hazards. Landslide hazard areas within Fresno County are concentrated in the foothill and mountain areas where fractured and steep slopes are present (i.e., the Sierra Nevada), areas where less consolidated or weathered

soils overlie bedrock (e.g., the Coast Range), and areas where inadequate ground cover accelerates erosion (e.g., along the San Joaquin River). The central portion of Fresno County, including the Plan Area, is at low risk for landslides (Fresno County 2018: Figure 4.23). The topography within the Plan Area is relatively flat; therefore, the probability of a landslide is considered nonexistent.

SEISMICITY

Most earthquakes originate along fault lines. A fault is a fracture in the Earth's crust along which rocks on one side are displaced relative to those on the other side due to shear and compressive crustal stresses. Most faults are the result of repeated displacement that may have taken place suddenly and/or by slow creep (Bryant and Hart 2007). The state of California has a classification system that designates faults as either active, potentially active, or inactive, depending on how recently displacement has occurred along them. Faults that show evidence of movement within the last 11,000 years (the Holocene epoch) are considered active, and faults that have moved between 11,000 and 1.6 million years ago (comprising the later Pleistocene geologic period) are considered potentially active.

Seismic hazards resulting from earthquakes include surface fault rupture, ground shaking, liquefaction, and lateral spreading. Each of these potential hazards is discussed in the sections below.

Surface Fault Rupture

Surface rupture is the surface expression of movement along a fault. Structures built over an active fault can be torn apart if the ground ruptures. The potential for surface rupture is based on the concepts of recency and recurrence. Surface rupture along faults is generally limited to a linear zone a few meters wide. The Alquist-Priolo Act (see Section 4.7.1, "Regulatory Setting") was created to prohibit the location of structures designed for human occupancy across, or within 50 feet of, an active fault, thereby reducing the loss of life and property from an earthquake. Based on mapping by the California Geological Survey, no known active faults have been identified within or adjacent to the city of Fresno. The nearest active fault is the Nunez Fault, an Alquist-Priolo fault trace that is located over 50 miles southwest of the Plan Area centered near Coalinga (CGS 2021).

Ground Shaking

The intensity of seismic shaking, or strong ground motion, during an earthquake is dependent on the distance and direction from the epicenter of the earthquake, the magnitude of the earthquake, and the geologic conditions of the surrounding area. Ground shaking could potentially result in the damage or collapse of buildings and other structures.

According to the Fresno County Multi-Jurisdictional Hazard Mitigation Plan, most of Fresno County is situated within an area of relatively low seismic activity. The faults and fault systems that lie along the eastern and western boundaries of Fresno County, as well as other regional faults, have the potential to produce high-magnitude earthquakes and moderate intensity ground shaking throughout Fresno County. Two historic earthquakes that caused very strong ground shaking in the region are the Owens Valley Earthquake of 1872 and the Coalinga Earthquake of 1983 (Fresno County 2018).

The valley portion of Fresno County is located on alluvial deposits, which tend to experience greater ground shaking intensities than areas located on hard rock. Therefore, structures in the valley areas would tend to suffer greater damage from ground shaking than those located in the foothill and mountain areas. Most of Fresno County, from approximately Interstate 5 east, is located in Seismic Zone 3, as defined by the most recent CBC (Fresno County 2018). Seismic ground shaking is expected in the Plan Area over the lifetime of the proposed plan implementation.

Liquefaction and Lateral Spreading

Liquefaction is a process whereby soil is temporarily transformed to a fluid form during intense and prolonged ground shaking. Areas most prone to liquefaction are those that are water saturated (e.g., where the water table is less than 30 feet below the surface) and consist of relatively uniform sands that are loose to medium density. In addition to necessary soil conditions, the ground acceleration and duration of the earthquake must be of sufficient energy to induce liquefaction. Scientific studies have shown that the ground acceleration must approach 0.3g (where

g is defined as the acceleration due to Earth's gravity, equivalent to g-force) before liquefaction occurs in a sandy soil with relative densities typical of the San Joaquin alluvial deposits.

According to the Fresno County Multi-Jurisdictional Hazard Mitigation Plan, no specific countywide assessments to identify liquefaction hazards have been performed. Review of groundwater elevation data from the California Department of Water Resources dating from the 1950s to 2019 indicates that depth to groundwater in the City of Fresno ranged from 0 feet to greater than 100 feet below the ground surface (City of Fresno 2020). However, soil types in the region are generally not conducive to liquefaction, because they are either too coarse or too high in clay content. Within Fresno County, areas subject to 0.3g acceleration or greater are located in a small section of the Sierra Nevada along the Fresno-Inyo border and along the Coast Range foothills in western Fresno County (Fresno County 2018).

The predominant soils within the city of Fresno consist of varying combinations of loose/very soft to very dense/hard silts, clays, sands, and gravels. Groundwater has been encountered near the ground surface in close proximity to water-filled features such as canals, ditches, ponds, and lakes. Based on these characteristics, the potential for soil liquefaction within the city ranges from very low to moderate due to the variable density of the subsurface soils and the presence of shallow groundwater (City of Fresno 2020).

Liquefaction may also lead to lateral spreading. Lateral spreading (also known as expansion) is the horizontal movement or spreading of soil toward an "open face," such as a streambank, the open side of fill embankments, or the sides of levees. Lateral spreading often occurs in response to liquefaction of soils in an adjacent area. The potential for failure from lateral spreading is highest in areas where there is a high groundwater table, where there are relatively soft and recent alluvial deposits, and where creek banks are relatively high. Because the Plan Area is on flat terrain and relatively distant from the San Joaquin River, lateral spreading caused by liquefaction is not expected to be a concern within the Plan Area.

PALEONTOLOGICAL RESOURCES

Based on a review of geological maps, the city of Fresno is underlain with Quaternary alluvium with two primary surficial deposits: 1) Pleistocene non-marine and, 2) Quaternary non-marine fan deposits. The Pleistocene non-marine deposits have been more recently referred to as the Riverbank Formation, and are considered to have high paleontological sensitivity. The Quaternary non-marine terrace deposits consist of undifferentiated Pleistocene-Holocene alluvial sediments and are also considered to have high paleontological sensitivity. Paleontological specimens have been recorded in surrounding Fresno County, but none have been recorded within the Fresno metropolitan area, including the Plan Area (City of Fresno 2020).

MINERAL RESOURCES

The Plan Area is included in a mineral land classification report for the Fresno region, as mapped by the California Division of Mines and Geology (now the California Geological Survey). The Plan Area is classified under the Surface Mining and Reclamation Act of 1975 as MRZ-3, which encompasses areas that contain mineral deposits, but the significance of which cannot be evaluated from available data (California Division of Mines & Geology 1986).

Under Fresno's Citywide Development Code, the Mining (M) Overlay District was established to allow ongoing mineral extraction in the San Joaquin River bottom in conjunction with open space uses. The City of Fresno permits mining and quarrying only within this overlay district, which is concentrated along the San Joaquin River corridor. The Plan Area is located approximately 9 miles south of the nearest point of the San Joaquin River and is not within the City's Mining (M) Overlay District. No portions of the Plan Area are currently used for mineral resource extraction.

4.7.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

The examination of geology, soils, and mineral resources is based on information obtained from reviews of:

- ▶ the description of the proposed plan;
- ▶ available literature, including documents published by the City of Fresno, Fresno County, State and federal agencies, and published information dealing with geotechnical conditions in the San Joaquin Valley; and
- ▶ applicable elements from the City of Fresno General Plan (City of Fresno 2022) and the PEIR prepared for the General Plan (City of Fresno 2020).

THRESHOLDS OF SIGNIFICANCE

An impact related to geology, soils, and mineral resources would be significant if implementation of the proposed plan would:

- ▶ directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death through the rupture of a known earthquake fault, strong seismic shaking, seismic-related ground failure, soil 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, 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;
- ▶ directly or indirectly destroy a unique paleontological resource or site or unique geologic feature;
- ▶ result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state; or
- ▶ 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.

ISSUES NOT DISCUSSED FURTHER

Septic Tanks and Alternative Wastewater Disposal Systems

Septic tanks and alternative wastewater systems would not be installed within the Plan Area. In compliance with Fresno Municipal Code Section 6-303 – Sewer Connection Required, future development would connect with the City of Fresno's municipal sewer system. Therefore, implementation of the proposed plan would not have any significant impacts related to soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems. This issue is not discussed further in this Draft EIR.

Mineral Resources

As described in Section 4.7.2, "Environmental Setting," the Plan Area is not within the City's Mining (M) Overlay District and no portions of the Plan Area are currently used for mineral resource extraction. Land use designations within the Plan Area include a mixture of industrial, commercial, agriculture, public facility, and open space land uses, which preclude the extraction of mineral resources within the Plan Area. Therefore, implementation of the proposed

plan would not have any significant impacts related to the loss of availability of mineral resources or important mineral resource recovery sites. This issue is not discussed further in this Draft EIR.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 4.7-1: Directly or Indirectly Cause Potential Substantial Adverse Effects Involving Fault Rupture, Strong Seismic Ground Shaking, or Seismic Related Ground Failure

The Plan Area is not susceptible to surface fault rupture and landslides. Development under the proposed plan would be required to comply with CBC and the City of Fresno's Municipal Code requirements, which include preparing and incorporating the recommendations of site-specific geotechnical and engineering reports. Compliance with the CBC and the City of Fresno's Municipal Code would minimize hazards from seismic ground shaking and seismic-related ground failure. Therefore, the impact related to the potential to expose people or structures to substantial adverse impacts from seismic ground-shaking or related ground failure would be **less than significant**.

The following sections describe the potential for implementation of the proposed plan to expose people or structures to substantial adverse impacts from seismic hazards, including rupture of a known earthquake fault, strong seismic shaking, seismic-related ground failure, soil liquefaction, and landslides.

Surface Fault Rupture

As discussed in Section 4.7.2, "Environmental Setting," there are no active faults within the Plan Area. The nearest active fault is the Nunez Fault, an Alquist-Priolo fault trace that is located over 50 miles southwest of the Plan Area (CGS 2021). Therefore, implementation of the proposed plan would not place new development within an active fault zone and would not expose people or structures to substantial adverse impacts from surface fault rupture. No impact would occur.

Strong Seismic Shaking

As discussed in Section 4.7.2, "Environmental Setting," seismic ground shaking is expected in the Plan Area over the lifetime of proposed plan implementation. Proposed projects in the Plan Area would be designed to withstand strong ground shaking, because all built projects are required to comply with the CBC, as incorporated in Section 11-101 of the City of Fresno's Municipal Code, along with the City's amendments included in Municipal Code Section 11-102. In addition, development within the Plan Area would be required to comply with General Plan Policy NS-2-a, which requires new construction to incorporate seismic protection in accordance with the Fresno Municipal Code, and Policy NS-2-b, which requires the preparation of a soil analysis and mitigation plan for development in areas with potential geologic and soils hazards. Implementation of these requirements would be enforced through the City's building permit process. Compliance with these regulatory requirements would ensure that structures are built to meet seismic building codes and that the potential effects of seismic ground shaking from development under the proposed plan would be minimized. Therefore, implementation of the proposed plan would not expose people or structures to substantial adverse impacts from seismic ground shaking and this impact would be less than significant.

Seismic-Related Ground Failure, Including Liquefaction

As discussed in Section 4.7.2, "Environmental Setting," no specific countywide assessments to identify liquefaction hazards have been performed, but the potential for soil liquefaction within the city of Fresno is expected to range from very low to moderate due to the variable density of the subsurface soils and the presence of shallow groundwater (City of Fresno 2020).

As noted above, all built projects would be required to comply with the CBC, as incorporated in Section 11-101 of the City of Fresno's Municipal Code, along with the City's amendments included in Municipal Code Section 11-102. The CBC requires preparation of a site-specific geotechnical engineering investigation for new development, which would contain recommendations to reduce seismic, geologic, and soils hazards. Based on the findings of the geotechnical engineering investigation, new development would incorporate appropriate standard engineering practices and specifications to minimize risk of structural failure in a seismic event and would reduce secondary effects that may

occur as a result. Implementation of these standard engineering practices and specifications would be enforced through the City's building permit process. Compliance with these regulatory requirements would ensure that the potential effects of seismic-related ground failure from development under the proposed plan would be minimized. Therefore, implementation of the proposed plan would not expose people or structures to substantial adverse impacts from seismic-related ground failure and this impact would be less than significant.

Landslides

As discussed in Section 4.7.2, "Environmental Setting," the central portion of Fresno County, including the Plan Area, is at low risk for landslides (Fresno County 2018: Figure 4.23). The topography within the Plan Area is relatively flat and the probability of a landslide is considered nonexistent. Therefore, implementation of the proposed plan would not expose people or structures to substantial adverse impacts from landslides. No impact would occur.

Summary

Based on the above discussion, implementation of the proposed plan would have no impact related to surface fault rupture and landslides. Because the proposed project would comply with the requirements of the CBC, which include preparing a site-specific geotechnical and engineering report and incorporating the appropriate standard engineering practices and specifications, hazards related to seismic ground shaking and seismic-related ground failure would be minimized. Therefore, the potential to expose people or structures to substantial adverse impacts from seismic or geologic hazards would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.7-2: Result in Substantial Soil Erosion or the Loss of Topsoil

Development associated with implementation of the proposed plan could result in soil erosion. For any construction activities that disturb greater than one acre of soil, project proponents would be required to prepare a SWPPP and implement BMPs designed to control stormwater runoff and reduce erosion from construction sites. In addition, construction activities would be subject to SJVAPCD rules regarding dust control, which would reduce the potential for erosion and sedimentation. Further, individual projects meeting specific criteria would be required to incorporate post-construction stormwater management strategies to reduce the potential for erosion from new development and redevelopment. Therefore, the impact related to substantial soil erosion or the loss of topsoil would be **less than significant**.

As discussed in Section 4.7.2, "Environmental Setting," the Plan Area is not within an area of steep slopes or within a generalized erosion hazard area. However, development under the proposed plan involving substantial ground disturbance and earth-moving activities or changes to drainage patterns would have potential to result in soil erosion or the loss of topsoil. The following sections describe the potential for implementation of the proposed plan to result in substantial soil erosion or the loss of topsoil during construction and operation of new development or redevelopment projects.

Construction

Future construction activities that would occur as a result of individual projects implemented under the proposed plan would be subject to compliance with the Clean Water Act. For any projects that disturb greater than one acre of soil, project proponents would be required to obtain coverage under the NPDES Construction General Permit. As described in Section 4.7.1, "Regulatory Setting," the NPDES Construction General Permit requires development and implementation of a SWPPP that identifies BMPs designed to control stormwater runoff and reduce erosion and sedimentation. Specifically, BMPs may include silt fences, sedimentation ponds, erosion control blankets, vegetative covers, and soil binders. A SWPPP may also identify sediment and erosion controls for areas where permanent or post-construction stormwater controls (e.g., bioretention ponds and swales) would be constructed.

Construction activities would also be subject to SJVAPCD Regulation VIII/Rule 8011 and Rule 8021 governing dust control, as described in Section 4.7.1, "Regulatory Setting." Although these rules were adopted for the purpose of

reducing air pollutant emissions in the form of fugitive dust, these rules and regulations have the added benefit of stabilizing soils at construction sites in a manner that reduces the potential for wind erosion and sedimentation. In compliance with Rule 8011, project proponents would be required to implement dust control measures at construction sites, prior to any excavation and earthmoving activities, during bulk material handling, storage, and transport, and prior to vehicle movement on unpaved roads. Dust control measures may include applying water before and during earthwork and onto unpaved traffic areas, phasing work to limit dust, applying dust suppressants and establishing vegetative cover on areas of disturbed land, and limiting vehicle speeds on unpaved roads. Under Rule 8021, projects meeting certain criteria (identified in Section 4.7.1) would also be required to implement a Dust Control Plan.

Because project proponents would be required to comply with Central Valley RWQCB and SJVAPCD requirements, which include implementation of a project-specific SWPPP with BMPs designed to control stormwater runoff and reduce erosion and implementation of dust control measures, substantial soil erosion would not result during construction of projects implemented as part of the proposed plan.

Operation

Areas of new development or redevelopment implemented under the proposed plan would generally be hardscaped and landscaped, which would minimize the area of bare ground that could be subject to wind erosion. However, projects that increase impervious surfaces within the Plan Area could alter topographic features at individual project sites. The alteration of topographic features could lead to increased erosion by creating unstable rock or soil surfaces, changing the permeability or runoff characteristics of the soil, or modifying or creating new pathways for drainage. Because much of the Plan Area is relatively flat and the locations of projects that would substantially alter topography are limited, there would be minimal geotechnical effects related to erosion.

Implementation of the proposed plan could result in larger development or redevelopment projects that would meet the criteria of a Priority Development Project (e.g., 100,000-square-foot industrial/commercial development, automotive repair shops, parking lots with 5,000 square feet or more or with 25 or more parking space). Under the NPDES MS4 Permit, these projects would be required to implement minimum management practices, control techniques, and design and engineering methods to reduce pollutant discharges from areas of new development and redevelopment. These stormwater management strategies are intended to reduce water pollution from point sources, such as pollution caused by soil erosion or loss of topsoil. Under the NPDES MS4 Permit, project applicants must also demonstrate that post-project conditions would approximate the pre-project erosive effect of sediment transporting flows in receiving waters. As also required under the NPDES MS4 Permit, project applicants must demonstrate that project design features would be protective of the natural drainage systems from erosion, incision, and sedimentation that can occur as a result of flow increases from impervious surfaces and damage stream habitat in natural drainage systems. Examples of stormwater management strategies include low impact development design features intended to maintain natural drainage and reduce pervious surfaces (e.g., bioretention planters, vegetated swales, infiltration basins, and porous pavement).

As applicable, project proponents would also be required to comply with provisions of the City of Fresno Municipal Code governing erosion. For example, Sections 12-1022 and 12-1023 require subdividers to submit grading plans and a soils report to the City of Fresno Planning and Development Department for verification prior to Final Map approval. Section 15-2304 requires that landscape plans be submitted with permit applications, which would identify proposed landscape elements and measures to control erosion.

Because project proponents would be required to implement design features that would reduce the potential for erosion or loss of topsoil in accordance with the NPDES MS4 permit and applicable municipal regulations, substantial soil erosion would not result during the operation of projects implemented as part of the proposed plan.

Summary

Based on the above discussion, compliance with existing regulations would ensure the construction and operation of individual development projects implemented under the proposed plan would reduce the potential of erosion or loss of topsoil. Therefore, the potential to result in substantial soil erosion or loss of topsoil would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.7-3: Be Located on a Geologic Unit or Soil That Is Unstable, or That Would Become Unstable as a Result of Specific Plan Development Resulting in Landslide, Lateral Spreading, Subsidence, Liquefaction, or Collapse

Based on its topography and soil characteristics, the Plan Area is not susceptible to landslides, lateral spreading, subsidence, or collapse. Development under the proposed plan would be required to comply with CBC and the City of Fresno's Municipal Code requirements, which include preparing and incorporating the recommendations of site-specific geotechnical and engineering reports. Compliance with the CBC and the City of Fresno's Municipal Code, enforced through the City's building permit process, would minimize potential hazards related to liquefaction. Therefore, the impact related to the potential for these hazards would be **less than significant**.

As discussed in Section 4.7.2, "Environmental Setting," the Plan Area is not susceptible to landslides, lateral spreading, subsidence, or collapse because of its soil characteristics and relatively flat topography. Impact 4.7-1 above discusses the potential for implementation of the proposed plan to result in hazards related to liquefaction. As noted above, all built projects are required to comply with the CBC, as incorporated in Section 11-101 of the City of Fresno's Municipal Code, along with the City's amendments included in Municipal Code Section 11-102. The CBC requires preparation of site-specific geotechnical engineering investigations for new development, which contain recommendations to reduce seismic, geologic, and soils hazards. Based on the findings of project-specific geotechnical engineering investigations, new development would incorporate appropriate standard engineering practices and specifications to minimize risk of structural failure from landslides, lateral spreading, subsidence, liquefaction, and collapse. Implementation of these standard engineering practices and specifications would be enforced through the City's building permit process. Compliance with these regulatory requirements would ensure that the potential effects of unstable geologic units or soils from development under the proposed plan would be minimized. Therefore, implementation of the proposed plan would not locate new development on a geologic unit or soil that is unstable, or that would become unstable as a result of the development, such that landslide, lateral spreading, subsidence, liquefaction, or collapse would result. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.7-4: Be Located on Expansive Soil, Creating Substantial Direct or Indirect Risks to Life or Property

Based on source materials reviewed, there is no evidence that the Plan Area contains soils with moderately high to high expansion potential. Regardless, future development implemented in accordance with the proposed plan would comply with CBC and the City of Fresno's Municipal Code requirements, which include preparing and incorporating the recommendations of a site-specific geotechnical and engineering report. Compliance with the CBC and the City of Fresno's Municipal Code, enforced through the City's building permit process, would minimize hazards related to expansive soils, if found to be present. Therefore, the potential to create substantial direct or indirect risks to life or property from locating project facilities on expansive soils would be **less than significant**.

As discussed in Section 4.7.2, "Environmental Setting," the Fresno County Multi-Hazard Mitigation Plan identifies generalized locations of expansive soils within the county and none were identified within the Plan Area. Regardless, all built projects would be required to comply with the CBC, as incorporated in Section 11-101 of the Fresno Municipal Code, and amendments included in Municipal Code Section 11-102. The CBC requires preparation of a site-specific geotechnical engineering investigation for each new development, which would contain recommendations to reduce seismic, geologic, and soils hazards. Based on the findings of the geotechnical engineering investigation, new development would incorporate appropriate standard engineering practices and specifications to minimize risks from

expansive soils, if expansive soils are determined to be present. Implementation of these standard engineering practices and specifications would be enforced through the City's building permit process. Compliance with these regulatory requirements would ensure that the potential effects from development on expansive soils under the proposed plan would be minimized. Therefore, implementation of the proposed plan would not create substantial risks to life or property from locating development on expansive soil and this impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.7-5: Directly or Indirectly Destroy a Unique Paleontological Resource or Site or Unique Geologic Feature

Construction of future development projects under the proposed plan could require ground disturbance within previously undisturbed soils and in areas of high sensitivity for paleontological resources. Such development has the potential to destroy a unique paleontological resource or site or unique geologic feature. This impact would be **potentially significant**.

As discussed in Section 4.7.2, "Environmental Setting," paleontological specimens have not been recorded within the Fresno metropolitan area, including the Plan Area (City of Fresno 2020). However, geologic deposits that underlie the Plan Area (Pleistocene non-marine deposits and Quaternary non-marine terrace deposits) may have a high paleontological sensitivity.

Future development under the proposed plan would require ground-disturbing activities throughout the Plan Area. It is anticipated that excavation would be primarily limited to areas of previous ground disturbance, including areas that have been previously developed with industrial, commercial, agriculture, and public facility land uses. However, future development may occur in areas of high paleontological sensitivity and within previously undisturbed soils. If previously undiscovered paleontological resources are encountered during ground-disturbing activities, damage to or destruction of a paleontological resource would be considered a **potentially significant** impact.

Mitigation Measures

Mitigation Measure 4.7-5: Follow Procedures to Protect Paleontological Resources

After preliminary review by the City of grading plans for development within the Plan Area, if there is evidence that a project will include excavation or construction activities within previously undisturbed soils, a field survey and literature search for unique paleontological resources and unique geologic features shall be conducted. The following procedures shall be followed:

- ▶ If paleontological resources and unique geologic features are not found during either the field survey or literature search, excavation and/or construction activities can commence. In the event that paleontological resources or unique geologic features are discovered during excavation and/or construction activities, construction shall stop in the immediate vicinity of the find and a qualified paleontologist shall be consulted to determine whether the resource requires further study. The qualified paleontologist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including excavation of the finds and evaluation of the finds. If the resources are determined to be significant, mitigation measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any paleontological resources and unique geologic features recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study.
- ▶ If paleontological resources or unique geologic features are found during the field survey or literature review, the resources shall be inventoried and evaluated for significance. If the resources are found to be significant, the

qualified paleontologist shall identify mitigation measures. Such measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. In addition, appropriate mitigation for excavation and construction activities in the vicinity of the resources found during the field survey or literature review shall include a paleontological monitor. The qualified paleontologist shall determine the monitoring period. If additional paleontological/geological resources are found during excavation and/or construction activities, the procedure identified above for the discovery of unknown resources shall be followed.

Significance after Mitigation

Implementation of Mitigation 4.7-5 would require project proponents to conduct paleontological records searches and surveys for any project activities that would disturb native soils and to follow specific procedures in the event that paleontological resources and unique geologic features are found, which would minimize the potential for damage or destruction of a paleontological resource or unique geologic feature. Therefore, Mitigation 4.7-5 would reduce project impacts on paleontological resources and unique geologic features to a **less-than-significant** level.

4.8 GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

This section presents a summary of regulations applicable to greenhouse gas (GHG) emissions, a summary of climate change science and GHG sources in California, quantification of the estimated GHG emissions from assumed development under the plan, and discussion about their contribution to global climate change.

Comments were submitted during the NOP comment period from the California Air Resources Board (CARB) and the California Department of Justice. Both CARB and the California Department of Justice recommended measures that would reduce the contribution of GHG emissions from future plan development to global climate change. Impacts related to GHG emissions from implementation of the proposed plan are discussed in Section 4.8.3, "Environmental Impacts and Mitigation Measures," and mitigation is recommended for significant impacts.

4.8.1 Regulatory Setting

FEDERAL

There are no federal laws that pertain to the GHG analysis for the proposed plan. All laws pertaining to the assessment of GHG emissions come from State and local agencies, as described below.

STATE

Statewide GHG Emission Targets and Climate Change Scoping Plan

Reducing GHG emissions in California has been the focus of the state government for approximately two decades. GHG emission targets established by the state legislature include reducing statewide GHG emissions to 1990 levels by 2020 (AB 32 of 2006) and reducing them to 40 percent below 1990 levels by 2030 (SB 32 of 2016). Executive Order (EO) S-3-05 calls for statewide GHG emissions to be reduced to 80 percent below 1990 levels by 2050. This target was superseded by AB 1279 in 2022, which codifies a goal for carbon neutrality and reduction of emissions by 85 percent below 1990 levels by 2045. These targets are in line with the scientifically established levels needed in the U.S. to limit the rise in global temperature to no more than 2 degrees Celsius, the warming threshold at which major climate disruptions, such as super droughts and rising sea levels, are projected; these targets also pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius (United Nations 2015).

CARB adopted the *Final 2022 Scoping Plan for Achieving Carbon Neutrality* (2022 Scoping Plan) on December 16, 2022, which traces the state's pathway to achieve its carbon neutrality and an 85 percent reduction from 1990 emissions goal by 2045 using a combined top-down, bottom-up approach under various scenarios. It identifies the reductions needed by each GHG emission sector (e.g., transportation [including off-road mobile source emissions], industry, electricity generation, agriculture, commercial and residential, pollutants with high global warming potential, and recycling and waste) to achieve these goals.

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

Transportation-Related Standards and Regulations

CARB certified the Advanced Clean Cars II Program (ACC II Program) on August 25, 2022. The ACC II Program builds upon the existing ACC program and established more stringent zero-emission vehicle (ZEV) sales requirements for future benchmark years. As part of its Advanced Clean Cars program, CARB established more stringent GHG emission standards and fuel efficiency standards for fossil fuel-powered on-road vehicles than the US Environmental Protection Agency. In addition, the program's ZEV regulation requires battery, fuel cell, and plug-in hybrid electric vehicles (EVs) to account for up to 15 percent of California's new vehicle sales by 2025 (CARB 2018a). The ACC II Program also sets sales requirements for ZEVs to ultimately reach the goal of 100 percent ZEV sales in the state by 2035.

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

CARB adopted the Low Carbon Fuel Standard (LCFS) in 2007 to reduce the carbon intensity (CI) of California's transportation fuels. Low-CI fuels emit less carbon dioxide (CO₂) than other fossil fuel-based fuels such as gasoline and fossil diesel. The LCFS applies to fuels used by on-road motor vehicles and off-road vehicles, including construction equipment (Wade, pers. comm., 2017).

In addition to regulations that address tailpipe emissions and transportation fuels, the state legislature has passed regulations to address the amount of driving by on-road vehicles. Since passage of SB 375 in 2008, CARB requires metropolitan planning organizations to develop and adopt sustainable communities strategies (SCSs) as a component of the federally-prepared regional transportation plans (RTPs) to show reductions in GHG emissions from passenger cars and light-duty trucks in their respective regions for 2020 and 2035 (CARB 2018b). These plans link land use and housing allocation to transportation planning and related mobile-source emissions.

The Fresno Council of Governments (FCOG) serves as the metropolitan planning organization for Fresno County. The FCOG was tasked by CARB to achieve a 5-percent per capita reduction compared to 2012 emissions by 2020 and a 10-percent per capita reduction by 2035, both of which CARB confirmed the region would achieve by implementing the RTP/SCS (CARB 2019). In March 2018, CARB promulgated revised targets tasking the FCOG to achieve a 6-percent and a 13-percent per capita reduction by 2020 and 2035, respectively (CARB 2018b). FCOG has not yet prepared an RTP/SCS to demonstrate that it will meet these targets.

CARB has also adopted the Advanced Clean Trucks Regulation, which sets requirements for the transition of diesel trucks and vans to zero-emission trucks beginning in 2024. CARB estimates that the regulation will lower related premature deaths.

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SB 743 of 2013 required that the Governor's Office of Planning and Research (OPR) propose changes to the State CEQA Guidelines to address transportation impacts in transit priority areas and other areas of the state. In response, Section 15064.3 was added to CEQA in December 2018, requiring that transportation impacts no longer consider congestion but instead focus on the impacts of vehicle miles traveled (VMT). In support of these changes, OPR published its *Technical Advisory on Evaluating Transportation Impacts in CEQA*, which recommends that the transportation impact of a project be based on whether the project would generate a level of VMT per capita (or VMT per employee or some equivalent metric) that is 15 percent lower than that of existing development in the region, or that a different threshold is used based on substantial evidence (OPR 2017). OPR's technical advisory explains that this criterion is consistent with Public Resources Code Section 21099, which states that the criteria for determining significance must "promote the reduction in greenhouse gas emissions" (OPR 2017). This metric is intended to replace the use of delay and level of service to measure transportation-related impacts. More detail about SB 743 is provided in the "Regulatory Setting" section of Section 3.12, "Transportation and Circulation."

Legislation Associated with Electricity Generation

The state has passed legislation requiring the increasing use of renewables to produce electricity for consumers. California's Renewables Portfolio Standard Program was established in 2002 (SB 1078) with the initial requirement that 20 percent of electricity retail sales be served by renewable sources by 2017, 33 percent by 2020 (SB X1-2 of 2011), 52 percent by 2027 (SB 100 of 2018), 60 percent by 2030 (also SB 100 of 2018), and 100 percent by 2045 (also SB 100 of 2018).

Building Energy Efficiency Standards (Title 24, Part 6)

The energy consumption of new residential and nonresidential buildings in California is regulated by the California Energy Code. The code was established by California Energy Commission (CEC) in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption and provide energy-efficiency standards for residential and nonresidential buildings. CEC updates the California Energy Code every 3 years, typically including more stringent design requirements for reduced energy consumption, which results in the generation of fewer GHG emissions.

The 2022 California Energy Code went into effect on January 1, 2023. The 2022 California Energy Code advances the on-site energy generation progress started in the 2019 California Energy Code by encouraging electric heat pump technology and use, establishing electric-ready requirements when natural gas is installed, expanding solar photovoltaic system and battery storage standards, and strengthening ventilation standards to improve indoor air quality. CEC estimates that the 2022 California Energy Code will save consumers \$1.5 billion and reduce GHGs by 10 million metric tons of carbon dioxide equivalent (MMTCO_{2e}) over the next 30 years (CEC 2021).

California Green Building Standards (Title 24, Part 11)

The California Green Building Standards Code, also known as CALGreen, is California's first green building code and the nation's first state-mandated green building code, and it applies to every newly constructed building or structure. The current version is the 2022 CALGreen Code, which took effect on January 1, 2023. As compared to the 2019 CALGreen Code, the 2022 CALGreen Code strengthened sections pertaining to EV and bicycle parking, water efficiency and conservation, and material conservation and resource efficiency, among other sections of the CALGreen Code. The CALGreen Code sets design requirements equivalent to or more stringent than those of the California Energy Code for energy efficiency, water efficiency, waste diversion, and indoor air quality. These codes are adopted by local agencies that enforce building codes and used as guidelines by state agencies for meeting the requirements of Executive Order B-18-12.

Cap-and-Trade Program

In 2011, CARB adopted the cap-and-trade regulation thus creating the cap-and-trade program. The program covers sources of GHG emissions that emit more than 25,000 metric tons of carbon dioxide equivalent (MTCO_{2e}) per year in the State such as refineries, power plants, industrial facilities, and transportation fuels. The cap-and-trade program includes an enforceable state-wide emissions cap that declines approximately 3 percent annually. CARB distributes allowances, which are tradable permits, equal to the emissions allowed under the cap. Sources that reduce emissions more than their limits can auction carbon allowances to other covered entities through the cap-and-trade market. Sources subject to the cap are required to surrender allowances and offsets equal to their emissions at the end of each compliance period (CARB 2012). The cap-and-trade program took effect in early 2012 with the enforceable compliance obligation beginning January 1, 2013. The cap-and-trade program was initially slated to sunset in 2020 but the passage of SB 398 in 2017 extended the program through 2030. Investments made by the cap-and-trade program are specifically designated to alleviate pollution burdened communities located in disadvantaged communities. The Plan Area is classified as a heavily pollution-burdened community by the California Environmental Protection Agency. See Section 4.3, "Air Quality," for discussion of the existing air quality in the Plan Area.

LOCAL

San Joaquin Valley Air Pollution Control District

The San Joaquin Valley Air Pollution Control District (SJVAPCD) is the primary agency responsible for addressing air quality concerns in the San Joaquin Valley Air Basin, which includes the City of Fresno. Its role is discussed further in Section 4.5, "Air Quality." SJVAPCD also recommends methods for analyzing project-generated GHGs in CEQA analyses and offers multiple potential GHG reduction measures for land use development projects. SJVAPCD developed thresholds of significance to provide a uniform scale to measure the significance of GHG emissions from land use and stationary source projects in compliance with CEQA and AB 32. SJVAPCD's goals in developing GHG thresholds include ease of implementation, use of standard analysis tools, and emissions mitigation consistent with

AB 32. However, SJVAPCD has not developed new thresholds since the passage of SB 32, which mandates a statewide emissions target of 40 percent below 1990 levels by 2030.

City of Fresno General Plan

The *City of Fresno General Plan* (City of Fresno 2022) establishes the following policies related to GHG and climate change that are relevant to the proposed plan:

- ▶ **Policy RC-5-c GHG Reduction through Design and Operations.** Increase efforts to incorporate requirements for GHG emission reductions in land use entitlement decisions, facility design, and operational measures subject to City regulation through the following measures and strategies:
 - Promote the expansion of incentive-based programs that involve certification of projects for energy and water efficiency and resiliency. These certification programs and scoring systems may include public agency “Green” and conservation criteria, Energy Star™ certification, CALGreen Tier 1 or Tier 2, Leadership in Energy Efficient Design (LEED™) certification, etc.
 - Promote appropriate energy and water conservation standards and facilitate mixed-use projects, new incentives for infill development, and the incorporation of mass transit, bicycle and pedestrian amenities into public and private projects.
 - Require energy and water audits and upgrades for water conservation, energy efficiency, and mass transit, pedestrian, and bicycle amenities at the time of renovation, change in use, change in occupancy, and change in ownership for major projects meeting review thresholds specified in an implementing ordinance.
 - Incorporate the City’s “Guidelines for Ponding Basin/Pond Construction and Management to Control Mosquito Breeding” as conditions of approval for any project using an on-site stormwater basin to prevent possible increases in vector-borne illnesses associated with global climate change.
 - Periodically evaluate the City’s facility maintenance practices to determine whether there are additional opportunities to reduce GHGs through facility cleaning and painting, parks maintenance, road maintenance, and utility system maintenance.

City of Fresno Climate Action Plan

The City adopted its first greenhouse gas reduction plan (GHGRP) in 2014 and updated it in 2021 to extend its GHG reduction targets beyond 2020 to align with state reduction targets for 2030 as mandated by SB 32, and 2035 to align with the horizon year of the general plan. The GHGRP forecasts emissions in the City using a business-as-usual (BAU) model that does not account for various statewide regulations that will reduce emissions in the City. To establish GHG reduction targets, an adjusted BAU (ABAU) that accounts for such regulations was also estimated. Following this exercise, an emissions reduction target of reducing emissions by an additional 29,316 and 209,463 MTCO_{2e} for 2030 and 2035, respectively, through local GHG reduction measures was established (City of Fresno 2020). These reductions represent a 1.5 and 11.6 percent reduction in all GHG emissions for 2030 and 2035, respectively. The GHGRP was prepared prior to the passage of AB 1279 (discussed above), which amended the previous targets under SB 32 to become more stringent (i.e., achieve carbon neutrality and an 85 percent reduction from a 1990 statewide GHG inventory by 2045). Future updates to the GHGRP would likely amend targets in consideration of this most recent statewide legislation; however, because the proposed plan has an extended operation year beyond 2030 and 2035, consistency with the GHGRP has not been used in this analysis, though it is appropriate for projects with a build-out year prior these targets. Rather, for this analysis, the 2022 Scoping Plan comprises the most appropriate plan for reducing GHG emissions and requests projects implement project design features that are comparable to what is currently required in the GHGRP.

4.8.2 Environmental Setting

Certain gases in the earth’s atmosphere, classified as GHGs, play a critical role in determining the earth’s surface temperature. Solar radiation enters the atmosphere from space. A portion of the radiation is absorbed by the earth’s surface, and a smaller portion of this radiation is reflected toward space. The absorbed radiation is then emitted from the earth as low-frequency infrared radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead “trapped,” resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth.

Prominent GHGs contributing to the greenhouse effect are CO₂, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Human-caused emissions of these GHGs in excess of natural ambient concentrations are found to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth’s climate, known as global climate change or global warming. The Sixth Assessment Report contains the Intergovernmental Panel on Climate Change’s strongest warnings to date on the causes and impacts of climate change. Importantly, the report notes that, in terms of solutions, “We need transformational change operating on processes and behaviors at all levels: individual, communities, business, institutions, and governments. We must redefine our way of life and consumption.”

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. Whereas most pollutants with localized air quality effects have relatively short atmospheric lifetimes (approximately 1 day), GHGs have long atmospheric lifetimes (1 year to several thousand years). GHGs persist in the atmosphere long enough to be dispersed around the globe. Although the lifetime of any GHG molecule depends on multiple variables and cannot be determined with any certainty, it is understood that more CO₂ is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration. Of the total annual human-caused CO₂ emissions, approximately 55 percent are estimated to be sequestered through ocean and land uptake every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO₂ emissions remain stored in the atmosphere (IPCC 2013).

The quantity of GHGs in the atmosphere responsible for climate change is not precisely known, but it is considered to be enormous. No single project alone would measurably contribute to an incremental change in the global average temperature or to global or local climates or microclimates. From the standpoint of CEQA, GHG impacts relative to global climate change are inherently cumulative.

GREENHOUSE GAS EMISSION SOURCES

The total GHG inventory for California in 2020 was 370 MMTCO₂e (CARB 2022a). This is less than the 2020 target of 431 MMTCO₂e. Table 4.8-1 summarizes the statewide GHG inventory for California by percentage. As shown in Table 4.8-1, transportation, industry, and in-state electricity generation are the largest GHG emission sectors.

Emissions of CO₂ are byproducts of fossil fuel combustion. Methane, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices, landfills, and forest fires. Nitrous oxide is also largely attributable to agricultural practices and soil management. CO₂ sinks, or reservoirs, include vegetation and the ocean, which absorb CO₂ through sequestration and dissolution (CO₂ dissolving into the water) and are two of the most common processes for removing CO₂ from the atmosphere.

Table 4.8-1 Statewide GHG Emissions by Economic Sector

Sector	MMTCO ₂ e	Percent
Transportation	141	38%
Industrial	85	23%
Electricity (in state)	41	11%
Residential	33	9%

Sector	MMTCO ₂ e	Percent
Agriculture and Forestry	30	8%
Commercial	22	6%
Electricity (Imports)	19	5%
Total	370	100%

Note: MMTCO₂e = million metric tons of carbon dioxide equivalent.

Source: CARB 2022a.

A GHG inventory and emissions forecast for the City of Fresno is provided in the City's GHGRP and summarized in Table 4.8-2. These emissions inventories demonstrate the business-as-usual projections for the City without consideration of statewide regulatory measures to reduce GHG emissions. Similar to statewide emissions trends, the transportation sector comprises the greatest GHG emission sector in the City.

Table 4.8-2 City of Fresno 2016 Inventory Update and Business-as-Usual Projections

Emissions Sector	2016	2020	2030	2035
	MTCO ₂ e			
Transportation	1,520,052	1,594,888	1,798,498	1,909,582
Commercial Energy	524,838	557,142	627,373	657,379
Residential Energy	479,371	514,053	579,546	603,951
Fugitive Emissions	270,130	288,573	335,316	357,008
Solid Waste	119,167	127,303	147,923	156,493
Industrial Energy	10,055	10,506	11,528	12,035
Agriculture Energy	20	20	20	20
Total	2,923,633	3,092,486	3,500,204	3,697,738

Notes: Totals may not equal the sum of the numbers because of independent rounding.

MTCO₂e = metric tons of carbon dioxide equivalent.

Source: City of Fresno 2020.

EFFECTS OF CLIMATE CHANGE ON THE ENVIRONMENT

The global average temperature is expected to increase by 3 to 7°F by the end of the century, depending on future GHG emission scenarios (IPCC 2014). According to California's Fourth Climate Change Assessment, depending on future GHG emissions scenarios, average annual maximum daily temperatures in California are projected to increase between 3.6 and 5.8°F by 2050 and by 5.6 to 8.8°F by 2100 (OPR et al. 2018).

Other environmental resources could be indirectly affected by the accumulation of GHG emissions and resulting rise in global average temperature. In recent years, California has been marked by extreme weather and its effects. Climate model projections for California demonstrate that impacts will vary throughout the state and show a tendency for the northern part of the state to become wetter while the southern portion of California to become drier (Pierce et al. 2018). According to California Natural Resources Agency's (CNRA's) report, *Safeguarding California Plan: 2018 Update* (CNRA 2018), California experienced the driest 4-year statewide precipitation on record from 2012 through 2015; the warmest years on average in 2014, 2015, and 2016; and the smallest and second smallest Sierra snowpack on record in 2015 and 2014 (CNRA 2018). Climate model projections included in California's Fourth Climate Change Assessment demonstrate that seasonal summer dryness in California may be prolonged due to earlier spring soil drying and would last longer into the fall and winter rainy season. Increases in temperature are also predicted to result in changes to California's snowpack. Based on climate model projections, the mean snow water equivalent, a common measurement which indicates the amount of water contained within snowpack, in California is anticipated to

decline to two-thirds of its historic average by 2050 and between less than half and less than one-third of historic average by 2100, depending on future emissions scenarios (OPR et al. 2018).

Climate model projections demonstrate that California will experience variation in precipitation patterns as well. The Northern Sierra Nevada experienced its wettest year on record in 2016 (CNRA 2018). As temperatures increase, the increase in precipitation falling as rain rather than snow also could lead to increased potential for floods because water that would normally be held in the snowpack of the Sierra Nevada and Cascade mountains until spring will flow into the Central Valley concurrently with winter rainstorm events. This scenario will place more pressure on California's levee/flood control system (CNRA 2018). As the climate continues to warm, extreme precipitation events in California will increase and could, subsequently, increase the probability of 'mega-flood' events (Polade et al. 2017).

Climate change is also projected to result in tertiary impacts on energy infrastructure throughout California. Changes in temperature, precipitation patterns, extreme weather events, and sea-level rise have the potential to affect and decrease the efficiency of thermal power plants and substations, decrease the capacity of transmission lines, disrupt electrical demand, and threaten energy infrastructure with the increased risk of flooding (CNRA 2018).

According to California's Fourth Climate Change Assessment, climate change will create impacts on the State's transportation network that will have 'ripple effects' including direct and indirect impacts on inter-dependent infrastructure networks as well as negative impacts on the economy. Without appropriate adaptations strategies for roadway materials (i.e., asphalt and pavement), researchers estimate that the median total cost to California for 2040-2070 will be between \$1 billion and \$1.25 billion (OPR et al. 2018). The California Department of Transportation owns and operates more than 51,000 miles along 265 highways, as well as three of the busiest passenger rail lines in the nation. Sea level rise, storm surge, and coastal erosion are imminent threats to highways, roads, bridge supports, airports, transit systems and rail lines near sea level and seaports. Shifting precipitation patterns, increased temperatures, wildfires, and increased frequency in extreme weather events also threaten transportation systems across the state. Temperature extremes and increased precipitation can increase the risk of road and railroad track failure, decrease transportation safety, and increase maintenance costs (CNRA 2018). Modeling for flood events in California demonstrates that approximately 370 miles of highways are susceptible to flooding in a 100-year storm event by the year 2100 (OPR et al. 2018).

Water availability and changing temperatures affect the prevalence of pests, disease, and species, which will directly impact crop development, forest health, and livestock production. Other environmental concerns include decline in water quality, groundwater security, and soil health (CNRA 2018). Vulnerabilities of water resources also include risks to degradation of watersheds, alteration of ecosystems, and loss of habitat (OPR et al. 2018).

California's Fourth Climate Change Assessment also identifies the impacts climate change will have on public health and social systems. Average temperature increases in California are estimated to have impacts on human mortality, with 6,700 to 11,300 additional annual deaths in 2050, depending on higher or lower emissions scenarios (Ostro et al. 2011). Studies have also shown that impacts from climate change can also have indirect impacts on public health, such as increased vector-borne diseases, and stress and mental trauma due to extreme events, economic disruptions, and residential displacement (Gould and Dervin 2012; McMichael and Lindgren 2011; US Global Change Research Program 2016).

4.8.3 Environmental Impacts and Mitigation Measures

THRESHOLDS OF SIGNIFICANCE

The issue of global climate change is inherently a cumulative issue because the GHG emissions of individual projects cannot be shown to have any material effect on global climate. Thus, the proposed plan's impact on climate change is addressed only as a cumulative impact.

State CEQA Guidelines Section 15064 and relevant portions of Appendix G recommend that a lead agency consider a project's consistency with relevant, adopted plans and discuss any inconsistencies with applicable regional plans,

including plans to reduce GHG emissions. Under Appendix G of the State CEQA Guidelines, implementing a project may result in a cumulatively considerable contribution to climate change if it would:

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

With respect to GHG emissions, CEQA Guidelines Section 15064.4 provides guidance to lead agencies for determining the significance of impacts from GHG emissions. Section 15064.4(a) provides that a lead agency will make a good-faith effort based, to the extent possible, on scientific and factual data to describe, calculate, or estimate the amount of GHG emissions resulting from a project. Section 15064.4(a) further provides that a lead agency will have the discretion to determine, within the context of a particular project, whether to quantify GHG emissions from a project or rely on qualitative analysis or performance-based standards. Pursuant to the CEQA Guidelines in Section 15064.4(a), the analysis presented herein quantifies GHG emissions resulting from anticipated development under the plan through the planning horizon of 2040, and describes, calculates, and estimates those emissions. CEQA Guidelines Section 15064.4(b) provides that when assessing the significance of impacts from GHG emissions, a lead agency should focus the analysis on the incremental contribution of the project's emissions to the effects of climate change and consider an appropriate timeframe for the project. The lead agency's analysis should reasonably reflect evolving scientific knowledge and state regulatory schemes and consider (1) the extent to which the project may increase or reduce GHG emissions compared with existing conditions, (2) whether the project's GHG emissions exceed a threshold of significance that the lead agency determines applies to the project, and (3) the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. The analysis of the potential impacts from the proposed plan's GHG emissions follows this approach.

The CEQA Guidelines do not provide numeric or quantitative thresholds of significance for evaluating GHG emissions. Instead, they leave the determination of threshold significance up to the lead agency and provide it the discretion to consider thresholds of significance previously adopted or recommended by other public agencies or experts, provided that the lead agency's decision is supported by substantial evidence (CEQA Guidelines Sections 15064.7[b] and 15064.7[c]). Additionally, any public agency may also use an environmental standard as a threshold of significance, as it would promote consistency in significance determination and integrate environmental review with other environmental program planning and regulations (CEQA Guidelines Section 15064.7[d]).

In California, when numerical GHG thresholds are established, they are developed based on the overall statewide GHG emissions reduction targets that have been legislated but are adjusted based on anticipated growth and development in a particular region such that when a project meets the established threshold, it can be said that the project would also be consistent with the established state's GHG target for which the threshold was based. The State's targets are based on future milestone years (i.e., 2030, 2045, and 2050); thus, by default the local thresholds must also be based on the same targets.

EO B-55-18 establishes a goal to achieve statewide carbon neutrality as soon as possible and no later than 2045, and EO S-03-05 has set forth a long-term reduction target to reduce GHG emissions by 80 percent below 1990 levels by 2050. AB 1279, which was signed into law on September 16, 2022, requires the state to achieve net zero GHG emissions as soon as possible, but no later than 2045, and achieve and maintain net negative GHG emissions thereafter, and to ensure that by 2045, statewide anthropogenic GHG emissions are reduced to at least 85 percent below the 1990 levels. The proposed plan would develop over many years, with a planning horizon of 2040 established for meaningful environmental analysis. As mentioned above, SJVAPCD does not have GHG thresholds tied to future GHG target years (i.e., 2045, 2050); thus, given that the plan is anticipated to be built out beyond 2030, compliance with SJVAPCD's GHG guidance alone would not be sufficient to demonstrate consistency with the established milestone years beyond 2030, so SJVAPCD's thresholds of significance are not applied to the GHG analysis.

Courts have ruled that although there are various potential thresholds and methodologies for evaluating project-level GHG emissions consistent with CEQA, use of statewide emission reduction goals is a permissible criterion of significance, so long as substantial evidence and reasoned explanation is provided to close the analytical gap

between the level of effort required at one scale (state level) to the level of effort required at another scale (e.g., a project level). The plan to achieve these statewide emission reduction goals is the 2022 Scoping Plan; comparing a project to the 2022 Scoping Plan can demonstrate whether a project is consistent or conflicts with statewide reduction targets and goals.

CEQA case law has identified the need to analyze both near-term and post-2020 emissions, as applicable, with the court stating that an "EIR taking a goal-consistency approach to CEQA significance may in the near future need to consider the project's effects on meeting longer-term emissions reduction targets." Moreover, analyses must use the best scientific information available and to determine whether planning decisions are consistent with state goals.

SJVAPCD's thresholds are based on AB 32 statewide GHG target of reducing emissions to 1990 levels by 2020 as established by AB 32; however, AB 1279, which was signed into legislation in 2022, establishes a statewide target of achieving net zero GHG emissions as soon as possible, but no later than 2045, and to achieve and maintain net negative GHG emissions thereafter, and to ensure that by 2045, statewide anthropogenic GHG emissions are reduced to at least 85 percent below the 1990 levels.

As discussed in Section 4.8.1, "Regulatory Setting," the City has an adopted GHGRP with established numerical targets for 2030 and 2035. The GHGRP was developed prior to the passage of AB 1279, which extends the state's long-term GHG reduction targets beyond 2035. While future updates to the GHGRP would likely amend targets in consideration of this most recent statewide legislation, because the proposed plan has an extended operation year beyond 2030 and 2035, consistency with the GHGRP has not been used in this analysis, though it is appropriate for projects with a build-out year prior these targets. Rather, for this analysis, the 2022 Scoping Plan comprises the most appropriate plan for reducing GHG emissions and requests projects implement project design features that a comparable to what is currently required in the GHGRP.

The recently adopted 2022 Scoping Plan assesses progress toward the state's statutory 2030 target, outlining different scenarios for achieving statewide carbon neutrality by 2045. In addition, the 2022 Scoping Plan identifies key GHG emissions sectors (i.e., building energy, transportation energy) for which local development should focus on reducing, referred to as priority areas. Appendix D, "Local Actions," of the 2022 Scoping Plan provides lead agencies with guidance for the necessary project design features (or mitigation measures) needed in new development to further the state's long-term GHG reduction goals established in AB 1279 including the elimination of on-site natural gas infrastructure, incorporation of the most recent version of the CALGreen Code's Tier 2 EV charging requirements for residential and nonresidential land uses, and increasing VMT efficiency. These development standards are paramount as they provide the infrastructure needed to support California's transition from fossil-fuel powered buildings and vehicles to ensure that the state can meet its long-term GHG reduction targets.

Notably, Appendix D of the 2022 Scoping Plan is best applied to residential and mixed-use commercial projects rather than industrial development. Other air districts, such as SMAQMD, recommend a 10,000 MTCO₂e/year threshold for stationary sources based on the reporting requirements of the Cap-and-Trade Program; however, while development under the proposed plan largely comprises industrial development, some of which could be regulated under the Cap-and-Trade Program, future industrial development may not be characterized as a stationary source subject to this reporting requirement (e.g., logistics centers, warehouses, distribution centers, some research and development). Therefore, SMAQMD's 10,000 MTCO₂e/year threshold is not an applicable metric for determining the proposed plan's overall significance. Thus, in lieu of an available numerical threshold, the Priority Areas of Appendix D have been applied in this analysis to determine the proposed plan's potential to conflict with the state's long-term GHG reduction goals.

Given the lack of an applicable threshold consistent with the state's long-term GHG goals beyond 2030 and the lack of an applicable adopted local plan for the reduction of GHGs consistent with CEQA Guidelines Section 15183.5 with targets extending beyond 2035, the proposed plan's GHG emissions are evaluated using the following approach as suggested by CARB in Appendix D of the 2022 Scoping Plan. GHG emissions that would be generated by development under the proposed plan are evaluated for each major emission sector identified by the 2022 Scoping Plan as primary focus areas that local development can address. To evaluate the significance of the proposed plan's

GHG emissions, the two CEQA Guidelines Appendix G checklist questions were applied. A GHG emissions impact would be significant if implementation of the proposed plan would:

- ▶ generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment (measured based on consistency with the 2022 Scoping Plan), or
- ▶ conflict with any applicable plan (i.e., 2022 Scoping Plan), policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

It must also be considered that the proposed plan is programmatic in nature and would govern individual development projects. The policies included in the proposed plan meant to reduce GHG emissions, as well as the mitigation measures recommended herein, would be applied to future development projects once specific land use proposals have been developed. This analysis is intended to provide applicable mitigation that may be applied at the project level to ensure that future projects constructed within the purview of the proposed plan contribute their fair share in assisting the state in meeting its long-term GHG reduction goals as outlined in the 2022 Scoping Plan.

METHODOLOGY

GHG emissions associated with the proposed plan would be generated during construction and during operation after the full buildout of the proposed plan's land uses. Estimated levels of construction- and operation-related GHG emissions are presented below. The proposed project is evaluated for its consistency with the 2022 Scoping Plan.

Construction-Related Greenhouse Gas Emissions

Construction-generated GHG emissions were calculated using the California Emissions Estimator Model (CalEEMod), Version 2022.4.17 as recommended by SJVAPCD. Modeling was based on development assumptions (e.g., land use type, square footage); assumptions based on typical construction activities; and default values in CalEEMod that are based on the location of the Plan Area and land use types. Based on the anticipated construction period of 2024–2040, annual average and worst-case annual development was modeled, using the anticipated square footage and land use types.

Operational Greenhouse Gas Emissions

Operation-related emissions of GHGs were estimated for the following sources: area sources (e.g., landscape maintenance equipment), energy use (i.e., electricity and natural gas consumption), water use, solid waste generated, and mobile sources. Operational mobile-source GHG emissions were modeled based on the estimated level of VMT for the Plan Area. VMT estimates were derived from data generated during the traffic impact analysis conducted for the proposed plan (see Section 4.15, "Transportation"). Mobile-source emissions were calculated using CalEEMod and project-specific trip generation and VMT. Indirect emissions associated with electricity and natural gas consumption were estimated using GHG emissions factors for Pacific Gas and Electric Company. The proposed plan's level of electricity and natural gas use, solid waste generation, and wastewater generation was based on CalEEMod defaults. Detailed model assumptions and inputs for these calculations are presented in Appendix B.

PROPOSED SCSP POLICIES AND DEVELOPMENT STANDARDS

The following policies from the proposed plan relate to the reduction of GHG emissions.

Trucks

- ▶ T-3: Limit truck idling times.

Public Transit

- ▶ T-4: Expand bus area service and frequency.
- ▶ T-5: Provide van shuttles, transit and carpool incentives, and bicycle parking for employees.

Roadway Improvements

- ▶ T-9: Install traffic control or traffic safety measures to include bike lanes

- ▶ **T-11:** Install crosswalks and traffic calming measures near schools.
- ▶ **T-13:** Improve and maintain sidewalks

Vehicle/Equipment and Operation Standards

- ▶ **AQ-4:** Increase electric vehicle charging stations and alternative fuel stations.
- ▶ **AQ-5:** Seek out funding sources to assist warehouses and industrial uses to transition to near-zero emissions technology.
- ▶ **AQ-6:** Consider construction of near zero fueling stations (i.e., CNG/Hydrogen).
- ▶ **AQ-7:** Encourage commercial landscapers to use electric gardening equipment such as lawn mowers and leaf blowers.

Energy and Green Building

- ▶ **EGB-1:** Reduce energy consumption and promote energy efficiency through education, conservation programs, building design/operation standards, and incentive programs.
- ▶ **EGB-2:** Incentivize private solar installations by providing information about financing and by expediting the permit process.
- ▶ **EGB-3:** Encourage installation of solar panels, battery storage, and zero-emission backup electricity generators at distribution centers.

Water

- ▶ **W-5:** Require new development to implement water conservation measures and to contribute towards expanded and upgraded facilities.
- ▶ **W-6:** Reduce water consumption through education, conservation standards, landscaping standards, retrofit programs, and incentive programs.

In addition, the SCSP includes alternative energy development standards that would serve to reduce GHG emissions. These include requirements for ZE (zero emission) motorized operational equipment; solar-ready building roofs and solar requirements for buildings over 400,000 square feet; solar-reflective roofing material; EV-ready passenger vehicle parking spaces, including some quick-charge EV; electric TRUs and provision of electrical infrastructure to accommodate them; bicycle racks with electric plugs for e-bikes; cool surface treatments; upsizing of electrical rooms to accommodate additional electrical panels; super-compliant volatile organic compound paints and coatings; recycling; and reasonable best efforts to deploy the highest rated CARB Tier technologies during construction.

ISSUES NOT DISCUSSED FURTHER

All issues pertaining to GHG emissions are evaluated in this EIR.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 4.8-1: Generate GHG Emissions, Either Directly or Indirectly, That May Have a Significant Impact on the Environment

The proposed plan would result in GHG emissions during both construction and operation of plan development implemented over the planning period. It would result in a less-than-significant VMT impact (i.e., 33 percent below a 2015 baseline), which would align with CARB's direction in Appendix D of the 2022 Scoping Plan to reduce VMT statewide. However, the proposed plan would allow for natural gas usage for commercial, residential, and industrial land uses and does not provide a standard for future land uses to meet the Tier 2 voluntary requirements of the CALGreen Code. (Mitigation measures for air quality impacts [see section 4.3, "Air Quality"] recommend prohibiting or severely reducing use of natural gas in plan development, but this analysis is based on potential effects prior to implementation of mitigation.) Therefore, the proposed plan would not align with CARB's direction to decarbonize buildings or electrify the mobile source sector. Therefore, the proposed plan would not be consistent with the 2022 Scoping Plan and would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment or conflict with state GHG reduction goals. This impact would be **significant**.

GHG emissions associated with the proposed plan would be generated during both construction and operational activities, which are discussed separately, below.

Construction

Construction-related activities would generate GHG emissions from the use of heavy-duty off-road equipment, materials transport, and worker commute trips. Construction of assumed land uses under the proposed plan are anticipated to be built over a period of years, as described in more detail in Chapter 3, "Project Description." Because no specific developments are proposed, modeling is based on reasonable assumptions relative to grading, paving, typical construction activities, and default values in CalEEMod that are based on the location of the proposed plan and land use types. Based on the extended period of development over the planning horizon (approximately 2024–2040) and guidelines developed by the Sacramento Metropolitan Air Quality Management District (SMAQMD), modeling conservatively assumed that 25 percent of the total development would be constructed in year 2024 (worst-case year), and construction of the remaining 75 percent would be evenly distributed over the remaining planning horizon, 2025 to 2040 (SMAQMD 2021). While SMAQMD is not the air district that governs air permitting and regional air quality planning in the Plan Area, its guidance regarding program-level analyses for general plans and area plans can be reasonably applied to projects outside of its jurisdiction.

This assumption was made to characterize a worst-case construction year in the absence of known projects and specific construction phasing. While it is unlikely that 25 percent of all the proposed land uses would be fully constructed within the span of one year, GHG emissions estimates were generated to provide a meaningful, albeit conservative representation of the level of emissions that could occur from highly intensive construction activity. Moreover, 2024 was determined to be the most conservative year for estimating this buildout scenario as heavy-duty and on-road vehicle emissions associated with construction are anticipated to decline into the future from the deployment of various statewide regulations such as the Advanced Clean Fleets regulation and ACC II Program, among others, and can be used to represent the highest level of construction activity and highest emissions for any given year during buildout of the proposed plan. This methodology was also used for the analysis of construction-related criteria pollutants and ozone precursors (see Section 3.2, "Air Quality.")

Table 4.8-3, below, summarizes emissions for the worst-case and more average construction years, and provides an annual average, and annual maximum emissions estimate. Refer to Appendix B for construction assumptions and detailed input parameters and results.

Table 4.8-3 Construction-Related Greenhouse Gas Emissions Generated under the Proposed Plan

Construction Year ¹	Annual GHG Emissions (MTCO ₂ e)
2024	2,999
2025-2040	507
Total	11,106
Average Annual	653
Maximum Annual	2,999

Notes: GHG = greenhouse gas; MTCO₂e = metric tons of carbon dioxide equivalent.

¹ A worst-case construction year was identified by assuming 25 percent of the development projected over the planning period is constructed in year 2024; construction of remaining development was assumed to be evenly distributed through the remaining years.

Refer to Appendix B for construction assumptions and detailed input parameters and results.

Source: Modeled by Ascent Environmental in 2023.

As shown in Table 4.8-3, the maximum level of GHG emissions generated by development under the proposed plan in a worst-case single year of construction would be 2,999 MTCO₂e and the annual average emissions would be 653 MTCO₂e, based on reasonable assumptions. While neither CARB nor SJVAPCD have recommended thresholds for determining the significance of construction-generated emissions, other air districts, such as SMAQMD recommend that construction emissions be compared to a 1,100 MTCO₂/year threshold of significance. SMAQMD's threshold is tied to the state's long-term GHG reduction goals, and, unlike air pollution which has localized and regional implications, GHGs are pollutants of global concern. Therefore, the location of where a GHG is emitted is irrelevant to its contribution to global climate change. Therefore, SMAQMD's thresholds comprise a reasonable threshold for evaluating the magnitude of the proposed plan's construction GHG emissions. In the absence of a district-specific or statewide threshold, 1,100 MTCO₂/year is a reasonable metric by which to define significance as it is tied to meeting the state's long-term GHG reduction targets set by EO B-30-15. While construction-related development standards would serve to reduce GHG emissions during the construction of future projects, it is unknown whether they would be sufficient to reduce emissions below this applicable threshold.

Operations

Operation of development under the proposed plan would generate long-term GHG emissions as a result of truck and vehicle trips, energy-source emissions from the consumption of natural gas, water-related energy consumption associated with water use and the conveyance and treatment of wastewater, and waste-generated emissions from disposal of solid waste.

Individual projects would be incrementally constructed and operational over the duration of the planning period, and for the purposes of analysis, the assumed level of development would be fully operational in 2040. Table 4.8-4 summarizes the projected operational GHG emissions for 2040.

Table 4.8-4 Operational Greenhouse Gas Emissions Generated under the Proposed Plan (2040)

Emissions Source ¹	GHG Emissions (MTCO ₂ e/year)
Area	236
Energy	49,144
Mobile	124,035
Waste	5,871
Water	4,663
Refrigerant	30,205
Total Operational GHG Emissions	214,156

Notes: Totals may not add due to rounding; GHG = greenhouse gas; MTCO₂e/year = metric tons of carbon dioxide equivalent per year.

¹ Refer to Appendix B for operational assumptions and detailed input parameters and results.

Source: Modeled by Ascent Environmental in 2023.

As shown above, when fully operational, the proposed plan would emit 214,156 MTCO₂e/year through the planning period. As discussed under “Thresholds of Significance,” there is no numeric threshold developed by the City or SJVAPCD to evaluate a project’s contribution to climate change; therefore, the proposed plan’s consistency with the 2022 Scoping Plan is used to determine whether implementing the plan would result in a cumulatively considerable contribution to climate change.

Scoping Plan Consistency

As discussed under “Thresholds of Significance,” above, the 2022 Scoping Plan, the state’s adopted GHG reduction plan/strategy, is the applicable GHG reduction plan used to evaluate GHG emissions of the proposed plan. The 2017 Scoping Plan laid out the framework for achieving the 2030 statewide GHG reduction target of reducing statewide emissions to 40 percent below 1990 levels and integrates various CARB regulations and strategies, including Cap-and-Trade, LCFS, SB 350, the Sustainable Freight Action Plan, the Mobile Source Strategy, and the Short-Lived Climate Pollutant Strategy. The 2022 Scoping Plan assesses progress towards achieving the SB 32 2030 target and builds upon earlier plans with a target of reducing anthropogenic emissions to 85 percent below 1990 levels, as well as providing the framework to achieve statewide carbon neutrality by 2045 through the implementation of zero-emission technologies in every GHG-emitting sector, a substantial reduction in fossil fuel dependence, combined with investments in carbon capture and sequestration and nature-based solutions.

The 2022 Scoping Plan identified key actions necessary to achieve the state’s goals, including moving to zero-emission transportation; phasing out the use of fossil gas for heating homes and buildings; transitioning to low-GWP chemicals and refrigerants; providing communities with sustainable options for walking, biking, and public transit to reduce reliance on cars; continued investment in solar powered–infrastructure, wind turbine capacity, and other resources that provide clean, renewable energy to displace fossil-fuel fired electrical generation; and scaling up new renewable energy options that are available or may be available in the future.

Based on these key actions, Appendix D of the 2022 Scoping Plan includes local action recommendations that align with the state’s climate strategies. Land use development projects that are consistent with these, either through on-site project design features or mitigation strategies, would support state-level measures to contain the growth of GHG emissions associated with the transportation system and built environment, which comprise the two largest GHG emissions sectors over which local governments (or in the context of the proposed plan, the City of Fresno) have the authority to govern.

The 2022 Scoping Plan categorizes the priority areas into Transportation Electrification, VMT Reduction, and Building Decarbonization and provides project attributes associated with each that are intended as a guide to help local jurisdictions qualitatively identify projects that are consistent with the state’s climate goals. The priority areas and associated attributes are summarized below in Table 4.8-5.

Using this qualitative approach, projects that include all of these key attributes would be consistent with the state’s climate goals; however, projects that incorporate some, but not all, of these attributes can also demonstrate consistency with the state’s climate goals. There are different pathways for the overarching priority areas, which can vary from project to project. Notably, these project attributes were developed for residential and residential mixed-use project types only, which are not emphasized in the proposed plan; thus, there may be project attributes associated with other project types that, if implemented, could also align with the overall intent of the 2022 Scoping Plan to reduce GHGs from the identified priority areas. Based on the above, the following analysis provides context as to whether development under the plan would align with the state’s overarching, long-term GHG reduction goals.

Table 4.8-5 2022 Scoping Plan Key Project Attributes That Reduce Greenhouse Gas Emissions

Priority Areas	Project Attribute
Transportation Electrification	Provides EV charging infrastructure that, at minimum, meets the most ambitious voluntary standard in the California Green Building Standards Code at the time of project approval
VMT Reduction	Is located on infill sites that are surrounded by existing urban uses and reuses or redevelops previously undeveloped or underutilized land that is presently served by existing utilities and essential public services (e.g., transit, streets, water, sewer)
	Does not result in the loss or conversion of natural and working lands
	Consists of transit-supportive densities (minimum of 20 residential dwelling units per acre), 50 or 1s in proximity to existing transit stops (within a half mile), or satisfies more detailed and stringent criteria specified in the region's SCS
	Reduces parking requirements by: <ul style="list-style-type: none"> ▶ Eliminating parking requirements or including maximum allowable parking ratios (i.e., the ratio of parking spaces to residential units or square feet); or ▶ Providing residential parking supply at a ratio of less than one parking space per dwelling unit; or ▶ For multifamily residential development, requiring parking costs to be unbundled from costs to rent or own a residential unit.
Building Decarbonization	Uses all-electric appliances without any natural gas connections and does not use propane or other fossil fuels for space heating, water heating, or indoor cooking.

Source: CARB 2022b.

Transportation Electrification

This priority area aims at reducing fossil fuel consumption and GHG emissions from the transportation sector by promoting the installation of EV charging facilities to promote the widespread use of EVs as well as provide the electrical infrastructure during the development phase of a project that allows future expansion of electrical EV facilities. Developing land use projects in this way now will help the state achieve longer-term EV adoption targets.

The proposed plan includes air quality policies AQ-4, Increase electric vehicle charging stations and alternative fuel stations and AQ-6, Consider construction of near zero fueling stations (i.e., CNG/Hydrogen) and development standards which support transportation electrification. Development of the land uses under the proposed plan would meet the mandatory EV charging requirements of the CALGreen Code (Part 11, Title 24, California Code of Regulations). However, the proposed plan does not necessarily include policies or standards for future development to exceed these mandatory requirements. Using guidance from the 2022 Scoping Plan, local jurisdictions can demonstrate that they are doing their "fair share" in assisting the state in meeting its long-term GHG reduction goals by providing EV infrastructure at the project level to facilitate that transition to ZEV or near-zero vehicles (e.g., electric, hydrogen, plug-in hybrid). Merely complying with the mandatory provisions of the CALGreen Code, which is a statutory requirement to which all projects must adhere, CARB recommends that projects make additional commitments to meet the Tier 1 or Tier 2 voluntary requirements of the CALGreen Code. The proposed plan does not include any policies that explicitly state that future development would be required to provide EV charging meeting the Tier 1 or Tier 2 voluntary requirements of the CALGreen Code for residential and nonresidential development, and thus does not fulfill the requirement of "meeting the most ambitious voluntary standard of California Green Building Standards Code" (CARB 2022b). Therefore, the proposed plan would not align with the guidance provided in Appendix D of the 2022 Scoping Plan for this priority area.

VMT Reduction

This priority area aims at reducing fossil fuel consumption and GHG emissions from the transportation sector by promoting land use planning principles and project design features that can reduce VMT. It is important to note that although GHG emissions associated with vehicles in California will decrease over time as the use of EVs increase (especially beyond the year 2035 when, as a result of EO N-79-20, all new vehicles sold in the state would be required to be electric), all the non-EVs in the state would continue to operate until the end of their usable life, thus reducing over time the VMT generated by non-EVs that are still operational.

The Mobility and Transportation Element of the General Plan includes a long list of policies that would enhance bicycle and pedestrian mobility. Development under the proposed plan would increase employment opportunities within the Plan Area and reduce the distance between destinations. Moreover, the proposed plan includes policies and development standards that support alternative modes of transportation (see Section 4.15, "Transportation," for a list of transportation-related policies). Collectively, the proposed plan would result in a 33 percent decrease in VMT compared to existing conditions at the plan horizon year resulting in a less-than-significant VMT impact, consistent with the guidance of OPR in SB 743 and CARB in Appendix D. Therefore, the proposed plan would be consistent with this priority area. These project design commitments align with the guidance provided in Appendix D of the 2022 Scoping Plan for this priority area.

Building Decarbonization

The proposed plan would result in GHG emissions from the combustion of natural gas and electricity consumption. Appendix D of the 2022 Scoping Plan recommends that all residential development (of which very little would be developed under the proposed plan) should be constructed to be fully electric, and allows commercial development a 2029 target year to become fully electric. Appendix D does not address industrial use of natural gas and does not provide guidance for how industrial processes may continue to operate without natural gas usage. However, CARB identifies biogas and biomethane as a renewable alternative to conventional natural gas. From a scientific perspective, biogas and biomethane function identically to fossil natural gas (i.e., producing the same level of energy from combustion).

The proposed plan includes development standards that support increased electrification and building decarbonization for future land uses. The elimination of natural gas from the building sector is a key action identified by CARB to reduce statewide emissions and contribute to the ability of the state to meet its climate change objectives. CARB provides a target year of 2035 to initiate decarbonizing of industrial processes with the understanding that the industrial sector is a more challenging GHG sector to electrify; however, decarbonizing new commercial and residential development is considered a feasible requirement for projects proposed now. Many jurisdictions in the state have adopted reach codes that prohibit natural gas infrastructure for new construction.

Development under the proposed plan would include commercial land some residential uses that would otherwise use natural gas. While the proposed plan includes policies and development standards pertaining to building decarbonization, it is unknown whether they would be sufficient to align with the guidance provided in Appendix D of the 2022 Scoping Plan for this priority area.

Summary

As discussed above, the proposed plan would not generate VMT to the degree that the plan would conflict with OPR's targets under SB 743. For this reason, the proposed plan would align with the VMT Reduction Priority Area. However, the plan does not include policies that direct future development to provide EV charging consistent with the highest voluntary tier of the most recent CALGreen Code, which would be out of alignment with the Transportation Electrification Priority Area of the 2022 Scoping Plan. Finally, the proposed plan does not include policies that prohibit the use of natural gas for commercial and residential land uses. For this reason, the proposed plan does not align with the Building Decarbonization Priority Area.

Because it would not align with the Transportation Electrification and Building Decarbonization Priority Areas, the proposed plan would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment or conflict with state GHG reduction goals. This impact would be **significant**.

Mitigation Measures

Implement Mitigation Measures 4.3-1b, 4.3-1c, 4.3-1g, 4.3-1h, 4.3-1i, 4.3-1j, 4.3-1k, 4.3-1l, 4.3-1m, 4.6-2a, 4.6-2b, 4.6-2c, and 4.6-2d.

Mitigation Measure 4.8-1a: Use Low-Carbon Concrete

Use low-carbon concrete, minimize the amount of concrete used and produce concrete on-site if it is more efficient and lower emitting than transporting ready-mix.

Mitigation Measure 4.8-1b: Use Locally Sourced or Recycled Materials

Use locally sourced or recycled materials for construction materials (goal of at least 20 percent based on costs for building materials and based on volume for roadway, parking lot, sidewalk and curb materials). Wood products used should be certified through a sustainable forestry program.

Significance after Mitigation

Implementation of Mitigation Measures 4.3-1b, 4.3-1c, 4.3-1g, 4.3-1h, 4.3-1i, 4.3-1l, 4.3-1m, 4.6-2c, 4.6-2d, 4.8-1a, and 4.8-1b would reduce the proposed plan's operational GHG emissions through providing EV infrastructure meeting the Tier 2 requirements of the CALGreen Code, inclusion of low-emissions vehicles, electric development, and use of renewable biogas, use of clean construction fleets, use of recycled materials for building construction, and use of low carbon concrete, where possible. Mitigation Measures 4.3-1j, 4.3-1k, and 4.6-2a would ensure that future development under the proposed plan would align with the Transportation Electrification and Building Decarbonization Priority Areas of Appendix D of the 2022 Scoping Plan.

However, the City cannot guarantee future industrial businesses would source their natural gas from renewable resources due to limitations regarding enforceability. Given that heavy industrial comprises the majority of the proposed plan and would generate substantial emissions during operation, implementation of Mitigation Measures 4.3-1b, 4.3-1c, 4.3-1g, 4.3-1h, 4.3-1i, 4.3-1l, 4.3-1m, 4.6-2a, 4.6-2b, 4.6-2c, 4.6-2d, 4.8-1a, and 4.8-1b would not be sufficient to reduce impacts to a less-than-significant level. Thus, this impact is **significant and unavoidable**.

Impact 4.8-2: Conflict with Any Applicable Plan, Policy or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of GHGs

The proposed plan would have a less-than-significant VMT impact, thus aligning with CARB's direction to reduce statewide VMT. However, it would not prohibit natural gas usage for commercial and residential land uses and would not provide a standard for future land uses to meet the Tier 2 voluntary requirements of the CALGreen Code. Therefore, the proposed plan would not align with CARB's direction to decarbonization buildings or electrify the mobile source sector. Therefore, the proposed plan would not be consistent with the 2022 Scoping Plan. This impact would be **significant**.

As discussed above under Impact 4.8-1, the proposed plan includes policies and development standards that serve to reduce GHG emissions, but they may not be sufficient to demonstrate that plan implementation would not conflict with the statewide goals of the 2022 Scoping Plan. This is due to the proposed plan's lack of sufficient policies to ensure that future development would meet the Tier 2 EV charging requirements of the CALGreen Code and would be fully electric for commercial and residential development. Moreover, heavy industrial uses, which are substantial GHG-emitting land use types, would comprise the greatest portion of development under the plan. For these reasons, the proposed plan would conflict with the 2022 Scoping Plan and would cumulatively contribute to global climate change. This impact would be **significant**.

Mitigation Measures

Implement Mitigation Measure 4.3-1b, 4.3-1c, 4.3-1g, 4.3-1h, 4.3-1i, 4.3-1l, 4.3-1m, 4.6-2a, 4.6-2b, 4.6-2c, 4.6-2d, 4.8-1a, and 4.8-1b.

Significance after Mitigation

Implementation of Mitigation Measures 4.3-1b, 4.3-1c, 4.3-1g, 4.3-1h, 4.3-1i, 4.3-1l, 4.3-1m, 4.6-2c, 4.6-2d, 4.8-1a, and 4.8-1b would reduce the proposed plan's operational GHG emissions through providing EV infrastructure meeting the Tier 2 requirements of the CALGreen Code, inclusion of low-emissions vehicles, electric development, and use of renewable biogas, use of clean construction fleets, use of recycled materials for building construction, and use of low

carbon concrete, where possible. Mitigation Measures 4.3-1j, 4.3-1k, and 4.6-2a would ensure that future development under the proposed plan would align with the Transportation Electrification and Building Decarbonization Priority Areas of Appendix D of the 2022 Scoping Plan.

However, the City cannot guarantee future industrial uses and businesses would source their natural gas from renewable resources due to limitations regarding enforceability. Given that heavy industrial uses comprise the majority of the Plan Area and would generate substantial emissions during operation, implementation of Mitigation Measures 4.3-1b, 4.3-1c, 4.3-1g, 4.3-1h, 4.3-1i, 4.3-1l, 4.3-1m, 4.6-2a, 4.6-2b, 4.6-2c, 4.6-2d, 4.8-1a, and 4.8-1b would not be sufficient to reduce impacts to a less-than-significant level. Thus, this impact would be **significant and unavoidable**.

4.9 HAZARDS AND HAZARDOUS MATERIALS

This section describes the existing hazards and hazardous materials in the Plan Area and identifies the applicable federal and state plans, policies, and laws and local plans, policies, and regulations. The analysis identifies the potential impacts related to hazards and hazardous materials that could occur under the proposed plan and identifies mitigation measures to reduce the level of impact to less than significant.

Hazards associated with air quality and human health are discussed in Section 4.3, "Air Quality." Geologic hazards, including hazards associated with landslides, faulting, and expansive soils, are discussed in Section 4.7, "Geology, Soils, and Mineral Resources." Risks associated with flooding are discussed in Section 4.10, "Hydrology and Water Quality." Impacts on fire protection services are addressed in Section 4.14, "Public Services and Recreation."

During the public scoping period for the Draft EIR in response to the Notice of Preparation, comments were received expressing concerns related to public health and impacts to nearby schools associated with hazardous materials and contaminated areas.

4.9.1 Regulatory Setting

FEDERAL

Management of Hazardous Materials

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

- ▶ The Toxic Substances Control Act of 1976 (15 U.S. Code [USC] Section 2601 et seq.) regulates the manufacturing, inventory, and disposition of industrial chemicals, including hazardous materials. Section 403 of the Toxic Substances Control Act establishes standards for lead-based paint hazards in paint, dust, and soil.
- ▶ The Resource Conservation and Recovery Act of 1976 (42 USC 6901 et seq.) is the law under which EPA regulates hazardous waste from the time the waste is generated until its final disposal ("cradle to grave").
- ▶ The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (also called the Superfund Act or CERCLA) (42 USC 9601 et seq.) gives EPA authority to seek out parties responsible for releases of hazardous substances and ensure their cooperation in site remediation.
- ▶ The Superfund Amendments and Reauthorization Act of 1986 (Public Law 99-499; USC Title 42, Chapter 116), also known as SARA Title III or the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), imposes hazardous materials planning requirements to help protect local communities in the event of accidental release.
- ▶ The Spill Prevention, Control, and Countermeasure (SPCC) rule includes requirements for oil spill prevention, preparedness, and response to prevent oil discharges to navigable waters and adjoining shorelines. The rule requires specific facilities to prepare, amend, and implement SPCC Plans. The SPCC rule is part of the Oil Pollution Prevention regulation, which also includes the Facility Response Plan rule.

Transport of Hazardous Materials

The U.S. Department of Transportation regulates transport of hazardous materials between states and is responsible for protecting the public from dangers associated with such transport. The federal hazardous materials transportation law, 49 USC 5101 et seq. (formerly the Hazardous Materials Transportation Act 49 USC 1801 et seq.) is the basic statute regulating transport of hazardous materials in the United States. Hazardous materials transport regulations are enforced by the Federal Motor Carrier Safety Administration, Federal Highway Administration, the U.S. Coast Guard, the Federal Railroad Administration, and the Federal Aviation Administration.

Worker Safety

The federal Occupational Safety and Health Administration (OSHA) is the agency responsible for assuring worker safety in the handling and use of chemicals identified in the Occupational Safety and Health Act of 1970 (Public Law 91-596, 9 USC 651 et seq.). OSHA has adopted numerous regulations pertaining to worker safety, contained in CFR Title 29. These regulations set standards for safe workplaces and work practices, including standards relating to the handling of hazardous materials and those required for excavation and trenching.

The Emergency Planning and Community Right-To-Know Act

The Emergency Planning and Community Right-To-Know Act (EPCRA) (also known as Title III of the Federal Superfund Amendments and Reauthorization Act, or "SARA Title III") (42 United States Code 11001 et seq.), was established by the EPA to allow for emergency planning at the State and local level regarding chemical emergencies, to provide notification of emergency release of chemicals, and to address community right-to-know regarding hazardous and toxic chemicals. SARA Title III was designed to increase community access and knowledge about chemical hazards as well as facilitate the creation and implementation of State/Native American tribe emergency response commissions, responsible for coordinating certain emergency response activities and for appointing local emergency planning committees. Section 1910.1200(c) Title 29 of the CFR defines "chemicals or hazardous materials" for the purposes of SARA Title III.

Federal Insecticide, Fungicide, and Rodenticide Act

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) (seven United States Code 136 et seq.) was originally passed in 1947. It has been amended several times, most extensively in 1972 and in 1996 by the Food Quality Protection Act of 1996, and in 2012 by the Pesticide Registration Improvement Extension Act. The purpose of FIFRA is to establish federal jurisdiction over the distribution, sale, and use of pesticides. It also gives EPA the authority to study the effects of pesticide use. Other key provisions of FIFRA require pesticide applicators to pass a licensing examination for status as "qualified applicators," create a review and registration process for new pesticide products, and ensure thorough and understandable labeling that includes instructions for use.

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.

STATE

Management of Hazardous Materials

In California, both federal and state community right-to-know laws are coordinated through the Governor's Office of Emergency Services. The federal law, SARA Title III or EPCRA, described above, encourages and supports emergency planning efforts at the state and local levels and to provide local governments and the public with information about

potential chemical hazards in their communities. Because of the community right-to-know laws, information is collected from facilities that handle (e.g., produce, use, store) hazardous materials above certain quantities. The provisions of EPCRA apply to four major categories:

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

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

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

Transport of Hazardous Materials and Hazardous Materials Emergency Response Plan

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

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

Management of Construction Activities

Through the Porter-Cologne Water Quality Act and the National Pollutant Discharge Elimination System (NPDES) program, RWQCBs have the authority to require proper management of hazardous materials during project construction. For a detailed description of the Porter-Cologne Water Quality Act, the NPDES program, and the role of the Central Valley RWQCB, see Section 4.10, "Hydrology and Water Quality."

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

Worker Safety

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

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

California Health and Safety Code

The California Environmental Protection Agency has established rules governing the use of hazardous materials and the management of hazardous wastes. California Health and Safety Code Section 25531 et seq. incorporate the requirement of Superfund Amendments and Reauthorization Act and the Clean Air Act as they pertain to hazardous materials. Health and Safety Code Section 25534 directs facility owners storing or handling acutely hazardous materials in reportable quantities to develop a Risk Management Plan (RMP). The RMP must be submitted to the appropriate local authorities, the designated local administering agency, and the EPA for review and approval.

California Code of Regulations Title 22 and Title 26

CCR Title 22 provides state regulations for hazardous materials, and CCR Title 26 provides regulation of hazardous materials management. In 1996, the California Environmental Protection Agency (Cal EPA) established the "Unified Hazardous Waste and Hazardous Materials Management Regulatory Program" (Unified Program) which consolidated the six administrative components of hazardous waste and materials into one program.

LOCAL

City of Fresno General Plan

The General Plan (City of Fresno 2014) is a set of goals, objectives, and policies that form a blueprint for the physical development of the City. For a description of each of the elements within the General Plan, refer to Chapter 3, "Project Description." The following objective and policies related to hazards and hazardous materials are presented in the General Plan:

Objective NS-4: Minimize the risk of loss of life, injury, serious illness, and damage to property resulting from the use, transport, treatment, and disposal of hazardous materials and hazardous wastes.

- ▶ **Policy NS-4-a: Processing and Storage.** Require safe processing and storage of hazardous materials, consistent with the California Building Code and the Uniform Fire Code, as adopted by the City.
- ▶ **Policy NS-4-b: Coordination.** Maintain a close liaison with the Fresno County Environmental Health Department, Cal-EPA Division of Toxics, and the State Office of Emergency Services to assist in developing and maintaining hazardous material business plans, inventory statements, risk management prevention plans, and contingency/emergency response action plans.
- ▶ **Policy NS-4-c: Soil and Groundwater Contamination Reports.** Require an investigation of potential soil or groundwater contamination whenever justified by past site uses. Require appropriate mitigation as a condition of project approval in the event soil or groundwater contamination is identified or could be encountered during site development.
- ▶ **Policy NS-4-d: Site Identification.** Continue to aid federal, State, and County agencies in the identification and mapping of waste disposal sites (including abandoned waste sites), and to assist in the survey of the kinds, amounts, and locations of hazardous wastes.
- ▶ **Policy NS-4-e: Compliance with County Program.** Require that the production, use, storage, disposal, and transport of hazardous materials conform to the standards and procedures established by the County Division of

Environmental Health. Require compliance with the County's Hazardous Waste Generator Program, including the submittal and implementation of a Hazardous Materials Business Plan, when applicable.

- ▶ **Policy NS-4-f: Hazardous Materials Facilities.** Require facilities that handle hazardous materials or hazardous wastes to be designed, constructed, and operated in accordance with applicable hazardous materials and waste management laws and regulations.
- ▶ **Policy NS-4-g: Hazmat Response.** Include policies and procedures appropriate to hazardous materials in the City's disaster and emergency response preparedness and planning, coordinating with implementation of Fresno County's Hazardous Materials Incident Response Plan.
- ▶ **Policy NS-4-h: Household Collection.** Continue to support and assist with Fresno County's special household hazardous waste collection activities, to reduce the amount of this material being improperly discarded.
- ▶ **Policy NS-4-i: Public Information.** Continue to assist in providing information to the public on hazardous materials.

Objective NS-6: Foster an efficient and coordinated response to emergencies and natural disasters.

- ▶ **Policy NS-6-a: County Multi-Jurisdiction Hazard Mitigation Plan.** Adopt and implement the Fresno County Multi-Jurisdiction Hazard Mitigation Plan and City of Fresno Local Hazard Mitigation Plan Annex.
- ▶ **Policy NS-6-b: Disaster Response Coordination.** Maintain coordination with other local, State, and Federal agencies to provide coordinated disaster response.
- ▶ **Policy NS-6-c: Emergency Operations Plan.** Update the City's Emergency Operations Plan periodically, using a whole community approach which integrates considerations for People with access and functional needs in all aspects of planning.
- ▶ **Policy NS-6-d: Evacuation Planning.** Maintain an emergency evacuation plan in consultation with the Police and Fire Departments and other emergency service providers, which shows potential evacuation routes and a list of emergency shelters to be used in case of catastrophic emergencies.
- ▶ **Policy NS-6-e: Critical Use Facilities.** Ensure critical use facilities (e.g. City Hall, police and fire stations, schools, hospitals, public assembly facilities, transportation services) and other structures that are important to protecting health and safety in the community remain operational during an emergency.
 - Site and design these facilities to minimize their exposure and susceptibility to flooding, seismic and geological effects, fire, and explosions.
 - Work with the owners and operators of critical use facilities to ensure they can provide alternate sources of electricity, water, and sewerage in the event that regular utilities are interrupted in a disaster.
- ▶ **Policy NS-6-f: Emergency Vehicle Access.** Require adequate access for emergency vehicles in all new development, including adequate widths, turning radii, hard standing areas, and vertical clearance.
- ▶ **Policy NS-6-g: Emergency Preparedness Public Awareness Programs.** Continue to conduct programs to inform the general public, including people with access and functional needs, of the City's emergency preparedness and disaster response procedures.

Fresno Municipal Code

Various provisions of the City of Fresno Municipal Code are relevant to hazards and hazardous materials, including portions of Chapter 15, Chapter 10, and Chapter 11. Discussion of these relevant portions of the Fresno Municipal Code are provided below.

Chapter 15 of the Fresno Municipal Code is known as "Citywide Development Code (CDC)." The purpose of the CDC is to implement the General Plan, if applicable, operative plans, to protect and promote the public health, safety, peace, comfort, convenience, prosperity, and general welfare of the City of Fresno. More specifically, the CDC is

adopted to achieve the following consistent with the goals, objectives, and policies of the General Plan and any other operative plan.

Article 25 (Performance Standards) of the CDC has the following purposes: 1) Establish permissible limits and allow objective measurement of nuisances, hazards, and objectionable conditions; and 2) Ensure that all uses will provide necessary control measures to protect the community from nuisances, hazards, and objectionable conditions. The General Standard of Article 25 is stated as follows: "Land or buildings shall not be used or occupied in a manner creating any dangerous, injurious, or noxious conditions, chemical fires, explosive, blight, or other hazards that could adversely affect the surrounding area."

Article 27 (Standards for Specific Uses and Activities) of the CDC states: "The purpose of this article is to establish standards for specific uses and activities that are permitted or conditionally permitted in some or all districts. These provisions are supplemental standards and requirements to minimize the impacts of these uses and activities on surrounding properties and to protect the health, safety, and welfare of their occupants and of the general public." This article specifies regulations governing the operation of various types of facilities and activities, including hazardous waste management facilities, recycling facilities, and hazardous materials storage activities.

Section 15-2727, Development of Former Landfill Sites and Hazardous Sites, states "A Conditional Use Permit shall be required for the development of all former Landfill Sites and other sites deemed hazardous, regardless of the proposed use. As part of the application, the applicant shall at a minimum, provide a geotechnical report that provides a complete analysis of on-site soil conditions, fault hazards, underground water conditions, and recommendations as well as a post-closure plan that outlines remediation measures. Applicants shall comply with all State and federal regulations related to operation, post-closure remediation, and monitoring."

Separately, Chapter 10, Regulations Regarding Public Nuisances and Real Property Conduct and Use, includes:

Article 14, Hazardous Spills Expense Recovery. The intent of Article 14 is stated as follows: "Surface waters, groundwater, soils, vegetation, and atmosphere inside the City of Fresno are susceptible to damage from the handling, storage, use, processing and disposal of hazardous material and the expense incurred by the taxpayers as a result of the City of Fresno or its Designee having to respond in an emergency to protect life, property and the environment when there has been a release of hazardous materials should be recovered from the person responsible for the emergency." In conjunction with Chapter 15, Article 27 of the City of Fresno Municipal Code, Article 14 pertains to the recovery of expenses associated with hazardous spills. Specifically, the code states that "Any person causing a release or threatened release which results in an emergency action shall be liable to the City of Fresno for the recoverable costs resulting from the emergency action."

Additionally, Chapter 11, Building Permits and Regulations, includes Article 2, Section 11-218, Debris and Excavations, which requires of demolition projects that the permit holder properly cap the sanitary sewer house connection, and to properly fill or otherwise protect all basements, cellars, septic tanks, wells, and other excavations, and said lot or parcel shall be left level and in a condition to be disked for control of weeds.

City of Fresno Fire Department Hazardous Materials Response Team

The City of Fresno Fire Department recognizes the potential for a large chemical release to occur which could expose thousands of people to hazardous or toxic vapors. The City of Fresno Fire Department Hazardous Materials Response Team has embraced an all-hazards approach to emergency response to ensure that the City receives effective protection from the risk of hazardous materials releases.

City of Fresno Emergency Operations Plan

In addition to emergency response to hazardous materials incidents, both the City of Fresno and Fresno County implement programs to facilitate emergency preparedness for other types of incidents within the Plan Area. Specifically, the City of Fresno has an Emergency Operations Plan that describes what the City's actions will be during a response to an emergency. This plan also describes the role of the Emergency Operations Center (EOC) and the coordination that occurs between the EOC, City departments, and other response agencies. The plan establishes a requirement for the emergency management organization to mitigate any significant emergency disaster affecting

the City of Fresno. The plan also identifies the policies, responsibilities, and procedures required to protect the health and safety of City communities, public and private property, and the environmental effects of natural or technological disasters. In addition, the plan establishes the operation concepts and procedures associated within initial response operations (field response) to emergencies, the extended response operations (City of Fresno Emergency Operations Center Activities), and the recovery process. Furthermore, the plan complies with the State of California Emergency Operations Plan "Cross Walk" checklist for determining whether an emergency plan has addressed critical elements of California's Standardized Emergency Management System and the National Incident Management System.

Fresno County Hazardous Materials Management Plan/Hazardous Materials Business Plan

The Fresno County Environmental Health Department maintains a hazardous materials management plan/hazardous materials business plan (HMMP/HMBP). The HMMP/HMBP describes agency roles, strategies and processes for responding to emergencies involving hazardous materials. The Environmental Health Department maintains a Hazardous Materials Database and Risk and Flood Maps available to the public on its website.

County of Fresno Multi-Jurisdictional Local Hazard Mitigation Plan

The purpose of a local hazard mitigation plan (LHMP) is to reduce or eliminate long-term risk to human life and property resulting from hazards. A local hazard mitigation plan recognizes risks before they occur, as well as identifies resources, information, and strategies for emergency response. Fresno County, with participation from 17 jurisdictions, is the lead agency on the Multi-Jurisdictional Local Hazard Mitigation Plan (MHMP). In 2018, the Fresno County Board of Supervisors adopted the MHMP, which includes a Fresno Annex listing information that pertains to the City in the areas of health, infrastructure, housing, government, environment, and land use (Fresno County 2018).

San Joaquin Valley Air Pollution Control District

The San Joaquin Valley Air Pollution Control District (SJVAPCD) has regulations that require compliance with the asbestos demolition and renovation requirements developed by EPA in the National Emission Standards for Hazardous Air Pollutants (NESHAP) regulation, 40 CFR, Part 61, Subpart M.

Certified Unified Program Agency

The California Environmental Protection Agency designates specific local agencies as Certified Unified Program Agencies (CUPAs), typically at the county level. The Fresno County Department of Environmental Health is the CUPA designated for Fresno County. The Fresno County Department of Environmental Health is responsible for the implementation of statewide programs within its jurisdiction, including USTs, Hazardous Materials Business Plan requirements, California Accidental Release Prevention program, etc. Implementation of these programs involves permitting, inspecting, providing education/guidance, investigations, and enforcement. The Fresno County Environmental Health Division (FCEHD) is the local CUPA.

4.9.2 Environmental Setting

For purposes of this section, the term "hazardous materials" refers to both hazardous substances and hazardous wastes. A "hazardous material" is defined in the CFR as "a substance or material that ... is capable of posing an unreasonable risk to health, safety, and property when transported in commerce" (49 CFR 171.8). California Health and Safety Code Section 25501 defines a hazardous material as follows:

"Hazardous material" means any material that, because of its quantity, concentration, or physical, or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material which a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

"Hazardous wastes" are defined in California Health and Safety Code Section 25141(b) as wastes that:

because of their quantity, concentration, or physical, chemical, or infectious characteristics, [may either] cause, or significantly contribute to an increase in mortality or an increase in serious illness [or] pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

CCR Title 22 categorizes hazardous waste into hazard classes according to specific characteristics of ignitability, corrosivity, reactivity, or toxicity. Hazardous waste with any of these characteristics is also known as a Resource Conservation and Recovery Act (RCRA) waste.

Hazardous materials can be categorized as hazardous non-radioactive chemical materials, radioactive materials, toxic materials, and biohazardous materials. The previous definitions are adequate for non-radioactive hazardous chemicals. Radioactive and biohazardous materials are further defined as follows:

- ▶ Radioactive materials contain atoms with unstable nuclei that spontaneously emit ionizing radiation to increase their stability.
- ▶ Radioactive wastes are radioactive materials that are discarded (including wastes in storage) or abandoned.
- ▶ Toxic wastes are harmful or fatal when ingested or absorbed (e.g., containing mercury, lead). When toxic wastes are land disposed, contaminated liquid may leach from the waste and pollute groundwater.
- ▶ Biohazardous materials include materials containing certain infectious agents (microorganisms, bacteria, molds, parasites, and viruses) that cause or significantly contribute to increased human mortality or organisms capable of being communicated by invading and multiplying in body tissues.
- ▶ Medical wastes include both biohazardous wastes (byproducts of biohazardous materials) and sharps (devices capable of cutting or piercing, such as hypodermic needles, razor blades, and broken glass) resulting from the diagnosis, treatment, or immunization of human beings, or research pertaining to these activities.

There are several categories of hazardous materials and hazardous wastes that could be found on any given property based on past uses. Some common examples include agrichemicals (chlorinated herbicides, organophosphate pesticides, and organochlorine pesticides, such as such as Mecoprop (MCP), Dinoseb, chlordane, dichloro-diphenyltrichloroethane (DDT), and dichloro-diphenyldichloroethylene (DDE), petroleum-based products (oil, gasoline, diesel fuel), a variety of chemicals including paints, cleaners, and solvents, and asbestos-containing or lead-containing materials (e.g., paint, sealants, pipe solder).

Historical Use Information

Historical information was reviewed to understand the history of previous uses within the Plan Area and surrounding lands so as to evaluate the Plan Area and adjoining properties for evidence of environmental concerns. Standard historical sources reviewed during the preparation of this report included the following references, as available.

EnviroStor Data Management System

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. There are six active sites listed in the database within the Plan Area (Table 4.9-1).

Table 4.9-1 DTSC Known Hazardous Material Release Sites within the Plan Area

Site	Location	Type	Status
Schnitzer-Fresno	2727 South Chestnut Avenue	DTSC Corrective Action Site	Active
Potential Release Southeast of Golden State Boulevard and East Avenue	Southeast of Golden State Boulevard and South East Avenue	DTSC State Response Site	Active
FMC Corporation	2501 South Sunland Avenue	DTSC State Response Site	Active
FMC Corporation-RCRA Post-Closure	2501 South Sunland Avenue	DTSC Voluntary Cleanup Site	Active
FMC Corporation	2501 South Sunland Avenue	DTSC Hazardous Waste-RCRA Site	Undergoing Closure
Valley Foundry and Machine Works	2510 South East Avenue	DTSC State Response Site	Active
South Fresno Regional Groundwater Plume	North of Church Avenue at South East Avenue	DTSC State Response Site	Active
South Fresno PCE Groundwater Plume	2376 South Railroad Avenue	DTSC State Response Site	Active
Largent H M Company Inc.	3252 South Cedar Avenue	DTSC Evaluation Site	Inactive-Needs Evaluation
New Idria Mining and Chemical	3457 South Cedar Avenue	DTSC Evaluation Site	Inactive-Needs Evaluation
Orange Avenue Disposal Site	3280 South Orange Avenue	DTSC Evaluation Site	In Remediation Under RWQCB
TSE Brakes	3183 South Parkway Drive	DTSC Evaluation Site	Inactive-Needs Evaluation
Wilbur & Ellis	2903 South Cedar Street	DTSC Evaluation Site	Inactive-Needs Evaluation
Former Dow Brands Facility-Fresno	4787 East Drive Avenue	DTSC Evaluation Site	In Remediation Under RWQCB
Autoline Industries West	2696 South Maple Avenue	DTSC Evaluation Site	In Remediation Under RWQCB
Kearney's Metals	4371 East Vine Avenue	DTSC Evaluation Site	Inactive-Needs Evaluation
PG&E Fresno Service Center	California and Orange Avenues	DTSC Voluntary Cleanup Site	In Remediation Under RWQCB
PDM Steel Service Center	4005 East Church Avenue	DTSC Voluntary Cleanup Site	Certified Operations and Maintenance (O&M)
Former Burlington Northern Santa Fe Ice House	3090 East Church Ave	DTSC State Response Site	No Further Action
Weir Floway Inc.	2494 South Railroad Avenue, P.O. Box 164	DTSC State Response Site	Certified Operations and Maintenance (O&M)
South Fresno VOC Discovery Project	Highway 99 and Jensen Avenue	DTSC Evaluation Site	Inactive-Needs Evaluation
Aquachlor	2885 East Jensen Avenue	DTSC Voluntary Cleanup Site	In Remediation Under RWQCB
Pick N Pull Auto Dismantler	3230 East Jensen Avenue	DTSC Voluntary Cleanup Site	Inactive-Needs Evaluation
TSG Recycling Disposal, Incorporated, DBA Western Metal Company	2910 South Cherry Avenue	DTSC Corrective Action	Active

Cortese Database

The State of California Hazardous Waste and Substances Site List (also known as the “Cortese List”) is a planning document used by the state, local agencies, and developers to comply with CEQA requirements for providing information about the location of hazardous materials sites. Government Code Section 65962.5 requires Cal EPA to annually update the Cortese List. DTSC is responsible for preparing a portion of the information that comprises the Cortese List. Other state and local government agencies are required to provide additional hazardous material release information that is part of the complete list. The Cortese database identifies public drinking water wells with detectable levels of contamination, hazardous substance sites selected for remedial action, sites with known toxic material identified through the abandoned site assessment program, sites with USTs having a reportable release, and all solid waste disposal facilities from which there is known hazardous substance migration. The source of this database is the California Environmental Protection Agency (Cal EPA). No portion of the Plan Area is listed in this database.

GeoTracker

GeoTracker provides online access to environmental data and is the interface to the Geographic Environmental Information Management System, a data warehouse which tracks regulatory data about underground fuel tanks, fuel pipelines, and public drinking water supplies. GeoTracker has replaced past databases, such as the Leaking Underground Storage Tank Information System and the UST database.

Searches of the GeoTracker database identified one active and one inactive hazardous material site located within the Plan Area known to handle and store hazardous materials that are associated with a hazardous material related release or occurrence. The terms “release” or “occurrence” include any means by which a substance could harm the environment: by spilling, leaking, discharging, dumping, injecting, or escaping.

Table 4.9-2 displays the known hazardous material sites located within the Plan Area with a description of the type, status, and address. As shown, the sites are designated as completed and case closed, or open with an additional status descriptor: site assessment, remediation, eligible for closure, or inactive.

Table 4.9-2 GeoTracker Known Hazardous Material Release Sites within the Plan Area

Site	Location	Type	Status
Southern Pacific Pipe Lines, Inc.	4149 South Maple Avenue	SWRCB Cleanup Program Site	Completed; Case Closed
Former Chevron Fuel Terminal	4073 South Maple Avenue	SWRCB Cleanup Program Site	Completed; Case Closed
Wilbur Ellis Co.	2903 South Cedar	SWRCB Cleanup Program Site	Completed; Case Closed
DOW Brands Facility	4787 East Date Avenue	SWRCB Cleanup Program Site	Completed; Case Closed
DOW Brands Facility II	4787 East Date Avenue	SWRCB Cleanup Program Site	Open; Site Assessment
Ashland Chemical Co.	4525 East Commerce Street	SWRCB Cleanup Program Site	Completed; Case Closed
Flemming Foods	2626 South Maple	SWRCB Cleanup Program Site	Completed; Case Closed
American Warehouse	2702 South Maple Avenue	SWRCB Cleanup Program Site	Completed; Case Closed
Former Fruehauf Trailer Service Facility	2727 South East Avenue	SWRCB Cleanup Program Site	Completed; Case Closed
Chevron Chemical Co. (Ag Chem Warehouse)	2882 East Annadale Avenue	SWRCB Cleanup Program Site	Completed; Case Closed
Nisshinbo Facility	2885 South Cherry Avenue	SWRCB Cleanup Program Site	Completed; Case Closed
Market Express Transportation	2449 South Cherry Avenue	SWRCB Cleanup Program Site	Completed; Case Closed
Currie Bros Inc. Fresno Bulk Plant Parcel 3	2191 South East Avenue	SWRCB Cleanup Program Site	Completed; Case Closed
Currie Bros Inc. Fresno Bulk Plant Parcel 2	3217 East Lorena Avenue	SWRCB Cleanup Program Site	Completed; Case Closed
Currie Bros Inc. Fresno Bulk Plant Parcel 1	2150 South Third Street	SWRCB Cleanup Program Site	Completed; Case Closed
Birk Petroleum	4000 East California Avenue	SWRCB Cleanup Program Site	Completed; Case Closed
Fresno Metropolitan Flood Control Basin II-2	Bisceglia and California Avenues	SWRCB Cleanup Program Site	Open; Site Assessment

Site	Location	Type	Status
Univar	4465 East Florence	SWRCB Cleanup Program Site	Completed; Case Closed
BNSF (Former Ice House)	3090 East Church Avenue	SWRCB Cleanup Program Site	Open; Remediation
FMC Corporation	2501 South Sunland Avenue	SWRCB Cleanup Program Site	Open; Remediation
Weir Floway, Inc.	2494 South Railroad Avenue	SWRCB Cleanup Program Site	Open; Remediation
Ametek Valley Foundry	2510 South East Avenue	SWRCB Cleanup Program Site	Open; Site Assessment
Former Fruehauf Trailer Service Facility	2727 South East Avenue	SWRCB Clean Up Program Site	Completed; Case Closed
RMW-Champion Parts Rebuilders, Inc.	2696 South Maple	SWRCB Cleanup Program Site	Open; Remediation
Wingate Chemical Co.	4791 East Date Avenue	SWRCB Cleanup Program Site	Open; Remediation
North and Elm Excavation	Corner of North and Elm	SWRCB Cleanup Program Site	Completed; Case Closed
The Christian Bros	2202 South Cedar Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
Qual-T-Truck	3767 East Church Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
Pacific Forest Products	3355 East Lorena Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
Guild Winery	3223 East Church Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
Fresno Wire Rope & Rigging	2360 South East Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
Anderson Clayton	2396 South Railroad Street	SWRCB LUST Cleanup Site	Completed; Case Closed
Roadway Express, Inc.	2440 Church Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
Fred Horn	2320 East Church	SWRCB LUST Cleanup Site	Completed; Case Closed
Ryder Truck Rental	2701 East Byrd Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
Ryder	2701 East Byrd Avenue	SWRCB Cleanup Program Site	Open; Eligible for Closure
Allied Fasteners	2540 South Sarah Street	SWRCB LUST Cleanup Site	Completed; Case Closed
Weird (Peabody) Floway	2494 South Railroad Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
Daylen Inc.	2559 South East Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
Calif-Fresno Oil Co.	2585 South East Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
Shell Service Station	2595 South East Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
Private Shop	2865 East Jensen Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
Aquachlor	2885 East Jensen Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
American Transfer Co.	2810 East Jensen Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
M&S Texaco AKA Fleetcard Fuels #992	2619 South East Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
Growers Packaging	3751 East Calwa Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
Jensen Auto Parts	3230 East Jensen Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
Consolidated Freightways	2737 South East Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
Royal Express	2774 South Orange Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
Truck City	2768 South Railroad Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
American Warehouse	2702 South Maple Avenue	SWRCB Clean Up Program Site	Completed; Case Closed
Cal Sesame Inc.	4620 East Vine Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
Fresno Pallet Inc.	4707 East Vine Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
Associated Compressor	4651 East Date Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
Pacific Choice Brands	4667 East Date Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
Red Triangle	2809 South Chestnut Avenue	SWRCB Cleanup Program Site	Open; Inactive

Site	Location	Type	Status
Red Triangle Oil Co.	2809 South Chestnut Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
Bergen & Brunswick	4586 East Commerce Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
Producers Cotton Oil Warehouse	2907 South Maple Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
Ace Sprinkler Co.	2803 South Orange Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
Cal Trans Fresno	2796 South Railroad Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
KBK Oil	2874 Golden State Boulevard	SWRCB LUST Cleanup Site	Completed; Case Closed
Manna Pro	2962 South Cedar	SWRCB LUST Cleanup Site	Completed; Case Closed
General Tire Service	2099 East North Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
Smith Tank Lines	2999 South Orange Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
Pepsi-Cola Bottling Co.	1150 East North Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
Shane Industries	2724 East Annadale Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
TED Smith (TSE Brakes)	3187 South Parkway Drive	SWRCB LUST Cleanup Site	Completed; Case Closed
General Petroleum-Fresno Cardlock	3220 South Parkway Drive	SWRCB LUST Cleanup Site	Completed; Case Closed
Cleim-Crown Pumps	3087 South Elm Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
Dunavant-Fambro Warehouse	3600 South Cedar Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
Orange Ave Disposal Site	3280 South Orange Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
R.V. Jensen Inc.	4021 South Maple Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
SFPP,LP	4149 South Maple Avenue	SWRCB Cleanup Program Site	Open; Site Assessment
Fresno Truck Center	4194 South Orange Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed
Malaga Food Center	4412 South Maple Avenue	SWRCB LUST Cleanup Site	Completed; Case Closed

Source: State Water Resources Control Board GeoTracker (2023).

Locations of hazardous materials sites within the Plan Area that are listed in the GeoTracker and EnviroStor databases are shown in Figure 4.9-1.

Emergency Response

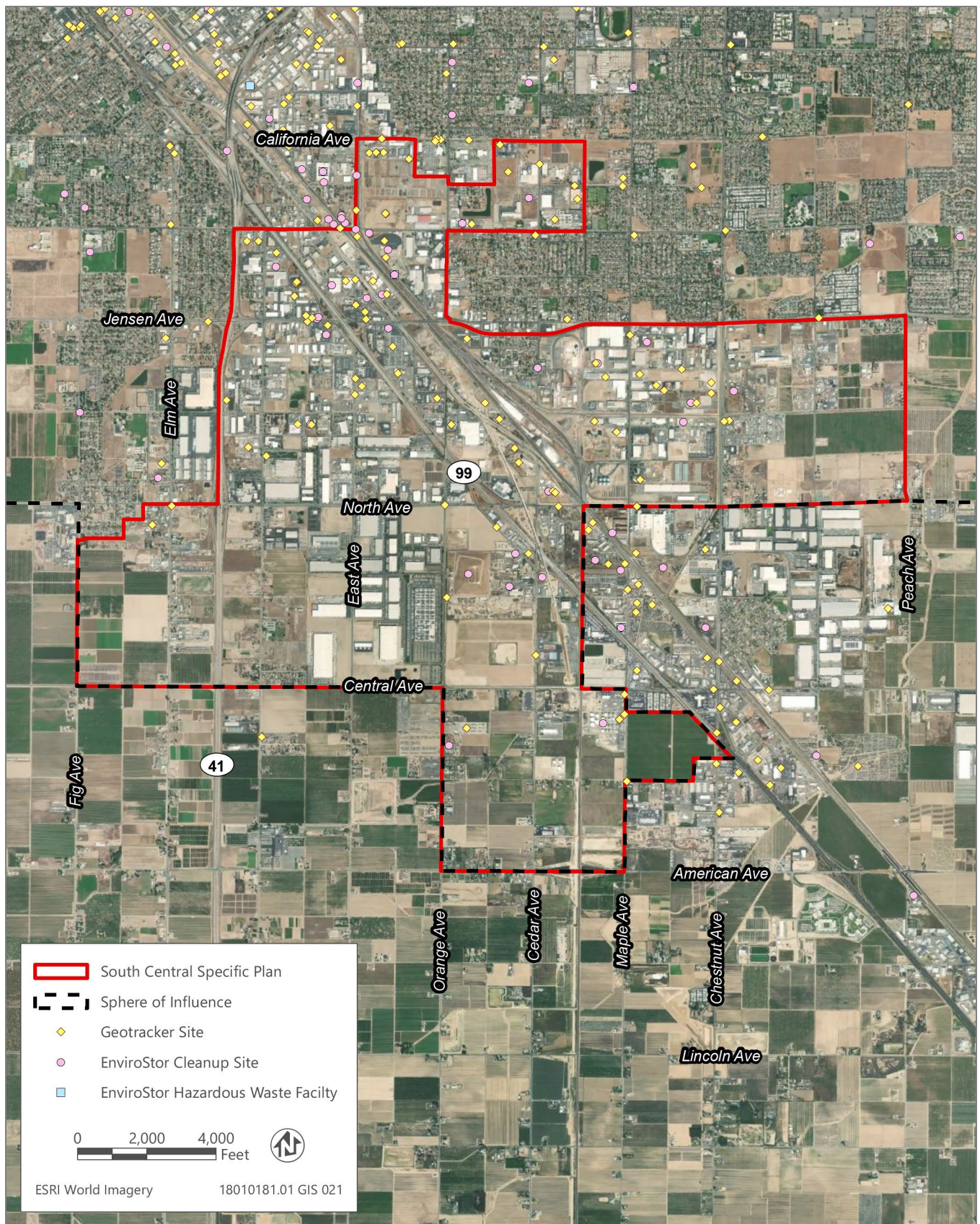
The City of Fresno Fire Department (FFD) provides fire prevention, suppression and investigation services, airport fire and rescue, urban search and rescue, response to medical emergencies, and response to hazardous materials incidents. The FFD service area consists of the City of Fresno and extra-territorial services via contracts to provide services to the Fig Garden Fire Protection District, Fresno Yosemite International Airport, and surrounding areas through mutual aid and automatic aid requests. The Plan Area contains two fire departments, City of Fresno Fire Station 7 is located at 2571 S. Cherry Avenue, north of Jensen Avenue, and Fresno County Fire Station 87 is located at 4706 E Drummond Avenue, southeast of the intersection of Jensen and Maple Avenues.

Transportation of Hazardous Materials

The nearest roadway and transportation route approved for the transportation of explosives, poisonous inhalation hazards, and radioactive materials in the City is SR 99.

Wildfire Hazards

No part of the Plan Area is located within or near a State Responsibility Area (SRA). The Plan Area is located within a Local Responsibility Area (LRA). The Plan Area is located in the "LRA Unzoned" Fire Hazard Severity Zone. There are no very high fire hazard severity zones (VHFHSZ) located within or near the Plan Area (CAL FIRE 2023).



Source: Data downloaded from State Water Resources Control Board in 2023 and Department of Toxic Substances Control in 2023.

Figure 4.9-1 Hazardous Material Sites

4.9.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

The following reports and data sources document potential hazardous conditions in the Plan Area and were reviewed for this analysis:

- ▶ Cortese List Data Resources (Cal EPA 2019),
- ▶ Fresno General Plan Public Review Draft Program Environmental Impact Report (City of Fresno 2020),
- ▶ West Area Neighborhoods Specific Plan Draft Environmental Impact Report (City of Fresno 2022a),
- ▶ EnviroStor Data Management System (DTSC 2023),
- ▶ Fresno County Airport Land Use Compatibility Plan (Fresno County Airport Land Use Commission 2018),
- ▶ Fresno General Plan (City of Fresno 2022b),
- ▶ Fresno Municipal Code (City of Fresno 2023), and
- ▶ GeoTracker (SWRCB 2023).

The impact analysis involved a review of applicable law, plans and policies, regulations, and database searches to identify the existing environmental setting and requirements pertaining to construction and operation related hazards and hazardous materials. Existing on-site hazardous materials and the potential for other safety or hazardous conditions were reviewed based on publicly available hazard and hazardous materials information. The impact analysis considered potential changes in the nature, extent, and presence of hazardous conditions with the implementation of the proposed plan that would create a significant hazard to the public or environment.

THRESHOLDS OF SIGNIFICANCE

An impact related to hazards and hazardous materials would be significant if implementing the proposed plan would:

- ▶ 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, result in a safety hazard or excessive noise 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.

ISSUES NOT DISCUSSED FURTHER

Airport Hazards

The closest airport to the Plan Area is Fresno Chandler Executive Airport, approximately 2.1 miles from the Plan Area. The Plan Area is located outside of the nearest airport land use plan area. Therefore, no impacts related to being located within an airport land use plan area, within 2 miles of an airport, or within the vicinity of a private airstrip would occur. No further analysis is required by CEQA.

Wildland Fires

The Plan Area is not located in or near to any SRA or land classified as VHFHSZs. The Plan Area is largely industrialized with little agricultural land within the Plan Area boundaries. Implementation of the proposed plan would increase industrial land uses within the Plan Area, reducing the potential for wildland fires to occur. The City of Fresno is also largely categorized as a little or no threat or moderate fire hazard, largely attributed to developed and disturbed areas. Therefore, no impacts related to wildland fires within the Plan Area would occur. No further analysis is required by CEQA.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 4.9-1: Create a Significant Hazard to the Public or the Environment through the Routine Transport, Use, or Disposal of Hazardous Materials or through the Reasonably Foreseeable Upset and Accident Conditions Involving the Release of Hazardous Materials into the Environment

Construction and operation of development under the proposed plan would involve the use, storage, and transport of hazardous materials. All such hazardous materials and activities would be typical for such uses, and would occur in compliance with local, state, and federal regulations, which would minimize but not eliminate the potential for upset or accident conditions. Site-specific studies for future projects under the plan could reveal as-yet unknown environmental conditions during construction or operation. The impact to the public and the environment from exposure to these unknown hazardous materials and other hazards during construction, and/or from accidental release of hazardous materials during the routine transport, use, or disposal of hazardous materials would be **potentially significant**.

Unauthorized releases of hazardous materials can occur in areas that treat, store, transport, and use hazardous materials and have the potential to create environmental impacts to properties, the natural environment, and human health. The extent of the risk would depend in large part on the release location, the quantity and nature of the substance released, and the mechanism of release. In the event of an accidental release of hazardous materials/substances, emergency response measures must be implemented to address potential risks and ensure the protection of human health and the natural environment.

Construction Activities

Construction activities would occur through indirect implementation of the proposed plan. Construction equipment and materials would likely require the use of petroleum-based products (oil, gasoline, diesel fuel), and a variety of chemicals including paints, cleaners, and solvents. The use of these materials at a construction site could pose a risk of release into the environment if not properly handled, stored, and transported.

Properties within the Plan Area could have residual soil (and potentially groundwater) contamination that may require remediation, and potentially hazardous building materials (e.g., asbestos containing materials, lead-based paint) could be encountered during demolition of existing structures to accommodate new development. A release into the environment could pose significant impacts to the health and welfare of people and wildlife and could result in contamination of water (groundwater or surface water), habitat, and other important resources.

Like most agricultural and farming operations in the Central Valley, agricultural practices in the area have used agricultural chemicals including pesticides and herbicides as a standard practice. Residual concentrations of pesticides may be present in soil as a result of historic agricultural application and storage. Continuous spraying of crops over many years can potentially result in a residual buildup of pesticides in farm soils. Of highest concern relative to agrichemicals are chemicals such as chlorinated herbicides, organophosphate pesticides, and organochlorine pesticides, such as MCP, DDT, and DDE (City of Fresno 2022a). Other chemicals may also be present. As described in the "Environmental Setting," there is a historical record of soil contamination at the Schnitzer-Fresno site, and aquifer and groundwater contamination at the FMC Corporation site, Valley Foundry and Machine Work site, South Fresno Regional Groundwater Plume site, and South Fresno PCE Groundwater Plume site. Therefore, there is the potential for other sites to be contaminated or have a history of hazardous materials being used as part of previous or current operations. Future development under the proposed plan could involve the transport, use, and disposal of hazardous materials associated with construction and/or remediation activities. Use, storage, and transport of hazardous materials and any potential remediation activities would be subject to existing federal, State, and local regulations. CHP and Caltrans regulate transport of hazardous materials. BMPs and other measures would be identified and implemented as part of the SWPPP to prevent, contain, or clean-up any released hazardous materials. Development projects proposed in the Plan Area would be required to comply with applicable General Plan objectives and policies, including Objective NS-4 and Policy NS-4-a, NS-4-e, and NS-4-g, and SCSP policies, including GB-1, GB-2, and CBD-3, to reduce the impacts to the public and the environment from exposure of hazardous materials during construction activities through the routine transport, use, or disposal of hazardous materials.

Operational Activities

During operation, the storage, use, and disposal of hazardous materials would be associated with industrial and, to a lesser degree, commercial, and residential uses. Hazardous materials such as cleaners, paint, landscape maintenance chemicals, and hazardous materials similar to those used during construction could also be used periodically as part of operation, maintenance, and repair of facilities and infrastructure. Facilities that would use hazardous materials on site would be required to obtain any required permits and comply with appropriate regulatory agency standards designed to ensure proper use and storage and avoid hazardous materials releases. Chemicals used for landscape maintenance, such as fertilizers and pesticides, would be used in limited quantities, in accordance with instructions provided by the manufacturer. Pursuant to the State of California Hazardous Materials Release Response Plans and Inventory Law of 1985 (Business Plan Act, California Health and Safety Code, Division 20, Chapter 6.95, Article 1), operators of commercial and industrial facilities would be required to prepare and implement a Hazardous Materials Business Plan and inventory of hazardous materials, if inventory would exceed threshold quantities, or include extremely hazardous substances. The Hazardous Materials Business Plan would be prepared before occupancy of subject buildings and would include:

- ▶ an inventory of hazardous materials handled,
- ▶ facility floor plans showing where hazardous materials are stored,
- ▶ an emergency response plan, and
- ▶ provisions for employee training in safety and emergency response procedures.

Major transportation corridors, including State Route (SR) 41, SR 99, and Burlington Northern Santa Fe and Union Pacific rail lines traverse the Plan Area. All classes of hazardous materials except for some high-level radioactive materials, poisons, and explosives, unless a Hazardous Materials Safety Permit is obtained, are legally permitted to be transported on SR 99, SR 41, and major roadways both adjacent to and within the Plan Area. In addition, the rail lines would continue to transport hazardous materials through the Plan Area. An accident involving release of hazardous materials along highways or rail lines is possible in Fresno as it is in any jurisdiction through which they pass. Intensification of industrial development in the Plan Area could increase the amount of hazardous material and waste being produced and transported along SR 99, SR 41, and other major surrounding roadways and railways, but there is no evidence to suggest that risk of an accident would be substantially increased. The SCSP would meet the requirements of Section 31303 of the California Vehicle Code, in accordance with Title 49 of the U.S. Code, Section

5101 et seq., to protect against the risks to life, property, and the environment that are inherent in the transportation of hazardous materials.

The City's Emergency Operation Plan and County Multi-Jurisdictional LHMP provide detailed and unified guidance for mitigation of hazard events and a coordinated response with surrounding jurisdictions in the event of an emergency related to hazards. As described in the "Regulatory Setting" section, EPA and either DTSC or CVRWQCB would manage the regulation of hazardous materials handling and disposal. These federal and state agencies create and enforce the standards for the handling, storage, and spill response requirements of all hazardous materials. Development projects proposed in the Plan Area would be required to comply with applicable General Plan objectives and policies, including Objective NS-4 and Policy NS-4-a, NS-4-e, and NS-4-g, and SCSP policies, including GB-1, GB-2, and CBD-3, to reduce the impacts to the public and the environment from exposure of hazardous materials during operational activities through the routine transport, use, or disposal of hazardous materials.

Conclusion

Compliance with federal, state, and local regulations and implementation of BMPs would minimize but not eliminate the risk of a spill or accidental release of hazardous materials during construction of development pursuant to the plan. Similarly, operation of primarily industrial development in the plan area would involve use, transport, storage, and disposal of hazardous materials, the risks of which would be reduced, but not eliminated, through compliance with applicable regulations. The impact on the public and the environment from exposure to hazardous materials and other hazards during construction and operation would be **potentially significant**.

Mitigation Measures

Mitigation Measure 4.9-1a: Submit Hazardous Materials Business Plan

Before issuance of grading permits or improvement plans, project applicants for all future development projects within the Plan Area shall submit an HMBP to Fresno County Environmental Health Division (CUPA) for review and approval. If during the construction process the applicant or their subcontractors generates hazardous waste, the applicant must register with the CUPA as a generator of hazardous waste, obtain an EPA ID# and accumulate, ship, and dispose of the hazardous waste per Health and Safety Code Ch. 6.5. (California Hazardous Waste Control Law).

Mitigation Measure 4.9-1b: Conduct a Phase I ESA

Prior to the issuance of a grading permit, project applicants for all future development projects within the Plan Area shall complete a Phase I ESA (performed in accordance with the current ASTM Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process [E 1527]) for each individual property prior to development or redevelopment to ascertain the presence or absence of Recognized Environmental Conditions (RECs), Historical Recognized Environmental Condition (HRECs), and Potential Environmental Concerns (PECs). The findings and conclusions of the Phase I ESA shall become the basis for potential recommendations for follow-up investigation, if found to be warranted.

Mitigation Measure 4.9-1c: Conduct a Phase II ESA

If the findings and conclusions of the Phase I ESA for a property result in evidence of RECs, HRECs and/or PECs warranting further investigation, applicants for those projects shall complete a Phase II ESA. The Phase II ESA may include but may not be limited to the following: (1) Collection and laboratory analysis of soils and/or groundwater samples to ascertain the presence or absence of significant concentrations of constituents of concern; (2) Collection and laboratory analysis of soil vapors and/or indoor air to ascertain the presence or absence of significant concentrations of volatile constituents of concern; and/or (3) Geophysical surveys to ascertain the presence or absence of subsurface features of concern such as USTs, drywells, drains, plumbing, and septic systems. The findings and conclusions of the Phase II ESA shall become the basis for potential recommendations for follow-up investigation, site characterization, and/or remedial activities, if found to be warranted.

Mitigation Measure 4.9-1d: Conduct a Site Characterization

In the event the findings and conclusions of the Phase II ESA reveal the presence of significant concentrations of hazardous materials warranting further investigation, project applicants for all future development within the Plan Area shall ensure that site characterization shall be conducted in the form of additional Phase II ESAs in order to characterize the source and maximum extent of impacts from constituents of concern. The findings and conclusions of the site characterization shall become the basis for formation of a remedial action plan and/or risk assessment.

Mitigation Measure 4.9-1e: Conduct a Site Remediation and Potential Risk Assessment

If the findings and conclusions of the Phase II ESA(s), site characterization and/or risk assessment demonstrate the presence of concentrations of hazardous materials exceeding regulatory threshold levels, prior to the issuance of a grading permit, project applicants for such projects shall complete site remediation and potential risk assessment with oversight from the applicable regulatory agency including, but not limited to, CalEPA DTSC or RWQCB, and FCEHD. Potential remediation could include the removal or treatment of water and/or soil. If removal occurs, hazardous materials shall be transported and disposed of at a hazardous materials permitted facility.

Mitigation Measure 4.9-1f: Prepare Environmental Site Management Plan

Prior to the issuance of a future building permit for an individual property within the Plan Area with residual environmental contamination, the agency with primary regulatory oversight of environmental conditions at such property ("Oversight Agency") shall have determined that the proposed land use for that property, including proposed development features and design, does not present an unacceptable risk to human health, if applicable, through the use of an environmental site management plan (ESMP) that could include institutional controls, site-specific mitigation measures, a risk management plan, and deed restrictions based upon applicable risk-based cleanup standards. Remedial action plans, risk management plans and health and safety plans shall be required as determined by the Oversight Agency for a given property under applicable environmental laws, if not already completed, to prevent an unacceptable risk to human health, including workers during and after construction, from exposure to residual contamination in soil and groundwater in connection with remediation and site development activities and the proposed land use.

Mitigation Measure 4.9-1g: Conduct a Vapor Intrusion Assessment

For those sites with potential residual volatile organic compounds (VOCs) in soil, soil gas, or groundwater that are planned for future redevelopment with an overlying occupied building, a vapor intrusion assessment shall be performed by a licensed environmental professional. If the results of the vapor intrusion assessment indicate the potential for significant vapor intrusion into the proposed building, the project design shall include vapor controls or source removal, as appropriate, in accordance with RWQCB, DTSC, or FCEHD requirements. Soil vapor mitigation measures or controls could include passive venting and/or active venting. The vapor intrusion assessment as associated vapor controls or source removal can be incorporated into the ESMP.

Mitigation Measure 4.9-1h: Conduct Asbestos and Lead-Based Paint Surveys

In the event of future planned renovation or demolition of structures in the Plan Area, prior to the issuance of demolition permits, asbestos and lead-based paint (LBP) surveys shall be conducted to determine the presence or absence of asbestos-containing materials (ACM) and/or LBP. Removal of friable ACM, and non-friable ACMs that have the potential to become friable during demolition and/or renovation shall conform to the standards set forth by the NESHAPs. SJVAPCD is the responsible agency on the local level to enforce the National Emission Standards for Hazardous Air Pollutants (NESHAPs) and shall be notified by the property owners and/or developers of properties (or their designee(s)) prior to any demolition and/or renovation activities. If asbestos-containing materials are left in place, an Operations and Maintenance Program shall be developed for the management of asbestos containing materials.

Mitigation Measure 4.9-1i: Conduct Soil Sampling

Prior to the import of a soil to a particular property within the Plan Area as part of that property's site development, such soils shall be sampled for toxic or hazardous materials to determine if concentrations exceed applicable

Environmental Screening Levels for the proposed land use at such a property, in accordance with RWQCB, DTSC, or FCEHD requirements.

Significance after Mitigation

The proposed plan would be required to implement Mitigation Measures 4.9-1a through 4.9-1i, which require submittal of Hazardous Materials Business Plans; require Phase I and Phase II site assessments, and other remediation activities including surveys and assessments, cleanup plans, programs, and activities, as applicable; and requires actions to ensure that developing a property within the Plan Area does not present an unacceptable risk to human health, through the use of an Environmental Site Management Plan (ESMP), as applicable. Therefore, the potential for existing or new hazards generated by development under the proposed plan would be limited. Additional requirements include those related to evaluation of potential asbestos and lead prior to planned renovation or demolition of residential and/or commercial structures in the Plan Area, and soil sampling for hazardous materials. Implementation of Mitigation Measures 4.9-1a through 4.9-1j and compliance with federal, state, and local regulations would reduce potential impacts associated with the routine transport, use, and disposal of hazardous materials and reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment to a **less-than-significant** level.

Impact 4.9-2: Emit Hazardous Emissions or Handle Hazardous or Acutely Hazardous Materials, Substances, or Waste within One-Quarter Mile of an Existing or Proposed School

Orange Center School on S. Cherry Avenue is the only school located within the Plan Area, but three other schools, Calwa Elementary, Kirk Elementary, and Sequoia Middle School are located within a quarter mile of the Plan Area boundary. Although the nature and location of specific developments under the proposed plan are yet unknown, it is likely they would result in the routine transport, use, and storage of hazardous materials during construction and operation. Such use, though not expected to generate hazardous emissions or handle acutely hazardous materials our waste, could be proposed or could result through accident or upset conditions within one-quarter mile of a school. This impact would be **potentially significant**.

Development under the proposed plan has the potential to result in the routine transport, use, or disposal of hazardous materials, as described under Impact 4.9-1. The Orange Center School, a school consisting of both elementary and middle school grades, on S. Cherry Avenue between E. North and E. Central Avenues is the only school located within the Plan Area. Other schools within 0.25 mile from the Plan Area include Calwa Elementary School on E. Jensen Avenue between S. Cedar and S. Rowell Avenues, Kirk Elementary School on E. Belgravia Avenue between S. Holly and S. Lily Avenues, and Sequoia Middle School on E. Hamilton Avenue between S. Orange and S. Cedar Avenues.

As discussed in Impact 4.9-1, construction and operation of future development in the Plan Area would result in the transport, use, storage, and disposal of hazardous materials. Any such handling of hazardous materials, even with compliance with existing laws, regulations, and manufacturer's specifications for handling and storage, can pose a risk of release to the environment and human exposure, and children are more vulnerable than adults to exposure to hazardous materials. Development projects proposed in the Plan Area would be required to comply with applicable General Plan objectives and policies, including Objective NS-4 and Policy NS-4-a, NS-4-e, and NS-4-g, and SCSP policies, including GB-1, GB-2, and CBD-3, which would reduce the potential for hazardous emissions or inappropriate handling of hazardous or acutely hazardous materials, substances, or waste. However, as described in Impact 4.9-1, compliance with federal, state, and local regulations and City policies would minimize but not eliminate the risk of a spill or accidental release of hazardous materials during construction and operation of development pursuant to the plan. The potential for hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school would be **potentially significant**.

Mitigation Measures

Implementation of Mitigation Measures 4.9-1a through 4.9-1i as detailed under Impact 4.9-1 above would be required.

Significance after Mitigation

The proposed plan would be required to implement Mitigation Measures 4.9-1a through 4.9-1i, detailed under Impact 4.9-1. Implementation of Mitigation Measures 4.9-1a through 4.9-1i, as well as compliance with federal, state, and local regulations, would reduce potential impacts associated with emitting hazardous emissions or handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. With the incorporation of Mitigation Measures 4.9-1a through 4.9-1i, impacts would be reduced to a **less-than-significant** level.

Impact 4.9-3: Be Located on a Site Which Is Included on a List of Hazardous Materials Sites Compiled Pursuant to Government Code Section 65962.5

The Plan Area contains several hazardous materials sites that are listed in the Geographic Environmental Information Management System's GeoTracker and DTSC EnviroStor databases. Potential future development under the plan could be located on one or more of these sites. This would be a **potentially significant** impact.

As summarized in the "Environmental Setting," there are properties within the Plan Area that are known to have contaminated groundwater, aquifers, and soils. Substances identified on these properties include various metals, PCBs, VOCs, pesticides, and other chemicals. For most of these properties, soil and/or water testing has been performed and documented in accordance with regulatory requirements and with agency oversight. The Fresno County Multi-Jurisdictional Hazard Mitigation Plan and applicable federal, state, and local regulations require sites contaminated with hazardous materials to be cleaned up. For many of these sites, remedial action programs to mitigate potential impacts are recommended, planned, ongoing, or complete. Remediation programs are designed to clean up sites such that residual contamination is below specific numerical concentrations corresponding to acceptable human health risk thresholds for chemical contaminants of concern. The cleanup process also would be subject to case-by-case considerations, with regulatory actions and oversight subject to agency-owner interactions and negotiations. Thus, development can proceed only after appropriate property remediation has occurred and the regulatory agency with jurisdictional oversight has affirmed the site is cleaned up to safe levels. It should be noted that soils, groundwater, and/or property decontamination and remediation are currently being managed for each individual property with residual contamination in accordance with applicable federal, State (e.g., RWQCB and DTSC), and local (e.g., FCEHD) procedures, protocols, and standards. While the Plan Area includes known contaminated properties, there is also the potential for other future sites where hazardous materials are currently unknown and not listed within databases to be found within the Plan Area, potentially creating a significant impact to future occupants of the Plan Area and/or construction workers through the proposal of development or redevelopment. Therefore, this impact would be **potentially significant**.

Mitigation Measures

Implementation of Mitigation Measures 4.9-1c through 4.9-1i as detailed under Impact 4.9-1 above would be required.

Significance after Mitigation

Implementation of Mitigation Measures 4.9-1c through 4.9-1i, detailed under Impact 4.9-1, would require Phase I and Phase II site assessments and remediation activities such as surveys and assessments, cleanup plans, programs, and activities. Implementation of Mitigation Measures 4.9-1c through 4.9-1i, as well as federal, state, and local regulations, would reduce potential impacts associated with future development located on a hazardous materials site that could create hazards to the public or environment. With the incorporation of Mitigation Measures 4.9-1c through 4.9-1i, impacts would be reduced to a **less-than-significant** level.

Impact 4.9-4: Impair Implementation of or Physically Interfere with an Adopted Emergency Response Plan or Emergency Evacuation Plan

The City's Emergency Preparedness Officer (EPO) is responsible for ensuring that Fresno's emergency response plans are up-to-date and implemented properly and communicating with other agencies for emergency response operations. The City's Emergency Operations Plan and County Multi-Jurisdictional LHMP provides detailed guidance for mitigating hazard events and ensures a coordinated response provided in cooperation with the City's departments and other local, State, and federal agencies. As part of project operation of future development of the proposed plan, adequate emergency access routes to and from the development area would be established and emergency response would not be impaired. However, construction activities associated with future development within the Plan Area would involve truck traffic and temporary land/shoulder closures in work zones that could result in temporary land closures on certain roads, increased traffic, and other roadway conditions that could interfere with or slow down emergency vehicle access and services. This could create a **potentially significant** impact with response to the implementation of an emergency response plan or emergency evacuation area.

The City of Fresno has an Emergency Operations Plan that describes what the City's actions will be during a response to an emergency. The Fresno Police Department and FFD are the lead agencies for all local emergency response efforts. The City's full-time EPO is responsible for ensuring that Fresno's emergency response plans are up-to-date and implemented properly. The EPO also facilitates cooperation between City departments and other local, State and federal agencies that would be involved in emergency response operations. The City of Fresno's EOC will serve as the coordination and communication between the City of Fresno and Fresno County Operational Area EOC.

Development of the Plan Area would increase the development of primarily industrial uses, with some retail, office and residential uses.

Public health and safety is of particular concern in the Plan Area because of the emphasis of industrial development and the potential for such development to affect the health and safety of the people who live and work in the area. The City's Emergency Operation Plan and County Multi-Jurisdictional LHMP provide detailed and unified guidance for mitigation of hazard events and a coordinated response with surrounding jurisdictions in the event of an emergency related to hazards. All new development within the City is subject to review and approval by the City of Fresno Public Works Department, the Fresno Fire Department, and Fresno Police Department to ensure compliance with the Emergency Operation Plan and LHMP. Compliance with existing regulations and the City's review process ensure that operation of future development within the Plan Area would not impair implementation of or physically interfere with adopted emergency response plans or emergency evacuation plans and would therefore have a less-than-significant impact.

Construction within the Plan Area during implementation of the proposed plan could result in temporary lane closures on certain roads, increased traffic and other roadway conditions that could interfere with or slow down emergency vehicle access and services. This impact would be **potentially significant**.

Mitigation Measures

Mitigation Measure 4.9-4: Prepare and enforce a Construction Traffic Management Plan

Before construction of any project within the Plan Area, the project proponent shall submit to the City for review and approval a Construction Traffic Management Plan to minimize traffic impacts on all roadways at and near the work site affected by construction activities. The plan shall include construction and public (if applicable) access points, procedures for notification of road closures, construction materials delivery plan, a description of emergency personnel access routes during road closures, This plan shall reduce potential traffic safety hazards and ensure adequate access for emergency responders.

Significance after Mitigation

With the implementation of Mitigation Measure 4.9-3, the risk of interference with emergency vehicle access during construction in the Plan Area would be minimized by requiring all construction work to adhere to the construction traffic management plan. The specified elements outlined in this mitigation measure would ensure that construction in the Plan Area would not cause substantial interference or impairment with an adopted emergency response plan or emergency evacuation plan. This impact would be **less than significant**.

4.10 HYDROLOGY AND WATER QUALITY

This section describes the existing water resources in the Plan Area and identifies the applicable federal and state plans, policies, and laws and local plans, policies, and regulations. The analysis identifies and describes the potential impacts related to hydrology and water quality.

Potential impacts to riparian and wetland habitats are discussed in Section 4.4, "Biological Resources," and effects related to water supply are addressed in Section 4.16, "Utilities and Service Systems."

During the public scoping period for the Draft EIR, comments were received expressing concerns related to storm drainage and water quality. These comments are addressed below.

4.10.1 Regulatory Setting

FEDERAL

Clean Water Act

The US Environmental Protection Agency (EPA) is the lead federal agency responsible for water quality management. The Clean Water Act (CWA) is the primary federal law that governs and authorizes water quality control activities by EPA as well as the states. Various elements of the CWA address water quality. These are discussed below.

CWA Water Quality Criteria/Standards

Pursuant to federal law, EPA has published water quality regulations under Title 40 of the Code of Federal Regulations (CFR). Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. As defined by the act, water quality standards consist of designated beneficial uses of the water body in question and criteria that protect the designated uses. Section 304(a) requires EPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use. As described in the discussion of state regulations below, the State Water Resources Control Board (State Water Board) and its nine regional water quality control boards (RWQCBs) have designated authority in California to identify beneficial uses and adopt applicable water quality objectives.

CWA Section 404

In accordance with Section 404 of the CWA, the US Army Corps of Engineers (USACE) regulates discharge of dredged or fill material into waters of the United States. Waters of the United States and their lateral limits are defined in Title 33, Part 328.3(a) of the CFR to include navigable waters of the United States, interstate waters, all other waters where the use or degradation or destruction of the waters could affect interstate or foreign commerce, relatively permanent tributaries to any of these waters, and wetlands that are connected to these waters. Waters of the United States are often categorized as "jurisdictional wetlands" (i.e., wetlands over which USACE exercises jurisdiction under Section 404) and "other waters of the United States" when habitat values and characteristics are being described. "Fill" is defined as any material that replaces any portion of a water of the United States with dry land or that changes the bottom elevation of any portion of a water of the United States. Any activity resulting in the placement of dredged or fill material within waters of the United States requires a permit from USACE. In accordance with Section 401 of the CWA, projects that apply for a USACE permit for discharge of dredged or fill material must obtain water quality certification from the appropriate RWQCB indicating that the project would uphold state water quality standards. Wetland protection elements of the CWA administered by USACE are further discussed in Section 4.4, "Biological Resources," of this Draft EIR.

CWA Section 401 and 402 National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program was established in the CWA to regulate municipal and industrial discharges to surface waters of the United States. NPDES permit regulations have been established for broad categories of discharges, including point source municipal waste discharges and nonpoint source stormwater runoff. Each NPDES permit identifies limits on allowable concentrations and mass emissions of pollutants contained in the discharge. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits. "Nonpoint source" pollution originates over a wide area rather than from a definable point. Nonpoint source pollution often enters receiving water in the form of surface runoff and is not conveyed by way of pipelines or discrete conveyances. Two types of nonpoint source discharges are controlled by the NPDES program: discharges caused by general construction activities and the general quality of stormwater in municipal stormwater systems. The goal of the NPDES nonpoint source regulations is to improve the quality of stormwater discharged to receiving waters to the maximum extent practicable. The RWQCBs in California are responsible for implementing the NPDES permit system (see the discussion of state regulations below).

CWA Section 303(d) Impaired Waters List

Under Section 303(d) of the CWA, states are required to develop lists of water bodies that do not attain water quality objectives after implementation of required levels of treatment by point source dischargers (municipalities and industries). Section 303(d) requires that the state develop a total maximum daily load (TMDL) for each of the listed pollutants. The TMDL is the amount of the pollutant that the water body can receive and still comply with water quality objectives. The TMDL is also a plan to reduce loading of a specific pollutant from various sources to achieve compliance with water quality objectives. In California, implementation of TMDLs is achieved through water quality control plans, known as Basin Plans, of the State RWQCBs (see the discussion of state regulations below).

National Toxics Rule

In 1992, EPA issued the National Toxics Rule (40 CFR 131.36) under the CWA to establish numeric criteria for priority toxic pollutants in 14 states and jurisdictions, including California, to protect human health and aquatic life. The rule established water quality standards for 42 pollutants for which water quality criteria exist under CWA Section 304(a) but for which the respective states had not adopted adequate numeric criteria. EPA issued the California Toxics Rule in May 2000. This rule establishes numeric water quality criteria for 130 priority pollutants for which EPA has issued Section 304(a) numeric criteria that were not included in the National Toxics Rule.

Federal Antidegradation Policy

The federal antidegradation policy, established in 1968, is designed to protect existing uses and water quality and national water resources. The federal policy directs states to adopt a statewide policy that includes the following primary provisions:

- ▶ existing instream uses and the water quality necessary to protect those uses shall be maintained and protected;
- ▶ where existing water quality is better than necessary to support fishing and swimming conditions, that quality shall be maintained and protected unless the state finds that allowing lower water quality is necessary for important local economic or social development; and
- ▶ where high-quality waters constitute an outstanding national resource, such as waters of national and state parks, wildlife refuges, and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.

National Flood Insurance Act

The Federal Emergency Management Agency (FEMA) is tasked with responding to, planning for, recovering from, and mitigating against disasters. The Federal Insurance and Mitigation Administration within FEMA is responsible for administering the National Flood Insurance Program (NFIP) and administering programs that aid with mitigating future damages from natural hazards. The City of Fresno is a participant in the NFIP. Participants in the NFIP must satisfy certain mandated floodplain management criteria. The National Flood Insurance Act of 1968 has adopted 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 (DWR) and FEMA to insure the proper implementation of FEMA floodplain management regulations. Special Flood Hazard Areas are the areas identified as having a one percent chance of flooding in each year (otherwise known as the 100-year flood). In general, the NFIP mandates that development is not to proceed within the regulatory 100-year floodplain if the development is expected to increase flood elevation by 1 foot or more.

Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) was established to protect the quality of drinking water in the United States. This SDWA focuses on all waters either designed or potentially designed for drinking water use, whether from surface water or groundwater sources. The SDWA and subsequent amendments authorized EPA to establish health-based standards, or maximum contaminant levels (MCLs), for drinking water to protect public health against both natural and anthropogenic contaminants. All owners or operators of public water systems are required to comply with these primary (health-related) standards. State governments, which can be approved to implement these primary standards for EPA, also encourage attainment of secondary (nuisance-related) standards. At the federal level, EPA administers the SDWA and establishes MCLs for bacteriological, organic, inorganic, and radiological constituents (United States Code Title 42, and Code of Federal Regulations Title 40). At the state level, California has adopted its own SDWA, which incorporates the federal SDWA standards with some other requirements specific only to California (California Health and Safety Code Section 116350 et seq.).

STATE

Porter-Cologne Water Quality Control Act

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 (Porter-Cologne Act). The Porter-Cologne Act grants the State Water Board and each of the nine RWQCBs power to protect water quality, and is the primary vehicle for implementation of California's responsibilities under the Clean Water Act. The applicable RWQCB for the proposed project is the Central Valley RWQCB. The State Water Board and the Central Valley RWQCB have the authority and responsibility to adopt plans and policies, regulate discharges to surface and groundwater, regulate waste disposal sites, and require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substances, sewage, or oil or petroleum products.

Under the Porter-Cologne Act, each RWQCB must formulate and adopt a water quality control plan (known as a "Basin Plan") for its region. The Basin Plan for the Central Valley Region includes a comprehensive list of waterbodies within the region and detailed language about the components of applicable Water Quality Objectives (WQOs). The Basin Plan recognizes natural water quality, existing and potential beneficial uses, and water quality problems associated with human activities throughout the Sacramento and San Joaquin River Basins. Through the Basin Plan, the Central Valley RWQCB executes its regulatory authority to enforce the implementation of TMDLs, and to ensure compliance with surface WQOs. The Basin Plan includes both narrative, and numerical WQOs designed to provide protection for all designated and potential beneficial uses in all its principal streams and tributaries. Applicable beneficial uses include municipal and domestic water supply, irrigation, non-contact and contact water recreation, groundwater recharge, fresh water replenishment, hydroelectric power generation, and preservation and enhancement of wildlife, fish, and other aquatic resources.

The Central Valley RWQCB also administers the adoption of waste discharge requirements (WDRs), manages groundwater quality, and adopts projects within its boundaries under the NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (General Permit).

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

The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins presents water quality standards and control measures for surface water and groundwater for a significant portion of the Central Valley Region, including the watersheds within the Plan Area. The Water Quality Control Plan for the Sacramento River and San Joaquin River designated beneficial uses for water bodies and established water quality objectives, waste discharge prohibitions, and other implementation measures to protect those beneficial uses. The Water Quality Control Plan for the Sacramento River and San Joaquin River contains both narrative and numeric water quality objectives for the region. Ambient water quality standards are set as objectives for a body of water and effluent limits (or discharge standards) are conditions in state or federal wastewater discharge permits, such as the NPDES permits. Land uses and activities that could degrade water quality and BMPs that could be used to address various nonpoint sources of pollution are identified in the Water Quality Control Plan for the Sacramento River and San Joaquin River.

Water Quality Control Plan for the Tulare Lake Basin

The Water Quality Control Plan for the Tulare Lake Basin (Basin Plan), one of the two basin plans for the Central Valley Region, presents water quality standards and control measures for surface water and groundwater for a significant portion of the Central Valley Region, including the watersheds within the Plan Area. The Basin Plan designated beneficial uses for water bodies and established water quality objectives, waste discharge prohibitions, and other implementation measures to protect those beneficial uses. The Basin Plan contains both narrative and numeric water quality objectives for the region. Ambient water quality standards are set as objectives for a body of water and effluent limits (or discharge standards) are conditions in state or federal wastewater discharge permits, such as the NPDES permits. Land uses and activities that could degrade water quality and BMPs that could be used to address various nonpoint sources of pollution are identified in the Basin Plan.

National Pollutant Discharge Elimination System Permits

SWRCB and the Central Valley RWQCB require specific NPDES permits for a variety of activities that have potential to discharge pollutants to waters of the state and adversely affect water quality. To receive an NPDES permit, a notice of intent to discharge must be submitted to Central Valley RWQCB, and design and operational BMPs must be implemented to reduce the level of contaminated runoff. BMPs can include the development and implementation of regulatory measures (e.g., require local approval of drainage facility design), educational measures (e.g., implement public information campaigns about effects of discharge to storm drains), public policy measures (e.g., label storm drain inlets as to impacts of dumping on receiving waters), and structural measures (e.g., filter strips, grass swales, and retention basins). All NPDES permits also have inspection, monitoring, and reporting requirements.

General Permit for Stormwater Discharges Associated with Construction Activity

SWRCB adopted the statewide NPDES Construction General Permit (CGP) in August 1999. The CGP was updated in 2009 with adopted order 2009-0009-DWQ and amended in 2010 and 2012. The current CGP is order 2012-0006-DWQ. The state requires that projects disturbing more than 1 acre of land during construction file a notice of intent with RWQCB to be covered under this permit. Construction activities subject to the CGP include clearing, grading, stockpiling, and excavation. Dischargers are required to eliminate or reduce non-stormwater discharges to storm drainage systems and other waters. A stormwater pollution prevention plan (SWPPP) must be developed and implemented for each site covered by the permit. The SWPPP must include BMPs designed to prevent construction pollutants from contacting stormwater and to keep products of erosion from moving off-site into receiving waters throughout construction and the life of the project; the BMPs also must address source control and, if necessary, pollutant control.

State Nondegradation Policy

In 1968, as required under federal antidegradation policy, SWRCB adopted a nondegradation policy aimed at maintaining high quality for waters in California. The nondegradation policy states that the disposal of wastes into state waters shall be regulated to achieve the highest water quality consistent with maximum benefit to the people of the state and to promote the peace, health, safety, and welfare of the people of the state. The policy provides as follows:

- a) Where the existing quality of water is better than required under existing water quality control plans, such quality would be maintained until it has been demonstrated that any change would be consistent with maximum benefit to the people of the state and would not unreasonably affect present and anticipated beneficial uses of such water.
- b) Any activity which produces waste or increases the volume or concentration of waste and which discharges to existing high-quality waters would be required to meet waste discharge requirements.

California Water Code

The California Water Code is enforced by DWR. The mission of DWR is “to manage the water resources of California in cooperation with other agencies, to benefit the State’s people, and to protect, restore, and enhance the natural and human environments.” DWR is responsible for promoting California’s general welfare by ensuring beneficial water use and development statewide.

Groundwater Management is outlined in the California Water Code, Division 6, Part 2.75, Chapters 1–5, Sections 10750 through 10755.4. The Groundwater Management Act was first introduced in 1992 as Assembly Bill (AB) 3030, and has since been modified by Senate Bill (SB) 1938 in 2002, AB 359 in 2011, and the Sustainable Groundwater Management Act (SB 1168, SB 1319, and AB 1739) in 2014. The intent of the Acts is to encourage local agencies to work cooperatively to manage groundwater resources within their jurisdictions and to provide a methodology for developing a Groundwater Management Plan.

Sustainable Groundwater Management Act of 2014

The Sustainable Groundwater Management Act of 2014 (SGMA) became law on January 1, 2015, and applies to all groundwater basins in the state (Water Code Section 10720.3). By enacting the SGMA, the legislature intended to provide local agencies with the authority and the technical and financial assistance necessary to sustainably manage groundwater within their jurisdiction (Water Code Section 10720.1).

Pursuant to SGMA, any local agency that has water supply, water management or land use responsibilities within a groundwater basin may elect to be a groundwater sustainability agency (GSA) for that basin (Water Code Section 10723). The City of Fresno is part of the North Kings Groundwater Sustainability Agency (NKGSA), a Joint Powers Authority consisting of ten public agencies. The North Kings GSA is authorized under SGMA to develop, adopt, and implement a Groundwater Sustainability Plan for the sustainable management of groundwater in a portion of the Kings Subbasin.

LOCAL

City of Fresno General Plan

The approved General Plan is a set of policies and programs that form a blueprint for the physical development of the City. For a description of each of the elements within the approved General Plan, refer to Chapter 3, “Project Description.” The following objectives and policies related to hydrology and water quality are presented in various elements of the approved General Plan.

Noise and Safety Element

Objective NS-3: Minimize the risks to property, life, and the environment due to flooding and stormwater runoff hazards.

- ▶ **Policy NS-3-a: Stormwater Drainage and Flood Control Master Plan.** Support the full implementation of the Fresno Metropolitan Flood Control District (FMFCD) Storm Drainage and Flood Control Master Plan, the completion of planned flood control and drainage system facilities, and the continued maintenance of stormwater and flood water retention and conveyance facilities and capacities. Work with the FMFCD to make sure that its Storm Drainage and Flood Control Master Plan is consistent with the General Plan.

- ▶ **Policy NS-3-b: Curb and Gutter Installation.** Coordinate with FMFCD to install curbing, gutters, and other drainage facilities with priority to existing neighborhoods with the greatest deficiencies and consistent with the Storm Drainage and Flood Control Master Plan.
- ▶ **Policy NS-3-c: Dual Use Facilities.** Support multiple uses of flood control and drainage facilities as follows:
 - Use, wherever practical, FMFCD facilities for groundwater management and recharge; and
 - Promote recreational development of ponding basin facilities located within or near residential areas, compatible with the stormwater and groundwater recharge functions.
- ▶ **Policy NS-3-d: Landscaped Buffer.** City will support the development of FMFCD ponding basins including the landscaping and irrigation for the top one third of the side sloped areas consistent with the FMFCD Basin Design Criteria.
- ▶ **Policy NS-3-e: Pollutants.** Work with FMFCD to prevent and reduce the existence of urban stormwater pollutants pursuant to the requirements of the National Pollution Discharge Elimination Systems Act.
- ▶ **Policy NS-3-g: Essential Facilities Siting Outside of Floodplains.** Avoid siting emergency response and essential public facilities, such as fire and police stations, within a 100-year floodplain, unless it can be demonstrated that the facility can be safely operated and accessed during flood events.
- ▶ **Policy NS-3-h: Runoff Controls.** Implement grading regulations and related development policies that protect area residents from flooding caused by urban runoff produced from events that exceed the capacity of the Storm Drainage and Flood Control Master Plan system of facilities. Place all structures and/or flood-proofing in a manner that does not cause floodwaters to be diverted onto adjacent property, increase flood hazards to other property, or otherwise adversely affect other property.
- ▶ **Policy NS-3-i: New Development Must Mitigate Impact.** Require new development to not significantly impact the existing storm drainage and flood control system by imposing conditions of approval as project mitigation, as authorized by law. As part of this process, closely coordinate and consult with the FMFCD to identify appropriate conditions that will result in mitigation acceptable and preferred by FMFCD for each project.
- ▶ **Policy NS-3-k: 100-Year Floodplain Policy.** Require developers of residential subdivisions to preserve those portions of development sites as open space that may be subject to 100- year flood events, unless the flood hazard can be substantially mitigated by development project design.
- ▶ **Policy NS-3-l: 200-Year Floodplain Protection.** Promote flood control measures that maintain natural conditions within the 200-year floodplain of rivers and streams and, to the extent possible, combine flood control, recreation, water quality, and open space functions. Discourage construction of permanent improvements that would be adversely affected by periodic floods within the 200-year floodplain, particularly in the San Joaquin river bottom.

Public Utilities and Services Element

Objective PU-5: Preserve groundwater quality and ensure that the health and safety of the entire Fresno community is not impaired by use of private, on-site disposal systems.

Objective PU-8: Manage and develop the City's water facilities on a strategic timeline basis that recognizes the long life cycle of the assets and the duration of the resources, to ensure a safe, economical, and reliable water supply for existing customers and planned urban development and economic diversification.

- ▶ **Policy PU-8-f: Water Quality.** Continue to evaluate and implement measures determined to be appropriate and consistent with water system policies, including prioritizing the use of groundwater, installing wellhead treatment facilities, constructing above-ground storage and surface water treatment facilities, and enhancing transmission grid mains to promote adequate water quality and quantity.

Resource Conservation and Resilience Element

- ▶ **Objective RC-6:** Ensure that Fresno has a reliable, long-range source of drinkable water.

- ▶ **Policy RC-6-g: Protect Recharge Areas.** Continue to protect areas of beneficial natural groundwater recharge by preventing uses that can contaminate soil or groundwater.

City of Fresno Municipal Code

Chapter 6, Municipal Services and Utilities, Article 7, Urban Storm Water Quality Management and Discharge Control, of the Fresno Municipal Code (FMC) establishes provisions regarding stormwater discharges. The purpose of the City's Urban Storm Water Quality Management and Discharge Control Ordinance is to ensure the health, safety, and general welfare of citizens and protect the water quality of watercourses and water bodies in a manner pursuant to and consistent with the CWA (33 US Code Section 1251 et seq.) by reducing pollutants in urban stormwater discharges to the maximum extent practicable and by effectively prohibiting non-stormwater discharges to the storm drain system.

Chapter 11, Building Permits and Regulations, Article 6, Fresno Flood Plain Ordinance establishes methods of reducing flood losses by: restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards or flood heights or velocities; requiring that uses vulnerable to floods be protected against flood damage at the time of initial construction; controlling filling, grading, dredging, and other development which may increase flood damage; preventing or regulating the construction of flood barriers which will unnaturally divert flood water or which may increase flood hazards in other areas; and controlling the alteration of natural flood plains, stream channels, and natural protective barriers, which help accommodate or channel flood waters.

Fresno Municipal Flood Control District Post-Development Standards Technical Manual

Water quality treatment for post-construction discharges to stormwater in the FMFCD Master Plan Area is provided by detention and retention basins (henceforth referred to as retention basins) that are parts of FMFCDs stormwater drainage system. The FMFCD manages urban stormwater runoff in the Fresno-Clovis area. The City of Fresno Public Works Department maintains streets and gutters that convey stormwater to storm drain inlets. Storm drainage improvements are funded by local drainage fees paid by developments and are built by the FMFCD, by developers, or both. Basins are highly effective at reducing average concentrations of a broad range of contaminants, including several polyaromatic hydrocarbons, total suspended solids, and most metals. Pollutants are removed by filtration through soil, and thus don't reach the groundwater aquifer. Basins are built to design criteria exceeding Statewide Standard Urban Stormwater Mitigation Plan (SUSMP) standards. The urban flood control system provides treatment for all types of development.

The FMFCD published a Post-Development Standards Technical Manual in 2014 to provide development and redevelopment standards to address stormwater quality requirements for projects in areas that do not drain to the Regional Stormwater Management Basin System. Per the manual, five drainage areas in the FMFCD service area do not drain into a stormwater management basin and two areas outside the service area do not drain into a regional stormwater management basin. These post-development requirements were developed to comply with the MS4 Permit maintained for stormwater and non-stormwater discharges from MS4 to waters of the United States. The manual provides guidance and recommendations for implementing stormwater quality BMPs with the intention of improving water quality and mitigating potential water quality impacts from stormwater and non-stormwater discharges.

Regionwide MS4 Permit (2016)

The Central Valley RWQCB issued a region-wide permit (Order No. R5-2016-0040) covering the entire Central Valley RWQCB Region and storm drainage systems in cities as small as 10,000 population, in June 2016. The MS4 Permit for Fresno County, Order No. R5-2016-0040-015, was issued on May 17, 2018.

Permittees must develop and implement a Storm Water Management Program (SWMP) including the following elements:

- ▶ Illegal Connection and Illicit Discharge Elimination Program
- ▶ Construction Storm Water Runoff Control Program

- ▶ Industrial/Commercial Storm Water Runoff Control Program
- ▶ Municipal Operations Storm Water Runoff Control Program (Pollution Prevention/Good Housekeeping)
- ▶ Public Involvement and Participation Program
- ▶ Planning and Land Development/Post Construction Storm Water Management Program
- ▶ Priority development projects, identified below, are required to incorporate storm water mitigation measures:
 - Single-family hillside residences
 - Residential subdivisions of ten or more units
 - 100,000-square-foot industrial/commercial development
 - Automotive repair shops
 - Restaurants
 - Parking lots with 5,000 square feet or more or with 25 or more parking spaces
 - Redevelopment projects that are within one of above categories and that add or create at least 5,000 square feet of new impervious surface
- ▶ Stormwater management strategies include:
 - Site Design Measures: Emphasize conservation and use of existing natural site features integrated with distributed, small-scale storm water controls to mimic natural drainage.
 - Source Control Measures: Intended to keep pollutants from mixing with runoff, and thus minimize the transport of urban runoff and pollutants off-site and into storm drains. Source control measures include standards for design and operation of outdoor areas where substances that could contaminate stormwater are used, such as fueling areas, loading areas, material storage areas, and work areas.
 - Treatment Control Measures: remove pollutants from site runoff; measures include bioretention planters, vegetated swales, and infiltration trenches and basins.
 - Low Impact Development (LID) Measures: emphasize conservation and use of existing natural site features integrated with distributed, small-scale storm water controls to mimic natural drainage. LID measures include stream setbacks and buffers, soil amendments, tree planting and preservation, rooftop and impervious area disconnection, porous pavement, eco roofs, bioretention planters, and rain barrels or cisterns.
- ▶ Monitoring Program.

Fresno Metropolitan Flood Control District Storm Drainage Master Plan

- ▶ The Storm Drainage Master Plan, administered by the FMFCD, contains proposed elevations for tops of curbs in undeveloped areas, delineation of storm drain inlet watershed areas, collection system pipeline alignments and sizes, and retention basin or urban detention (water quality) basin locations and geometry. The development of land in conformance with the Storm Drainage Master Plan ensures that development is graded to drain to storm drainage facilities that are designed to collect and dispose of stormwater from the planned development.

Fresno Area Regional Groundwater Management Plan

- ▶ As part of a partnership of local municipal water purveyors, irrigation districts, a flood control district, and the overlying county, the Fresno Area Regional Groundwater Management Plan (FARGMP) was prepared in conformance with AB 3030 and SB 1938, the SGMA, as amended. The objectives of the FARGMP have been developed to monitor, protect, and sustain groundwater within the region. The City of Fresno and the other participating agencies subsequently adopted the groundwater management plan in 2006.

North Kings Groundwater Sustainability Agency Groundwater Sustainability Plan

- ▶ The NKGSA was formed through the adoption of a Joint Powers Agreement by the Fresno Irrigation District, the County of Fresno, the City of Fresno, the City of Clovis, the City of Kerman, Biola Community Services District, Garfield Water District, and the International Water Company (NKGSA 2023). The FMFCD is also a member of the NKGSA. The NKGSA is authorized under the SGMA to develop, adopt, and implement a Groundwater Sustainability Plan for the sustainable management of groundwater in a portion of the Kings Subbasin. The NKGSA's Groundwater Sustainability Plan (GSP) was submitted to DWR on January 28, 2020. The GSP was revised and submitted in 2022, following DWR's 2-year review and determination. The revised GSP was recommended for approval in March 2023 (NKGSA 2023).
- ▶ The sustainability goal of the Kings Subbasin and the NKGSA is to ensure that by 2040 the basin is being managed to maintain a reliable water supply for current and future beneficial uses without experiencing undesirable results. The NKGSA will reach sustainability by 2040 if groundwater flows from within the NKGSA to neighboring GSAs and basins are reduced and projects are developed to mitigate present and future projected effects. Actions to meet sustainability goals include education and outreach, well head requirements, groundwater allocation, and groundwater pumping restrictions. The City of Fresno is charged with implementing several projects to meet sustainability goals, including construction of the Southwest Reclamation Facility and Distribution System and Southeast Reclamation Facility and expansion of the Northeast Surface Water Treatment Facility. The City has already completed implementation of residential water meter retrofit projects, expansion of the City's water treatment plan, expansion of the City's groundwater recharge program, and construction of the new Southeast Surface Water Treatment Facility (NKGSA 2023):

Fresno County Multi-Hazard Mitigation Plan

- ▶ The Fresno County Multi-Hazard Mitigation Plan (plan) was originally developed in 2007-2008 and FEMA approved it in 2009. The plan was comprehensively updated in 2017-2018. Fresno County and the other participating jurisdictions developed this multi-jurisdictional hazard mitigation plan to make the county and its residents less vulnerable to future hazard events. The plan was prepared pursuant to the requirements of the Disaster Mitigation Act of 2000 so that Fresno County would be eligible for the FEMA Hazard Mitigation Assistance Grants, including Pre-Disaster Mitigation and Hazard Mitigation Grant programs as well as lower flood insurance premiums (in jurisdictions that participate in the National Flood Insurance Program's Community Rating System) (Fresno County 2018).

Recharge Fresno

The City of Fresno had adopted the Recharge Fresno program in 2014 with the intention to improve the pipelines and water system facilities that capture, treat, and deliver water to Fresno homes and businesses, including surface water from the Sierra Nevada Mountains. The program's objectives are to ensure a reliable and sustainable water supply for Fresno's present and future prosperity by increasing the available water supply; bring new, treated surface water from the Sierra Nevada Mountains to our community; improve natural and intentional groundwater recharge; maintain focus on conservation and its role in ensuring a sustainable water supply for Fresno; and ensure a safe and reliable water supply (Recharge Fresno 2023).

4.10.2 Environmental Setting

REGIONAL HYDROLOGY

Fresno County, including the Plan Area, is located in the San Joaquin Valley Basin. The basin is bounded to the north by the Sacramento-San Joaquin Delta and Sacramento Valley, to the east by the Sierra Nevada Mountains, to the south by the San Emigdio and Tehachapi Mountains, and to the west by the Coast Ranges. More specifically, the Plan Area is located within the Kings Subbasin, which is located in the southern half of the San Joaquin Valley Basin, bounded to the north by the San Joaquin River and to the south by the Kings River (City of Fresno 2021). The San Joaquin and the Kings Rivers are the principal rivers that influence the hydrology in the Plan Area. The western slopes

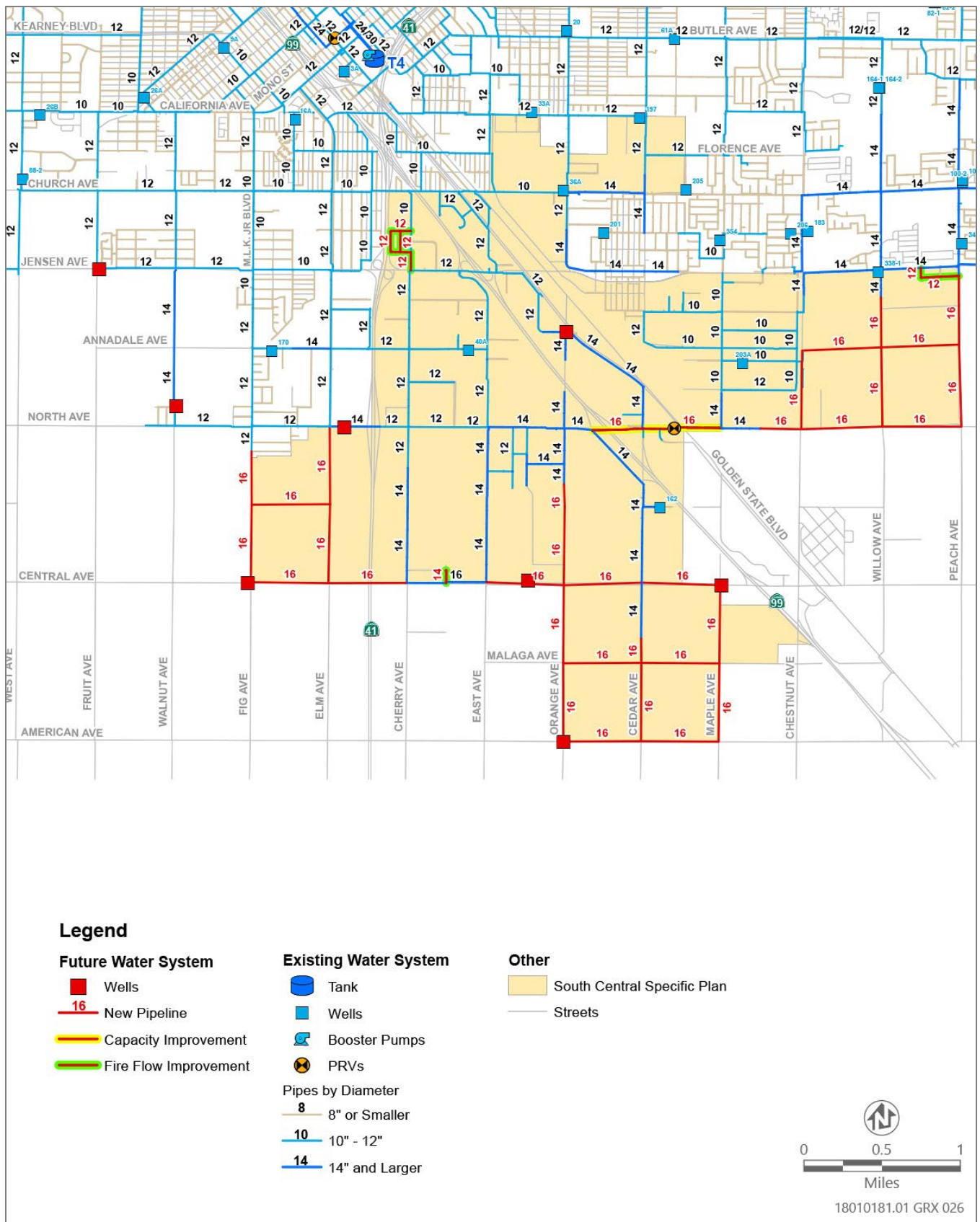
of the Sierra Nevada drain to the west via the San Joaquin and Kings Rivers. The Kings River is connected to the San Joaquin River by the James Bypass, a manmade canal. Floodwater from the Kings River is diverted to the San Joaquin River. Three dams control flows on the two rivers. The Friant and Mendota Dams are located on the San Joaquin River and provide some flood control; however, these two dams were not designed for the purpose of flood control. The Pine Flat Dam, located on the Kings River, was built for the purpose of flood control. In addition to the dams on the two rivers, there are reservoirs and detention basins that have been constructed to prevent flooding, including the Redbank Dam and the Redbank-Fancher Creeks Flood Control Project (Fresno County 2003).

Hydrologic Region

Fresno County is located in the Tulare Lake Hydrologic Region. The Tulare Lake Hydrologic Region covers approximately 10.9 million acres (17,000 square miles) and includes all of Kings and Tulare Counties and most of Fresno and Kern Counties. Significant geographic features include the southern half of the San Joaquin Valley, the Tumbler Range to the west, the Tehachapi Mountains to the south, and the southern Sierra Nevada to the east. The region has 12 distinct groundwater basins and seven subbasins of the San Joaquin Valley Groundwater Basin. Groundwater has historically been important to both urban and agricultural uses, accounting for 41 percent of the region's total annual supply and 35 percent of all groundwater use in the State. Groundwater use in the region represents about 10 percent of the State's overall supply for agricultural and urban uses. In general, groundwater quality throughout the Tulare Lake Hydrologic Region is suitable for most urban and agricultural uses with only local impairments. The City currently receives water from four water supply sources; surface water delivered to the City by either the Fresno Irrigation District (FID) Agreement for Kings River water or the US Bureau of Reclamation Central Valley Project (CVP) Friant Division Contract for San Joaquin River water, groundwater pumped from wells located within the City, or recycled water treated at the Fresno-Clovis Regional Wastewater Reclamation Facility (RWRF) and North Fresno Wastewater Reclamation Facility (NFWRF) (West Yost 2023). Figure 4.10-1 displays where the Plan Area is located within the Tulare Lake Hydrologic Region and the San Joaquin Valley Groundwater Basin.

GROUNDWATER

The Plan Area is underlain by the Kings River Subbasin, which, along with six other subbasins, comprises the San Joaquin Valley Basin. In turn, the San Joaquin Basin is located within the Tulare Lake Hydrologic Region, shown in Figure 4.10-1. The Kings River Subbasin is 1,530 square miles of central Fresno County and small areas of northern Kings and Tulare Counties. Groundwater levels in the City have declined from less than 0.5 feet per year in the southwest portion of the downtown area, to a rate of 1.5 per year for northern and southern areas of the City, to a maximum of 3 feet per year in the northeastern area of the City since 1990 (City of Fresno 2020). The Kings Subbasin groundwater aquifer supplies the City, other municipalities, agriculture, and rural residential areas with a consistent source of water. The Kings Subbasin has been identified as critically over drafted, with groundwater being pumped out of the subbasin faster than water is recharged into the subbasin. The City has historically relied on groundwater as its main supply source prior to the construction of the Surface Water Treatment Facility (SWTF). However, with the operation of the SWTF, the City has relied more on surface water, rather than ground water, and therefore, groundwater levels have begun to increase in certain areas of the City in the last few years. Currently, subsurface recharge occurs from the movement of groundwater from external sources such as the Sierra Nevada moving into the local aquifer. Because the groundwater table surrounding the City is higher than inside the City, subsurface water tends to flow from surrounding areas with a higher groundwater table into the aquifer within the city that has a lower groundwater table. However, the City estimates that by 2025, groundwater operations (i.e., subsurface inflows and outflows) would be balanced and subsurface flows will not be directed to the City (City of Fresno 2021).



Source: Data downloaded from CA DWR in 2022; adapted by Ascent in 2023

Figure 4.10-1 Hydrologic Region of Plan Area

The City has over 270 municipal wells and is actively operating approximately 202 municipal wells, which have a production capacity of approximately 403 million gallons per day (mgd). The wells are located within the northern part of the Kings Subbasin. While the wells are located throughout the City to provide equitable distribution throughout the City's water system, six active wells are located within the Plan Area (City of Fresno 2021). However, groundwater quality is a concern due to the groundwater basin containing several major contaminant plumes involving organic compounds, inorganic compounds, solvents, pesticides, and other contaminants. Several of the City wells are being treated or blended to address the various contaminants (West Yost 2023). Groundwater pumping data provided by the City indicates that approximately 83,360 acre-feet (AF) was pumped in 2015. Between 2011 and 2015, the City pumped an average of approximately 111,522 acre-feet per year (AF/year). This average groundwater pumping has exceeded the current estimated groundwater safe yield of approximately 72,500 AF/year (City of Fresno 2020). The City expects to continue to operate its three SWTFs and pump groundwater at a lower rate than historically so that the groundwater basin can recover. One of the primary objectives for the City as described in the Fresno Metropolitan Water Resource Management Plan, which is currently being prepared, is to maximize the use of available surface water treatment supplies to reduce overall reliance on groundwater (City of Fresno 2021). Groundwater will continue to be an important part of the City's supply but will not be relied upon as heavily.

Groundwater Recharge

Groundwater is recharged through natural recharge from rainfall and surface water, subsurface inflow from surrounding areas, and intentional recharge. Natural recharge in the Fresno metropolitan area was about 24,970 AF/year in 2020. The natural recharge is anticipated to be about 25,480 by the year 2025, according to the 2020 UWMP (City of Fresno 2021).

Groundwater is intentionally recharged in the Fresno metropolitan area through Leaky Acres, the City's main recharge facility; FMFCD retention basins throughout the region; the Alluvial Groundwater Recharge System owned and operated by the City of Clovis; and percolation basins recharging treated wastewater from the Fresno-Clovis Regional Wastewater Reclamation Facility.

The City of Fresno has an adopted program, Recharge Fresno, intended to improve the pipelines and water system facilities that will capture, treat, and deliver water to Fresno homes and businesses, including surface water from the Sierra Nevada. This program has the following objectives: ensure a reliable and sustainable water supply for Fresno's present and future prosperity by increasing the available water supply; bring new, treated surface water from the Sierra Nevada to the community; improve natural and intentional groundwater recharge; maintain focus on conservation and its role in ensuring a sustainable water supply for Fresno; and ensure a safe and reliable water supply (Recharge Fresno 2023). The Plan Area currently contains impermeable surfaces as a result of existing development. However, the Plan Area also contains open spaces, allowing for permeable surfaces to contribute to groundwater recharge, particularly in the southern and eastern portions of the Plan Area. Implementation of the SCSP would reduce the acreage of permeable surfaces through additional development, creating more impermeable surfaces.

Groundwater Quality

Groundwater quality throughout the Tulare Lake Hydrologic Region meets the primary and secondary drinking water standards for municipal use (City of Fresno 2020). Groundwater within the Fresno Irrigation District, in which the Plan Area is located, is generally good quality, however there are areas of concern due to contaminants (Fresno Irrigation District 2006). Known contaminants include dibromo-3-chloropropane (DBCP), ethylene dibromide (EDB), trichloropropane (TCP), volatile organic compounds (VOCs) such as trichloroethylene (TCE) and tetrachloroethylene (PCE), nitrate, manganese, radon, chloride, and iron. Most of the groundwater contaminants in the Fresno area are being addressed by responsible parties through assessment and remediation, and some are in advanced stages of mitigation. The responsible parties of many of the point source contaminants (i.e., hydrocarbons and VOCs) are working with State (Regional Water Quality Control Board, Department of Toxic Substances Control) and local (Fresno County Environmental Health Department) agencies to remediate the contaminants. Area wide contaminants are being addressed via wellhead treatment (DBCP) and plans are underway to address others, such as nitrate (Fresno

Irrigation District 2006). There are several contaminated groundwater sites within the Plan Area. Further discussion of these sites is located in Section 4.9, "Hazards and Hazardous Materials."

SURFACE HYDROLOGY AND DRAINAGE

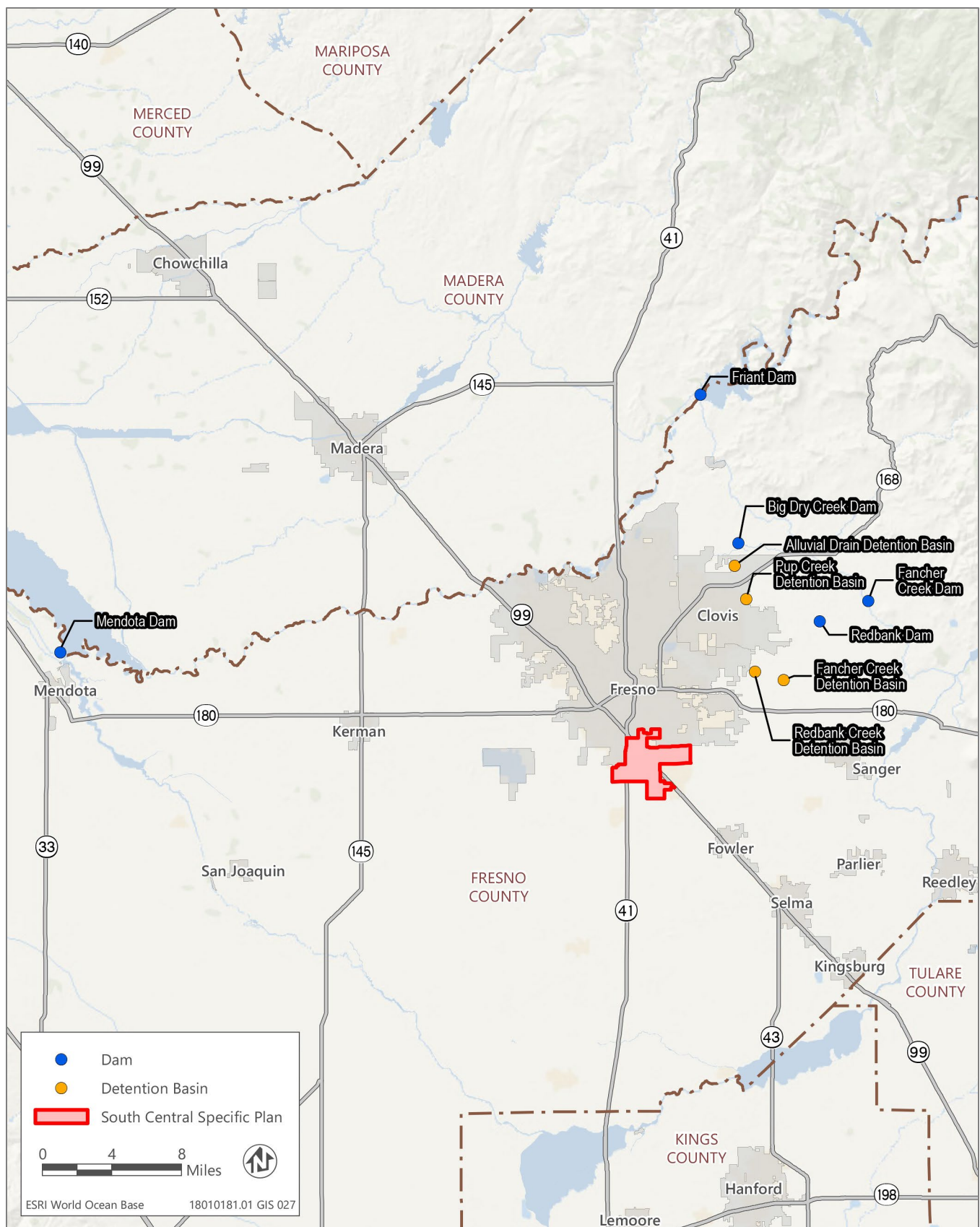
The City of Fresno is located in the alluvial fans of numerous foothill streams and creeks that drain the western slope of the Sierra Nevada foothills. These streams include Big Dry Creek, Alluvial Drain, Pup Creek, Dog Creek, Redbank Creek, Mud Creek, and Fancher Creek. The City has hot dry summers and cool mild winters, with temperatures of mid-90°F in the summer and 60°F in the winter. The precipitation averages 11 inches per year and occurs almost entirely in the fall, winter, and spring.

As mentioned above, the Plan Area is within the Tulare Lake Hydraulic Region. The primary direction of water flow in most of the Tulare Lake Hydraulic Region is northeast to southwest from the Sierra Nevada, west into the Coast Ranges, and south into the Tehachapi Mountains. The Tulare Lake Hydraulic Region is divided into several subbasins, and the Plan Area is located in the Upper Dry Subbasin. The Upper Dry Subbasin spans approximately 2,126 square miles, extending from the foothills of the Sierra Nevada west across the San Joaquin Valley to the eastern Coast Ranges. Three dams control flows on the San Joaquin River and Kings River. The Friant and Mendota Dams on the San Joaquin River impound Millerton Lake and the Mendota Pool, respectively, waters that provide for municipal and agricultural irrigation supply and some flood control. The Friant Dam is about 20 miles north and upstream of the Plan Area and the Mendota Dam is approximately 32 miles west and downstream from the Plan Area. Other flood control reservoirs and detention basins in the Upper Dry Subbasin include the Redbank Dam and the Redbank-Fancher Creeks Flood Control Project, which consists of two dams (Big Dry Creek Dam and Fancher Creek Dam); three detention basins (Redbank Creek, Pup Creek, and Alluvial Drain Detention Basins); and canals to convey discharges in and around the City of Fresno. These facilities were designed to protect developed areas from a 200-year storm event. Figure 4.10-2 displays the location of the mentioned dams and detention basins in retrospect of the Plan Area.

The storm drainage facilities within the Fresno-Clovis metropolitan area are planned, implemented, operated, and maintained by the FMFCD. The storm drainage facilities within the drainage area consist of storm drain inlets, pipeline, retention basins, urban detention (water quality) basins, and stormwater pump stations. The Plan Area is within the FMFCD's urban flood control system consisting of 158 drainage areas, each 1 to 2 square miles in area; all but five of the drainage areas are served by a detention or retention basin (FMFCD 2017).

The FMFCD has primary responsibility for managing the local stormwater flows for the City, as well as a large area beyond the City's boundaries. The City's stormwater drains to urban stormwater basins, where it is retained for groundwater recharge or pumped to local irrigation canals owned by Fresno Irrigation District (FID) and then conveyed away from the municipal area. Locally, the FMFCD drainage system consists of approximately 680 miles of pipeline and more than 150 stormwater retention basins. The storm drainage pipeline system is designed to accept the peak flow rate of runoff from a 2-year intensity storm event (a storm that has a 50 percent probability of occurring in any given year) (City of Fresno 2022a).

As described in Chapter 3, "Project Description," the Plan Area currently contains primarily industrial and commercial development, with some residential neighborhoods, rural residential, public facilities, open space, and vacant land. When storm events occur that exceed the 2-year intensity, ponding begins to occur in the streets until the pipeline system can remove the water. In the event of larger storms, "major storm breakover," the FMFCD has planned for streets or other conveyance to move the excess runoff to the basins.



Source: Adapted by Ascent in 2023

Figure 4.10-2 Location of Dams and Detention Basins near Plan Area.

FLOOD CONTROL

Flooding events can result in damage to structures, injury or loss of human and animal life, exposure of waterborne diseases, and damage to infrastructure. In addition, standing floodwater can destroy agricultural crops, undermine infrastructure and structural foundations, and contaminate groundwater. Regionally, the City is protected by USACE's Redbank-Fancher Creeks Flood Control Project. This project includes dams, detention basins, and levees designed to control upstream flood flows to approximately the 200-year storm event. Major facilities of this project include levee systems, the Big Dry Creek, Fancher Creek, and Redbank Creek dams and reservoirs, and the Alluvial Drain, Redbank Creek, Pup Creek, Fancher Creek, Big Dry Creek, Pup Creek Enterprise, and Dry Creek Extension detention basins.

Predicted flood conditions in the vicinity of the Plan Area are shown on the FEMA National Flood Hazard Layer (NFHL) map. A majority of the Plan Area is designated as shaded Zone X, a zone with a 0.2 percent chance of flooding in any given year and is within the limits of the 100-year and 500-year floodplain; however, there are certain portions of the Plan Area designated as Special Flood Hazard Areas (SFHA), Zone A, Zone AE, and Zone AH. Portions of Zone A and Zone AE are located in the south portion of the Plan Area. Areas designated Zone A have a one percent chance of flooding in any given year, whereas areas designated as Zone AE are base floodplains where base flood elevations are provided. Zone AH covers areas in the northern portion of the Plan Area, which has a one percent annual chance of shallow flooding. All zones are considered SFHAs because flood risks are generally high and flooding could occur once every 100 years. SFHAs require the NFIP's floodplain management regulations to be enforced, requiring the purchase of flood insurance (FEMA 2023). Figure 4.10-3 displays the flood zone locations within the Plan Area.

Dam Inundation

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. 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 Safety of Dams (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.

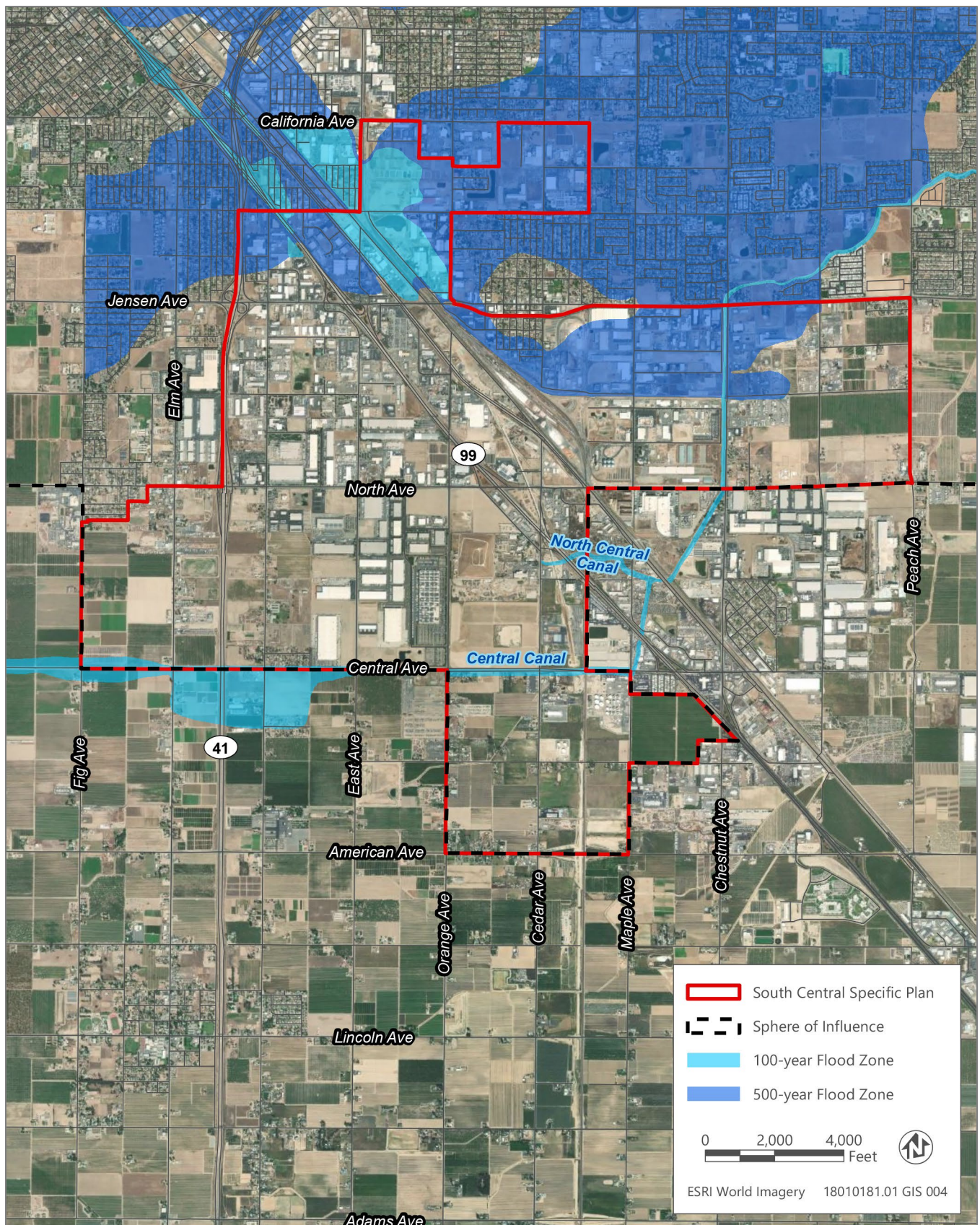
The northern portion of the Plan Area is in the dam inundation area for Fancher Creek, and Fancher Creek Detention. The nearest inundation area of Big Dry Creek Dam is approximately 0.40 miles west of the Plan Area, so the Plan Area is not in the direct area of Big Dry Creek Dam inundation. Depth of potential inundation across the northern portion of the Plan Area varies with geography and with each potential dam failure. A majority of the inundation areas located within the Plan Area have a maximum depth of 1 to 4 feet; however, along the borders of State Route (SR) 99, maximum inundation depth ranges from 5 feet to greater than 18 feet. Due to the location of the Plan Area in relation to these dams, peak inundation would be reached around 14 hours after dam failure in inundation areas more northeast in the Plan Area, with peak inundation being reached around 24 hours after dam failure in inundation areas more southwest in the Plan Area (FMFCD 2019, 2020a, 2020b). Potential inundation areas from these dams are shown in Figure 4.10-4.

Seiche

A seiche is a standing wave created when an inland water body is shaken, usually by an earthquake. The nearest water body to the Plan Area capable of generating a seiche is Big Dry Creek Reservoir, located about 14 miles to the northeast. Therefore, the Plan Area is not subject to seiche.

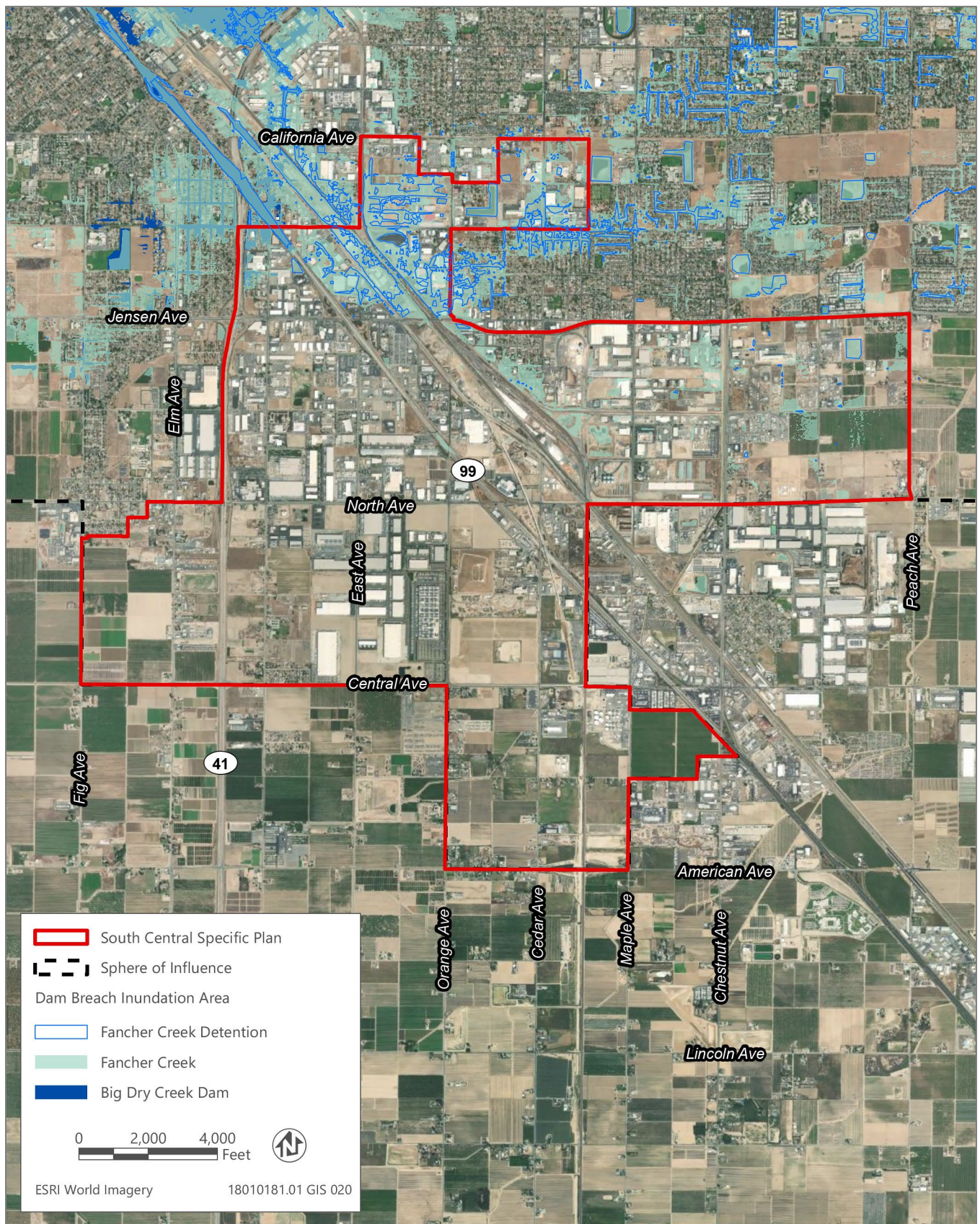
Tsunami

A tsunami is an ocean wave caused by a sudden displacement of the ocean floor, most often due to earthquakes. The Plan Area is located over 108 miles (inland) from the Pacific Ocean and is at an elevation ranging from about 263 feet above mean sea level (amsl) at the southwest corner to 283 feet above mean sea level (amsl) at the east boundary of the Plan Area. There is no potential for tsunami flood hazards within the Plan Area.



Source: Data downloaded from FEMA in 2022

Figure 4.10-3 Flood Zones Located Within the Plan Area



Source: Data downloaded from DWR in 2023

Figure 4.10-4 Dam Breach Inundation Areas Within the Plan Area

4.10.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

The impact analysis is based on a review of applicable plans, policies, and assessments that were used to identify the current hydrology and water quality conditions of the Plan Area. In determining the level of significance, the analysis assumes that future development within the Plan Area would comply with relevant federal, state, and local laws, ordinances, and regulations. The following reports and data sources document potential hydrology and water quality conditions within the Plan Area and were reviewed to determine potential impacts:

- ▶ Fresno General Plan (City of Fresno 2022b);
- ▶ California's Groundwater Update 2020 (DWR 2021); and
- ▶ South Central Specific Plan Water Supply Assessment (West Yost 2023).

THRESHOLDS OF SIGNIFICANCE

An impact on hydrology and water quality would be significant if implementation of the project would:

- ▶ violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality;
- ▶ substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;
- ▶ substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
 - result in substantial erosion or siltation on- site or off-site;
 - substantially increase the rate or amount of surface runoff in a manner that would result in flooding on-site or off-site;
 - create or contribute runoff water that would exceed the capacity of existing or planned stormwater- drainage systems or provide substantial additional sources of polluted runoff;
 - impede or redirect flood flows;
- ▶ in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; or
- ▶ conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

PROPOSED SCSP POLICIES AND DEVELOPMENT STANDARDS

The following policies are relevant to hydrology and water quality:

- ▶ W-1: Protect groundwater and surface water by regulating sewage disposal facilities and preventing contaminating uses.
- ▶ W-2: Implement a periodic water quality testing program in areas where contamination has been an issue.
- ▶ W-3: Provide supplemental water resources to areas already impacted by groundwater quality and quantity degradation.
- ▶ W-4 Identify funding tools to expand water system access in and near the Plan Area.
- ▶ W-5: Require new development to implement water conservation measures and to contribute towards expanded and upgraded facilities.

- ▶ W-6: Reduce water consumption through education, conservation standards, landscaping standards, retrofit programs, and incentive programs.
- ▶ W-7: Seek funding to expand water facilities to neighbors within the Plan Area.

ISSUES NOT DISCUSSED FURTHER

Tsunami or Seiche

As discussed above, the Plan Area is approximately 108 miles from the coast, which is sufficiently distant to preclude effects from a tsunami, and not adjacent to any lakes or standing water bodies that pose significant a risk from a seiche event. Therefore, these issues are not discussed further.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 4.10-1: Violate Any Water Quality Standards or Waste Discharge Requirements or Otherwise Substantially Degrade Surface or Ground Water Quality

Construction activities associated with future development under the proposed plan could degrade the quality of stormwater flows and potentially degrade downstream surface water quality. Further, contaminants generated by urban development within the Plan Area could be carried in stormwater runoff and could reach surface waters and degrade water quality. Development under the proposed plan would be required to comply with applicable requirements related to water quality, including on-site stormwater detention/retention and materials handling, during construction and operation. Compliance with these regulations would reduce the potential for construction and operation of development associated with the proposed plan to violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. Therefore, the proposed plan would have a **less-than-significant** impact related to water quality.

Short-term Construction Impacts

Clearing, grading, excavation, and construction activities associated with future development under the proposed plan could degrade water quality through soil erosion and increase silt and debris discharged into runoff. Additionally, the use of construction materials such as solvents, fuels, and paints may present a risk to surface water quality, if they were to come into contact. Temporary storage of construction materials and equipment in work areas or staging areas could involve a release of hazardous materials, trash, or sediment into the storm drain system. Construction activities could result in soil compaction and wind erosion effects that could adversely affect soils and reduce the revegetation potential at construction sites and staging areas. Construction activities have the potential to adversely affect the water quality of local surface waters and groundwater beneath the construction sites.

Individual developments would be required to comply with state and local water quality laws and regulations implemented to protect surface water and groundwater resources. Future construction activities under the proposed plan that would disturb one acre or more of soil would be governed by the NPDES Stormwater Program and Construction General Permit, Order No. 2012-0006-DWQ, and would be required to prepare a SWPPP containing Best Management Practices (BMPs) to reduce erosion and sediments to meet water quality standards. The SWPPP would be designed to control erosion and the loss of topsoil, to the extent practicable, using BMPs that the Central Valley RWQCB has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The SWPPP would be prepared by a qualified SWPPP practitioner and/or a qualified SWPPP developer and would identify water quality controls consistent with Central Valley RWQCB requirements and would ensure that runoff quality meets water quality objectives and maintains the beneficial uses of the Plan Area streams. The BMPs identified in the SWPPP would be implemented during all site development activities and may include temporary erosion control measures such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover. The SWPPP would be submitted to the Central Valley RWQCB and the City of Fresno. The SWPPP, once approved, is kept on site and implemented during

construction activities and must be made available upon request to representatives of the Central Valley RWQCB and/or the City of Fresno.

Additionally, construction activities would be required to comply with Chapter 6, Municipal Services and Utilities and Article 7, Urban Storm Water Quality Management and Discharge Control of the FMC during construction. These existing laws and regulations requiring erosion and sediment controls; implementation and maintenance of temporary construction BMPs to capture, detain, and allow infiltration or otherwise control and properly manage site runoff; waste control measures to prevent leakage or spill of hazardous materials into soils and surface waters; and management controls for stormwater runoff to prevent erosion and off-site transport of earth materials. If properly implemented, these existing protective policies and regulations would reduce the potential for construction activities to adversely affect water quality.

Long-term Operational Impacts

The long-term operation of future projects developed under the proposed plan could result in long-term impacts to surface water quality from urban stormwater runoff. The proposed plan would result in new additional impervious areas associated with roadways, driveways, parking lots, buildings, and other hardscape areas. The majority of development under the proposed plan would be within areas currently developed with urban uses, resulting in runoff conditions similar to current conditions within the developed areas. However, while there are areas covered by the SCSP that have been historically developed, there are portions of the Plan Area that are undeveloped and pervious, such as lands that are currently vacant or used for agricultural operations. With implementation of the SCSP, the undeveloped areas would become developed, resulting in new impervious surfaces throughout the Plan Area. Typical operational activities in developed areas would include the use of various automotive petroleum products (i.e., oil, grease, and fuel), common household hazardous materials, heavy metals, pesticides, herbicides, fertilizers, and sediment. Pollutant levels would vary based on factors such as time between storm events, volume of storm event, type of uses, and density of activity. 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. Without proper management, these constituents could adversely affect quality of surface water and groundwater in the Plan Area and vicinity.

The Plan Area is in areas served by FMFCD retention basins. Water quality treatment for post-construction discharges to stormwater in the FMFCD urban flood control system area is provided by retention basins. In addition, the Plan Area is within the regulatory area of FMFCD's Storm Water Quality Management Plan, and future projects within the Plan Area would be subject to the postconstruction stormwater control requirements.

The Plan Area would continue to support similar industrial land uses that are currently allowed under the General Plan. Industrial projects would be required to obtain an Industrial General Stormwater Permit (NPDES No. CAS000001), which is similar to the Statewide NPDES CGP. Some industrial and other uses that require water for processing may discharge treated wastewater to land or surface waters. These projects would be required to obtain a separate and additional wastewater NPDES permit through the Central Valley RWQCB. Wastewater NPDES permits contain facility-specific water discharge requirements that protect beneficial uses, ensure that discharges meet the water quality objectives of the water body to which wastewater is discharged, and meet federal and state nondegradation policies in instances in which existing water quality is better than required by law. The wastewater NPDES permit also specifies the location and frequency of effluent monitoring. Monitoring intervals vary depending on what is being tested and may be continuous (for flow), daily (for pH and temperature), weekly (e.g., for oxygen demand, total suspended solids, electrical conductivity), monthly (for hardness, nitrate, total dissolved solids), or quarterly or annually for more complex tests, such as total mercury or acute toxicity. The types of monitoring test required will depend on the characteristics of the wastewater and the receiving water. Self-monitoring reports are typically required to be submitted monthly.

Similar to construction, the NPDES Stormwater Program would be applicable to operational activities, as well as the specific policies such as those mentioned above in the City General Plan, and FMC regarding water quality. Future projects within the Plan Area would comply with these regulations, policies, and permit conditions requiring the implementation of stormwater BMPs to prevent urban pollutants from being carried into surface waters. Additional

permitting and compliance measures would be required for stormwater runoff from industrial facilities and for industrial projects that would generate wastewater, including facility-specific discharge requirements and regular monitoring and reporting. If properly implemented, these existing protections would reduce the potential for urban development within the Plan Area to create a substantial adverse impact on water quality.

Conclusion

Future development under the proposed plan would not violate water quality standards or waste discharge requirements during construction or operation because these future development projects would be required to comply with the FMFCD's Storm Water Quality Management Plan, NPDES Permit, City General Plan policies, and City Municipal Code requirements. Through compliance with these regulations and policies, the proposed plan would have a **less-than-significant** impact related water quality.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.10-2: Substantially Decrease Groundwater Supplies or Interfere Substantially with Groundwater Recharge Such That the Project May Impede Sustainable Groundwater Management of the Basin

The City overlays the Kings Subbasin, a high-priority and critically overdrafted basin managed by NKGSA. A GSP for the Kings Subbasin was adopted in 2023 and contains projects and management actions that would bring the subbasin into sustainability by 2040. Future development in the Plan Area would not impede implementation of projects or management actions included in the NKGSA GSP. Additionally, land uses included in the proposed plan would demand less water supply, including groundwater, than the land uses assumed in the 2014 General Plan, which was used to develop assumptions included within the NKGSA GSP. Therefore, this impact would be **less than significant**.

As discussed in more detail in Section 4.16, Utilities and Service Systems, the City pumps groundwater from a portion of the Kings Subbasin underlying the City. Per the City's 2020 UWMP, the City has over 270 municipal wells and is actively operating approximately 202 of those wells. Groundwater quality is a concern because the groundwater basin has several major contaminant plumes involving organic compounds, inorganic compounds, solvents, pesticides, and other contaminants. Several City wells are currently being treated or blended to address various contaminants. When the City's 2014 Water Master Plan was prepared, the total well capacity was approximately 460 million gallons per day (mgd) (West Yost 2023).

The City had historically relied on groundwater as its main source of supply prior to the construction of its surface water treatment facilities. With the recent investments in surface water infrastructure, the City has been able to significantly reduce its groundwater pumping. Groundwater production has decreased from 82,500 af/yr in 2015 to 55,000 af/yr in 2020 (City of Fresno 2021). The amount of groundwater pumped during dry years is not projected to differ from the amount pumped during normal years.

The City's future groundwater production is projected to increase substantially from regional growth, from 138,090 af/year in 2025 to 154,490 af/year in 2040, which is the sum of the Kings Subbasin sustainable yield and the volume intentionally recharged by the City. While the projected future groundwater production increases significantly from recent historical groundwater production, it remains sustainable. The City's 2020 UWMP addresses the sufficiency of the City's groundwater supplies, in conjunction with the City's other existing and additional water supplies, to meet the City's existing and planned future uses. Together with the City's other existing and planned future water supplies, the City's groundwater supplies is sufficient. The UWMP uses General Plan land use designations as a basis for future water demand. The development proposed under the SCSP is similar to that included in the General Plan for the Plan Area.

Future development projects under the proposed plan would result in new impervious surfaces and would reduce rainwater infiltration and groundwater recharge in those areas. Future developments would also include water quality BMPs, detention basins, and retention basins designed to minimize or eliminate increases in runoff from these new impervious surfaces entering existing surface water courses and existing storm drains. Peak runoff and total volume

of runoff would be managed through such facilities that retain and treat water and provide for groundwater infiltration.

The City overlies the Kings Subbasin, which is designated as a high-priority basin under SGMA. A GSP for the Kings Subbasin was adopted in 2023 and contains projects and management actions that would bring the subbasin into sustainability by 2040. The City has already implemented actions identified in the GSP including implementation of residential water meter retrofit projects, expansion of the City's water treatment plant, expansion of the City's groundwater recharge program, and construction of the new Southeast Surface Water Treatment Facility. Actions remaining for the City to implement consist of construction of the Southwest Reclamation Facility and Distribution System, Southeast Reclamation Facility, and expansion of the Northeast Surface Water Treatment Facility. The proposed plan would not impede implementation of these projects, nor would it be inconsistent with management actions associated with the GSP (i.e., education and outreach, well head requirements, groundwater allocation, and groundwater pumping restrictions). Furthermore, land use changes associated within the City's 2014 General Plan were used, in part, to develop the GSP's goals, projects, and management actions. These land use assumptions were used to determine the degree to which groundwater would be used as a water supply. Based on the Water Supply Assessment developed for the SCSP (West Yost 2023), water demand within the Plan area would be reduced relative to the land use scenario assumed in the 2014 General Plan. Therefore, groundwater demand would be less than assumed in the GSP. In addition, as discussed further in Impact 4.10-1 above, future development within the Plan Area would be required to comply with FMFCD's Storm Water Quality Management Plan, NPDES Permit, City General Plan policies, and City Municipal Code requirements, which would provide for infiltration of stormwater and reduce the potential for Plan Area development to adversely affect groundwater resources. Therefore, the impact related to groundwater supplies and recharge would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.10-3: Substantially Alter the Existing Drainage Pattern 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 Off-Site, Create or Contribute Runoff that would Exceed Capacity of Storm Drainage Systems, or Impede or Redirect Flood Flows

Implementation of development under the proposed plan would increase impervious surfaces in the Plan Area, which could subsequently increase stormwater runoff volumes and velocities, exceed capacity of existing drainageways, and create downstream flooding. The protective General Plan policies and MS4 permit conditions would require any future development in the Plan Area to implement stormwater management measures to reduce stormwater runoff such that peak runoff flow rates are reduced; stormwater runoff is infiltrated, evapotranspired, and/or captured and used on-site to reduce site runoff for smaller storm events into municipal systems; and increases in volumetric runoff would be retained to prevent increased downstream flooding. Additionally, the SCSP storm drain system would be designed to accommodate buildout conditions, so that new development would not generate runoff that could exceed the capacity of the system. Therefore, future development under the proposed plan would not result in substantial erosion, siltation, flooding, polluted runoff, or redirect flood flows. This impact would be **less than significant**.

The volume and rate of stormwater runoff generated from an area are affected by development through conversion of vegetated or pervious surfaces to impervious surfaces and by the development of drainage systems that connect these impervious surfaces to streams or other water bodies. In this way, development can increase the rate of runoff and eliminate storage and infiltration that would naturally occur along drainage paths. As water runs off the land surface, it collects and carries materials and sediment, which can be potentially harmful to downstream receiving waters. Additionally, runoff from impervious surfaces can become concentrated, overwhelming existing storm drain systems, causing erosion and increasing sediment transport and downstream deposition. The increased extent of impervious surfaces in upper watershed areas may also create flooding concerns for lower watershed areas.

Of the 5,567-acre Plan Area, approximately 4,321 acres is developed as industrial, commercial, residential and other land uses, and approximately 1,308 acres is open space and farmland. Approximately 700 acres of the Plan Area is conservatively assumed to be developed with non-residential uses, primarily industrial, by the year 2040. While it is not possible to identify where future development would occur, it is reasonable to assume that—in addition to some redevelopment—open space, farmland, and vacant areas would be developed. Bare soil on farmland (such as between rows or trees) is more susceptible to erosion than developed urban land. Thus, while future development under the plan could reduce erosion in some portions of the Plan Area, it would also create substantial areas of impervious surfaces, such as roadways, parking lots, driveways, and roofs, and would increase stormwater runoff to receiving creeks and storm drains. All future development would be required to include water quality BMPs, and detention/retention basins, as appropriate, designed to minimize or eliminate increases in runoff entering existing surface water courses and storm drains. Peak runoff and total volume of runoff would be managed by storm drainage design, which would retain water and promote infiltration to groundwater. As discussed in Section 4.16 Utilities and Service Systems, storm drainage facilities in the Plan Area are planned, implemented, operated, and maintained by the FMFCD. Specific upgrades may include new streets and gutters, storm drain inlets, storm drain pipelines, detention and retention basins, pump stations, and outfall facilities that collect and drain runoff from developed land areas.

FMFCD retention basins are highly effective at removing total suspended solids including sediment. The proposed plan would not alter drainage patterns in a manner that would cause flooding, erosion, or siltation. The drainage pattern in the Plan Area would remain similar to current conditions, but would be expanded over time in compliance with the FMFCD Storm Drain Master Plan as development occurs over the planning period. Surface runoff from the area would be managed via parcel-based LID measures, detention/retention basins, and flow reducing BMPs to prevent local flooding within the site. These features would also reduce peak flows from the Plan Area to receiving creeks and storm drains to amounts equal to or less than flows under existing conditions. Sediment in the stormwater flows would be captured in detention ponds designed to prevent siltation.

Regulatory requirements such as the City's grading plan check process, the FMFCD Storm Drain Master Plan, and the NPDES Construction General Permit would also reduce the impacts of construction activities on drainage patterns and erosion. Development within the Plan Area would be required to comply with the grading plan check process. Developers must submit grading plans in compliance with the California Building Standards Code (CBC), the Storm Drain Master Plan, and the NPDES Construction General Permit and obtain approval from the FMFC.

The Storm Drain Master Plan includes proposed elevation of curbs in undeveloped areas, delineation of storm drain inlet watershed areas, collection system pipeline alignments and sizes, and retention basin or urban detention basin locations and sizing. Development in conformance with the Storm Drain Master Plan would require that the Plan Area is graded to drain into storm drainage facilities, which collect and convey stormwater from the planned development. Retention and urban detention basins intercept and remove silt from stormwater before it is discharged to surface waters.

The grading plan review process for future individual development projects in the Plan Area would identify any plan to alter the course of any creek, stream, or irrigation canal. In this case, the City would require additional other reviews, permits, and agreements with agencies such as the USACE, the United States Fish and Wildlife Service (USFWS), the CDFW, the Central Valley Flood Protection Agency, the State Water Board, the Central Valley RWQCB, the FMFCD, and the FID. Possible permits and agreements include the CWA Section 401 and 403 permits, Endangered Species or Habitat Plan, Section 1603 Streambed Alteration Agreement, and Irrigation Canal Encroachment permit. Agreements would need to be made prior to the issuance of grading permits.

The NPDES Construction General Permit program is administered for the City by the Central Valley RWQCB. It regulates sources of erosion at construction sites that would result in the discharge of silt-laden stormwater from the site and into subsequent receiving waters during both construction and operation activities.

The proposed plan would not alter existing drainage patterns in a manner that would result in substantial erosion, siltation, flooding, polluted runoff, or redirection of flood flows. With the implementation of applicable policies and compliance with existing regulatory requirements that pertain to water quality and runoff, and with the design and

construction of the improvements included in the proposed storm drainage system, the proposed plan would have a **less-than-significant** impact.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.10-4: Release Pollutants Due to Plan Area Inundation by Flood Hazard

The Plan Area contains flood hazard and dam inundation areas. However, compliance with the Fresno Flood Plain Ordinance, General Plan policies, and existing safety regulations would be required for the implementation of development under the proposed plan, resulting in low-risk release of pollutants due to inundation. This impact would be **less than significant**.

As discussed in Section 4.10.2, "Environmental Setting," above, the majority of the Plan Area is designated shaded and unshaded Zone X, which has only a 0.2 percent annual chance of flood and is within the limits of the 100-year and 500-year floodplain. Lands designated as unshaded Zone X are outside of the SFHAs. Changes to land surfaces in these areas do not trigger map revisions and no flood insurance requirements are imposed on structures in these areas. However, there are certain portions of the Plan Area designated as SFHAs, Zone A, Zone AE, and Zone AH. Portions of the northern Plan Area are located within the dam failure inundation area for the Fancher Creek Detention and Fancher Creek dams. The DSD is responsible for inspecting and monitoring these dams annually to reduce the potential risk of dam failure, in accordance with the California Dam Safety Act.

As discussed above, areas designated as Zones A and AE are located in small portions in the southern area of the Plan Area. These zones are considered SFHA because flood risks are generally higher and flooding could occur once every 100 years. In the northern portion of the Plan Area, areas are designated as Zone AH. Zone AH is designated in an area where there is a one percent annual chance of shallow flooding. In addition, Portions of the northern Plan Area are located within the dam failure inundation area for the Fancher Creek Detention and Fancher Creek dams. The DSD is responsible for inspecting and monitoring these dams annually to reduce the potential risk of dam failure, in accordance with the California Dam Safety Act.

The City participates in the National Flood Insurance Program (NFIP) which adopts Floor Insurance Rate Maps (FIRMs), appoints a trained Floodplain Administrator, adopts a floodplain ordinance modeled after the Flood Insurance Program model ordinance, and enforces the ordinance and the requirements of Title 40 of the Code of Federal Regulations (40 Code of Federal Regulations [CFR] Protection of Environment), Subchapter D (Water Programs, Parts 100–149). The City enforces these requirements through Chapter 11, Article 6 of the Fresno Municipal Code (Fresno Flood Plain Ordinance), which outlines specific requirements for floodproofing of structures. The proposed plan includes developments that would be located within these SFHAs; development within these areas would require substantial floodproofing, and any required review and approval of the developments by the City, FMFCD, FEMA, and any other governing body. Compliance with the floodplain ordinance and General Plan objectives and policies are implemented, impacts associated with flooding of developments within the 100-year floodplain would be less than significant.

Provided that the storm drain system and detention/retention facilities installed as part of future development are adequately sized and properly installed and maintained as discussed in detail in Impact 4.10-3, as well as compliance with existing regulations and policies stated above, additional flooding would not be induced by the proposed plan. Therefore, the proposed plan would have a **less-than-significant** impact.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.10-5: Conflict with or Obstruct Implementation of a Water Quality Control Plan or Sustainable Groundwater Management Plan

Future development under the proposed plan would be required to comply with the Basin Plan (Water Quality Control Plan for the Tulare Lake Basin) groundwater sustainability plans, and stormwater best management practices. The proposed plan is also not anticipated to exceed the City's water supply. Therefore, this impact would be **less than significant**.

The Water Quality Control Plan for the Tulare Lake Basin, one of the two basin plans for the Central Valley Region of the Regional Water Quality Control Board, and the GSP are two guiding documents for water quality and sustainable groundwater management in the Plan Area. The Water Quality Control Plan for the Tulare Lake Basin includes a summary of beneficial water uses, water quality objectives needed to protect the identified beneficial uses, and implementation measures. Water quality standards are established for all the ground and surface waters of the region within the Water Quality Control Plan for the Tulare Lake Basin. As discussed in Impact 4.10-1, impacts related to water quality during construction and operation of future projects in the Plan Area would be less than significant.

As discussed in Section 4.10.1, "Regulatory Setting," and Impact 4.10-2, as part of a partnership of local municipal water purveyors, irrigation districts, a flood control district, and the overlying county, the FARGMP was prepared in conformance with AB 3030 and SB 1938. The objectives of the FARGMP have been developed to monitor, protect, and sustain groundwater within the region. The City falls within a portion of the Kings Subbasin, a high-priority basin under the jurisdiction of the NKGSA. The NKGSA has prepared and adopted an approved GSP, by which the basin is managed under as part of compliance with the SGMA and FARGMP. Development under the proposed plan would be consistent with the GSP and would not decrease groundwater supplies or interfere substantially with groundwater recharge such that the proposed plan would impede sustainable groundwater management of the basin. The required stormwater BMPs and retention basins would be designed to reduce runoff below that which occurs currently during storm events and provide for groundwater recharge. Additionally, the SCSP's water demand is not expected to exceed the City's supplies in any normal, single dry, or multiple dry year through the year 2045, and the proposed plan would not conflict with a sustainable ground management plan. Through compliance with the FMFCD's Storm Water Quality Management Plan, SWPPPs, SGMA, FARGMP, General Plan policies, and FMC requirements, the proposed plan would have a **less-than-significant** impact related to conflicting or obstructing implementation of a water quality control plan or sustainable groundwater management plan.

Mitigation Measures

No mitigation is required for this impact.

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4.11 LAND USE AND PLANNING

This section describes the regulatory and environmental setting related to land use and planning and evaluates the environmental impacts of implementing the proposed plan. The physical environmental effects associated with the plan, many of which pertain to issues of land use compatibility (e.g., aesthetics, air quality, noise), are evaluated in other sections of Chapter 4 of this Draft EIR. Potential conflicts with habitat conservation efforts are evaluated in Section 4.4, "Biological Resources," of this Draft EIR.

In response to circulation of the notice of preparation, comments related to land use and planning received expressed concern about changes to land use designations and zoning, including already developed areas; potential effects of required buffers on land uses; and responsiveness of the land use plan to public input.

4.11.1 Regulatory Setting

FEDERAL

No federal plans, policies, regulations, or laws related to land use are applicable to the proposed plan.

STATE

California Government Code

California Government Code Section 65300 et seq. establishes the obligation of cities and counties to adopt and implement general plans. The general plan is a comprehensive, long-term, and general document that describes plans for the physical development of the city or county and of any land outside its boundaries that, in the City's or County's judgment, bears relation to its planning. The general plan addresses a broad range of topics, including, at a minimum, land use, circulation, housing, conservation, open space, noise, and safety. In addressing these topics, the general plan identifies the goals, objectives, policies, principles, standards, and plan proposals that support the City's or county's vision for the area. The general plan is a long-range document that typically addresses the physical character of an area over a 20-year period. Although the general plan serves as a blueprint for future development and identifies the overall vision for the planning area, it remains general enough to allow for flexibility in the approach taken to achieve the plan's goals.

California Government Code Section 65453 states, "A specific plan shall be prepared, adopted, and amended in the same manner as a general plan, except that a specific plan may be adopted by resolution or by ordinance and may be amended as often as deemed necessary by the legislative body." It also states that a specific plan "may be repealed in the same manner as it is required to be amended."

The State Zoning Law (California Government Code Section 65800 et seq.) establishes that zoning ordinances, which are laws that define allowable land uses within a specific district, are required to be consistent with the general plan and any applicable specific plans. When amendments to the general plan are made, corresponding changes in the zoning ordinance may be required within a reasonable time to ensure that the land uses designated in the general plan also would be allowable by the zoning ordinance (Section 65860[c]).

LOCAL

City of Fresno General Plan

The City of Fresno General Plan, which was originally adopted on December 18, 2014, and was amended most recently on October 13, 2022, articulates a vision for the city and presents a set of implementing policies to achieve that vision (City of Fresno 2022). The following objectives and implementing policies from the general plan are relevant to this discussion of land use and planning.

Economic Development and Fiscal Sustainability Element

Objective ED-1: Support economic development by maintaining a strong working relationship with the business community and improving the business climate for current and future businesses.

- ▶ **Implementing Policy ED-1-d: Strategic Land Regulation.** Explore increasing the amount of land properly zoned, consistent with the General Plan, and ready to be expeditiously developed, redeveloped, and/or revitalized for economic development and job creation purposes. Establish a priority infill development program for sites and districts.
- ▶ **Implementing Policy ED-1-e: Ready to Go Sites.** Establish a list of “ready-to-go” or “shovel-ready” sites in consultation with property owners and provide the list to interested developers and businesses seeking sites in the city.

Urban Form, Land Use, and Design Element

Objective LU-7: Plan and support industrial development to promote job growth.

- ▶ **Implementing Policy LU-7-a: Incentives for a Diversity of Industries, Increased Food Processing and Manufacturing, and Related Employment Opportunities in Fresno.** Use the City’s Capital Improvement Program to set priorities for locations and timing of water, sewer, and transportation infrastructure investments by the City and initiate implementation programs to encourage development of targeted industries as identified under Policy ED-3-c, in employment land use areas designated on Figure LU-1: Land Use Diagram.
- ▶ **Implementing Policy LU-7-b: Business and Industrial Parks.** Promote business and industrial park sites that are of sufficient size, unified in design, and diversified in activity to attract a full range of business types needed for economic growth.
- ▶ **Implementing Policy LU-7-c: Efficiency of Industrial Uses.** Promote industrial land use clusters to maximize the operational efficiency of similar activities.
 - Provide access to a range of transportation modes through plans and incentives, ensuring that local, regional, and national connections are available to industrial uses;
 - Develop a strategy to promote rail-accessible sites for industries that need such capability; and
 - Ensure timely access to the full range of urban services for industrial development by coordinating proposed plans with the annual and long-range City infrastructure planning.

Mobility and Transportation Element

Objective MT-1: Create and maintain a transportation system that is safe, efficient, provides access in an equitable manner, and optimizes travel by all modes.

- ▶ **Implementing Policy MT-1-d: Integrate Land Use and Transportation Planning.** Plan for and maintain a coordinated and well integrated land use pattern, local circulation network and transportation system that accommodates planned growth, reduces impacts on adjacent land uses, and preserves the integrity of established neighborhoods.

City of Fresno Zoning Ordinance

The purpose of the City’s Zoning Ordinance (Chapter 15 of the Municipal Code) is to implement the general plan and, if applicable, other operative plans to protect and promote the public health, safety, peace, comfort, convenience, prosperity, and general welfare of the city of Fresno. More specifically, it was adopted to, among other things, provide a guide for the physical development of the city in a manner that progressively achieves the arrangement of land uses depicted in the general plan, foster a harmonious and workable relationship among land uses, support economic development and job creation, and promote the stability of existing land uses that conform to the general plan, consistent with the goals, objectives, and policies of the general plan and any other operative plan.

4.11.2 Environmental Setting

PLAN AREA

The approximately 5,567-acre Plan Area, located in the southern and southeastern portion of downtown Fresno, is largely composed of land within the City limits. However, it also includes land in the City's sphere of influence (SOI) (Figure 3-1). The Plan Area is generally located south of California Avenue, north of American Avenue, and between Fig and Peach Avenues. The portion of the Plan Area in the SOI is anticipated to become part of the city of Fresno in the future. The parcels currently in the unincorporated county will not be rezoned at this time. Instead, upon a proposal to annex the land into the City limits, the City of Fresno would prezone the land to a zone consistent with the general plan land use. After annexation occurs, the County zoning would no longer apply to the parcel, and the zoning established in the pre-zoning would take effect.

EXISTING LAND USES

Existing land uses in the Plan Area include a mix of industrial and commercial development, residential neighborhoods, public facilities (e.g., fire station, post office, elementary school, college, church), open space, and vacant land (Figure 3-4). Heavy industrial (42 percent), open space (27 percent), vacant land (11 percent), and light industrial (9 percent) are the predominant land uses in the Plan Area. Agriculture makes up 85 percent of the open space with the rest consisting of ponding basins for surface water runoff and recharge to the aquifer and canals. The Plan Area is traversed by State Route (SR) 41 and SR 99; by BNSF, Union Pacific, and spur rail lines that serve industrial uses in the area; and by irrigation canals. Land has been cleared and construction of structures is underway for the California High-Speed Rail line.

The current land uses in the Plan Area are as follows:

- ▶ **Rural residential:** Approximately 3 percent, or 160 acres, of the land in the Plan Area is developed with rural residential uses. All but less than 1 acre of this land is located in unincorporated Fresno County.
- ▶ **Other residential:** Approximately 2 percent, or 82 acres, of the land in the Plan Area is developed with low-, medium low-, medium-, medium high-, or high-density residential uses. Two-thirds of this land is located in unincorporated Fresno County.
- ▶ **Commercial:** Less than 1 percent, or 29 acres, of the land in the Plan Area is developed with commercial uses. All this land is located within City limits.
- ▶ **Heavy industrial:** Approximately 42 percent, or 2,056 acres, of the land in the Plan Area is developed with heavy industrial uses. Most of this land is located within City limits.
- ▶ **Light industrial:** Approximately 9 percent, or 427 acres, of the land in the Plan Area is developed with light industrial uses. Most of this land is within the City's SOI, located in unincorporated Fresno County.
- ▶ **Public facilities:** Approximately 1 percent, or 66 acres, of the land in the Plan Area is developed with public facility uses. Most of this land is located in unincorporated Fresno County.
- ▶ **Streets:** Less than 1 percent, or 4 acres, of the land in the Plan Area is streets. Nearly all this land is located within City limits.
- ▶ **Open space:** Approximately 27 percent, or 1,308 acres, of the land in the Plan Area is open space. Three-quarters of this land is located in unincorporated Fresno County.
- ▶ **Vacant:** Approximately 11 percent, or 566 acres, of the land in the Plan Area is vacant. Most of this land is located within City limits.
- ▶ **Other:** Approximately 5 percent, or 242 acres, of the land in the Plan Area is other land uses. Most of this land is located within City limits.

EXISTING LAND USE DESIGNATIONS AND ZONING

Land Use Designations

As shown in Figure 3-5 and Table 3-2, general plan land use designations in the Plan Area include a mixture of industrial, commercial, agriculture, public facility, and open space land uses. The portion of the Plan Area located within City limits is devoted primarily to employment-generating land uses, such as agriculture, industrial, and commercial, given its proximity to rail service and highways. However, sensitive land uses, such as residential and public facilities, are located throughout the Plan Area.

The current land use designations in the Plan Area are as follows:

- ▶ **Residential - Low Density.** This designation is intended to provide for large-lot residential development. Low Density residential allows one to 3.5 housing units per acre. The resulting land use pattern is large-lot residential in nature, such as rural residential.
- ▶ **Residential - Medium Low Density.** The Medium Low Density designation is intended to provide for single-family-detached housing with densities of 3.5 to 6 units per acre.
- ▶ **Residential - Medium Density.** Medium Density residential covers developments of 5 to 12 units per acre and is intended for areas with predominantly single-family residential development but can also accommodate a mix of housing types, including small-lot starter homes, zero-lot-line developments, duplexes, and townhouses.
- ▶ **Residential - Medium High Density.** Medium High Density residential is intended for neighborhoods with a mix of single-family residences, townhomes, garden apartments, and multifamily units intended to support a fine-grain, pedestrian scale. This land use accommodates densities from 12 to 16 units per acre overall.
- ▶ **Neighborhood Mixed-Use.** This designation allows a minimum of 50-percent residential uses and provides for mixed-use districts of local-serving, pedestrian-oriented commercial development, such as convenience shopping and professional offices in two- to three-story buildings. Development is expected to include ground-floor neighborhood retails uses and upper-level housing or offices, with a mix of small-lot single-family houses, townhomes, and multifamily dwelling units on side streets, in a horizontal or vertical mixed-use orientation. The built form will have a scale and character that is consistent with pedestrian orientation to attract and promote a walk-in clientele, with small lots and frequent roadway and pedestrian connections permitting convenient access from residences to commercial space. The minimum residential density is 12 units per acre with no maximum.
- ▶ **Commercial - General.** The Commercial - General designation is intended for a range of retail and service uses that are not appropriate in other areas because of higher volumes of vehicle traffic and potential adverse impacts on other uses. Examples of allowable uses include storage facilities with active storefronts, equipment rental, wholesale businesses, and specialized retail not normally found in shopping centers.
- ▶ **Employment - Business Park.** The Business Park designation provides for office/business parks in campus-like settings that are well suited for large offices or multitenant buildings. This designation is intended to accommodate and allow for the expansion of small businesses. Given its proximity to residential uses, only limited outdoor storage will be permitted, whereas adequate landscaping is imperative to minimize the visual impacts. Typical land uses include research and development, laboratories, administrative and general offices, medical offices and clinics, professional offices, prototype manufacturing, testing, repairing, packaging, and printing. No free-standing retail is permitted, except for small uses serving businesses and employees.
- ▶ **Employment - Regional Business Park.** The Regional Business Park designation is intended for large or campus-like office and technology development that includes office, research and development, manufacturing, and other large-scale, professional uses, with limited and properly screened outdoor storage. Permitted uses include incubator-research facilities, prototype manufacturing, testing, repairing, packaging, and printing, as well as offices and research facilities. Small-scale retail and service uses serving local employees and visitors are permitted as secondary uses.

- ▶ **Employment - Light Industrial.** The Light Industrial designation accommodates a diverse range of light industrial uses, including limited manufacturing and processing, research and development, fabrication, utility equipment and service yards, wholesaling, warehousing, and distribution activities. Small-scale retail and ancillary office uses are also permitted. Light Industrial areas may serve as buffers between Heavy Industrial and other land uses and otherwise are generally located in areas with good transportation access, such as along railroads and state routes.
- ▶ **Employment - Heavy Industrial.** The Heavy Industrial designation accommodates the broadest range of industrial uses, including manufacturing, assembly, wholesaling, distribution, and storage activities, that are essential to the development of a balanced economic base. Small-scale commercial services and ancillary office uses are also permitted.
- ▶ **Public Facilities.** This designation applies to public facilities, such as fire and police stations, City-operated recycling centers, and sewage treatment plants.
- ▶ **Open Space.** The Open Space designations (Parks and Recreational Facilities, Other Public Open Space, Agriculture) apply to open space areas that are not parks or trails, such as ponding basins.

Zoning

The City's Zoning Ordinance (Chapter 15 of the Municipal Code) establishes development standards and other general provisions to ensure consistency between general plan land use designations and proposed development projects. Consistent with the City's general plan land use map, the following zoning districts are located in the Plan Area:

- ▶ CG – Commercial - General
- ▶ IL – Industrial - Light
- ▶ IH – Industrial - Heavy
- ▶ OS – Open Space
- ▶ PI – Public and Institutional

SURROUNDING LAND USES

Areas southeast, southwest, and south of the Plan Area are located in unincorporated Fresno County, and areas north, east, and west of the Plan Area are located within the city of Fresno. The Plan Area is bordered by residences, SR 99, and the Union Pacific Railroad on the northwest; industrial uses, residences, SR 41, and San Joaquin Valley Railroad on the north; residences and commercial uses on the northeast; the communities of Calwa and Malaga, farmland, industrial uses, and the Union Pacific Railroad on the east (the southern portion of Calwa is located in the Plan Area); primarily farmland with a few residences and SR 41 and SR 99 on the south; and farmland, commercial uses, and residences on the west.

4.11.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

Evaluation of potential land use impacts is based on a review of project materials and documents pertaining to the Plan Area and areas adjacent to it, including the City of Fresno General Plan (City of Fresno 2022), City of Fresno Municipal Code, and Fresno County General Plan Policy Document (Fresno County 2003).

These documents were reviewed to determine whether implementation of the proposed plan would impede or conflict with those plans such that an environmental impact would occur. In determining the level of significance, this analysis assumes that the plan would comply with relevant state regulations and local planning policies, where feasible.

THRESHOLDS OF SIGNIFICANCE

A land use impact would be significant if implementation of the proposed plan would:

- ▶ physically divide an established community or
- ▶ 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.

ISSUES NOT DISCUSSED FURTHER

All the identified thresholds are addressed in the following analysis.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 4.11-1: Physically Divide an Established Community

Development under the proposed plan would not physically divide an established community. Approximately 5 percent of the Plan Area is occupied by residential uses, and the residences are located primarily in pockets of development along the outer edges of the area. The locations and extent of residences in the Plan Area would not change substantially under the proposed plan. No major roadways or any other development that could divide a community is proposed under the plan. In addition, the network of bicycle paths and trails and the network of sidewalks would be expanded under the plan, providing greater connectivity throughout the Plan Area. This impact would be **less than significant**.

The land uses in the Plan Area are largely industrial, open space, and vacant land. Approximately 5 percent of the Plan Area is occupied by residential uses. The residences, characterized as rural residential or small subdivisions, are located primarily in pockets of development along the outer edges of the area, although some residences (such as Daleville) are spread across the southern portion of the Plan Area, between Central Avenue and American Avenue. The closest communities are Calwa and Malaga, which are located east of the Plan Area, with the southern portion of Calwa located in the Plan Area.

The locations and extent of residences in the Plan Area would not change substantially under the proposed plan. Under the SCSP, although the plan will generate up to 91 residential units the percentage of the Plan Area and locations devoted to residential uses would be essentially unchanged. Five percent of the area would continue to be planned for residential uses. No major roadways or any other development that could divide a community is proposed under the SCSP. In addition, as described in Chapter 3, "Project Description," and shown in Figure 3-9 and Figure 3-10, respectively, the network of bicycle paths and trails and the network of sidewalks would be expanded under the proposed plan, providing greater connectivity throughout the Plan Area.

Because implementation of the proposed plan would not physically divide an established community, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.11-2: Cause a Significant Environmental Impact Due to a Conflict with Any Land Use Plan, Policy, or Regulation Adopted for the Purpose of Avoiding or Mitigating an Environmental Effect

Implementing the proposed plan would require a general plan amendment to allow for the proposed land use changes, as some of the proposed land uses differ from the general plan. With the approval of the amendment, the SCSP would be consistent with the City of Fresno General Plan. Also, the proposed plan includes policies, development regulations, and use regulations to reduce potential impacts on sensitive uses located adjacent to industrial areas. In addition, the SCSP would not conflict with a habitat conservation plan or natural community conservation plan. This impact would be **less than significant**.

The City of Fresno General Plan and Zoning Ordinance (Chapter 15 of the Municipal Code) are the primary planning documents for the City of Fresno. Both emphasize the importance of ensuring the compatibility of adjacent land uses as a means of protecting the health and safety of the community. As discussed in Chapter 3, "Project Description," the Fresno City Council would be required to approve a general plan amendment to allow for minor land use changes proposed under the SCSP. A rezone in the city would be required to implement the proposed plan. (The portion of the Plan Area in the SOI is anticipated to become part of the city of Fresno in the future. Upon a proposal to annex the land into the City limits, the City of Fresno would prezone the land to a zone consistent with the general plan land use. After annexation occurs, the county zoning would no longer apply to the parcel, and the zoning established in the pre-zoning would take effect.)

As depicted in Figure 3-15, an overlay zone is proposed to ensure compatibility between the proposed plan's vision and existing conditions. The overlay zone would be applied over each zoning district in the Plan Area, adding a layer of development standards and use regulations that would govern all future private development actions in the Plan Area, including new construction, additions, and renovations to existing structures and new land uses proposed for existing facilities. In accordance with the purpose of the proposed plan, sensitive uses are defined as residential, school, park, and day care uses. The development standards and use regulations, which are identified in Chapter 5, "Development Standards," of the proposed plan, address buffering and screening, signage and traffic patterns, the use of alternative energy, and operation and construction. Specific development standards and use regulations include:

- ▶ prohibiting rendering plants and slaughterhouses;
- ▶ prohibiting certain uses within 1,000 feet of a sensitive use, including service stations, freight/truck terminals and warehouses, and waste transfer facilities;
- ▶ requiring a conditional use permit for certain uses when they would be located within 1,000 feet of a sensitive use, including construction and material yards and warehousing, storage, and distribution for indoor warehousing and storage, outdoor storage, or wholesaling and distribution; and
- ▶ applying building setback standards to industrial uses that adjoin residential, school, church, and civic uses (e.g., buildings should be set back a minimum of 100 feet when they share the same property line; the minimum 50-foot landscape buffer should include a tree density canopy that covers 100 percent of the buffer area within 10 years of planting).

As discussed in other technical sections in Chapter 4 of this Draft EIR, the proposed plan also includes numerous policies to guide implementation of the SCSP's vision and guiding principles, many of which are designed to reduce environmental impacts associated with implementing the plan. The following policies are among those that would reduce such impacts:

Noise Policies

- ▶ N-1: Establish noise standards that are protective of residential and other noise-sensitive uses.
- ▶ N-3: Require the protection of noise-impacted areas through effective noise mitigation measures such as barriers, berms, design and placement of buildings, sound absorbing materials, and vegetation.

- ▶ N-4: Require new sources of noise to use the best available technology to minimize noise.

Green Barriers/Tree Coverage/Beautification Policies

- ▶ GB-1: Require buffers between new industrial development and existing neighborhoods.
- ▶ GB-2: Require the installation of solid barriers or vegetative buffers between emissions sources and schools, daycares, medical offices, and homes.
- ▶ GB-7: Establish landscaping and site design standards for new businesses and industry, especially next to existing neighborhoods.

Potential impacts of locating industrial uses adjacent to residential uses are addressed throughout this EIR (e.g., Section 4.1, "Aesthetics"; Section 4.3, "Air Quality"; Section 4.9, "Hazards and Hazardous Materials"; Section 4.12, "Noise"; and Section 4.15, "Transportation and Circulation").

As described in Section 4.4, "Biological Resources," the Plan Area is not located on land covered by a habitat conservation plan or natural community conservation plan that would apply to activities conducted under the SCSP. The area covered by the Pacific Gas and Electric Company's (PG&E's) San Joaquin Valley Operation and Maintenance Habitat Conservation Plan encompasses the Plan Area, but the plan applies only to work conducted by PG&E. It would not apply to activities conducted under the SCSP. Therefore, implementing the proposed plan would not conflict with a habitat conservation plan or natural community conservation plan.

While the proposed plan is not fully consistent with the proposed land uses of the current General Plan, the plan is consistent with the General Plan policies and vision for the Plan Area. The proposed plan would not create land use patterns that would cause a significant environmental impact due to a conflict with relevant plans, policies, or regulations. However, with implementation of the general plan amendment, the proposed plan would be consistent with the City of Fresno General Plan, and the application of the overlay would be more protective of sensitive uses than the existing land use designations. In addition, the Plan Area is not located on land covered by a habitat conservation plan or natural community conservation plan that would apply to activities conducted under the SCSP. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

4.12 NOISE

4.12.1 Introduction

This section addresses the potential noise and vibration impacts that would result from implementing anticipated development under the proposed plan through the planning horizon of 2040. It describes the existing ambient noise levels in the Plan Area and identifies applicable federal and state plans, policies, and regulations as well as local plans, policies, and regulations. The analysis identifies the potential impacts that would result from implementing assumed plan development, including potential short-term, long-term, and cumulative impacts from noise and vibration, and identifies mitigation measures to reduce significant impacts where identified. Additional data are provided in Appendix C, "Noise Modeling Data."

Comments received in response to the NOP that pertain to noise include requests to analyze both individual and cumulative noise impacts that would result from implementing the proposed plan and to evaluate how noise generated from nearby agricultural activities would affect proposed development in the Plan Area.

ACOUSTIC FUNDAMENTALS

Prior to discussing the noise setting of the Plan Area, background information about sound, noise, vibration, and common noise descriptors is needed to provide context and a better understanding of the technical terms referenced throughout this section.

Sound, Noise, and Acoustics

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a human ear. Noise is defined as loud, unexpected, annoying, or unwanted sound.

In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receiver, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receiver determines the sound level and characteristics of the noise perceived by the receiver. The field of acoustics deals primarily with the propagation and control of sound.

Frequency

Continuous sound can be described by frequency (pitch) and amplitude (loudness). A low-frequency sound is perceived as low in pitch. Frequency is expressed in terms of cycles per second, or hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed in kilohertz, or thousands of hertz. The audible frequency range for humans is generally between 20 Hz and 20,000 Hz.

Sound Pressure Levels and Decibels

The amplitude of pressure waves generated by a sound source determines the loudness of that source. Sound pressure amplitude is measured in micro-Pascals (mPa). One mPa is approximately one hundred billionth (0.0000000001) of normal atmospheric pressure. Sound pressure amplitudes for different kinds of noise environments can range from less than 100 to 100,000,000 mPa. Because of this large range of values, sound is rarely expressed in terms of mPa. Instead, a logarithmic scale is used to describe sound pressure level (SPL) in terms of decibels (dB).

Addition of Decibels

Because decibels are logarithmic units, SPLs cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3-dB increase. In other words, when two identical sources are each producing sound of the same loudness at the same time, the resulting sound level at a given distance would

be 3 dB higher than if only one of the sound sources was producing sound under the same conditions. For example, if one idling truck generates an SPL of 70 dB, two trucks idling simultaneously would not produce 140 dB; rather, they would combine to produce 73 dB. Under the decibel scale, three sources of equal loudness together produce a sound level approximately 5 dB louder than one source.

A-Weighted Decibels

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by the characteristics of the human ear.

Human hearing is limited in the range of audible frequencies as well as in the way it perceives the SPL in that range. In general, people are most sensitive to the frequency range of 1,000–8,000 Hz and perceive sounds within this range better than sounds of the same amplitude with frequencies outside of this range. To approximate the response of the human ear, sound levels of individual frequency bands are weighted, depending on the human sensitivity to those frequencies. Then, an “A-weighted” sound level (expressed in units of A-weighted decibels) can be computed based on this information.

The A-weighting network approximates the frequency response of the average young ear when listening to most ordinary sounds. When people make judgments of the relative loudness or annoyance of a sound, their judgment correlates well with the A-scale sound levels of those sounds. Thus, noise levels are typically reported in terms of A-weighted decibels. All sound levels discussed in this section are expressed in A-weighted decibels (dBA). Table 4.12-1 describes typical A-weighted noise levels for various noise sources.

Table 4.12-1 Typical A-Weighted Noise Levels

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

Source: Caltrans 2013: Table 2-5.

Human Response to Changes in Noise Levels

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

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear can discern 1-dB changes in sound levels when exposed to steady, single-frequency (“pure-tone”) signals in the mid-frequency (1,000–8,000 Hz) range. In general, the healthy human ear is most sensitive to sounds between 1,000 and 5,000 Hz and perceives both higher and lower frequency sounds of the same magnitude with less intensity (Caltrans 2013: 2-18). In typical noisy environments, changes in noise of 1–2 dB are generally not perceptible. However, it is widely accepted that people

can begin to detect sound level increases of 3 dB in typical noisy environments. Further, a 5-dB increase is generally perceived as a distinctly noticeable increase, and a 10-dB increase is generally perceived as a doubling of loudness (Caltrans 2013: 2-10). Therefore, a doubling of sound energy (e.g., doubling the volume of traffic on a highway) that would result in a 3-dB increase in sound would generally be perceived as barely detectable.

Vibration

Vibration is the periodic oscillation of a medium or object with respect to a given reference point. Sources of vibration include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) and those introduced by human activity (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, (e.g., operating factory machinery) or transient in nature (e.g., explosions). Vibration levels can be depicted in terms of amplitude and frequency, relative to displacement, velocity, or acceleration.

Vibration amplitudes are commonly expressed in peak particle velocity (PPV) or root-mean-square (RMS) vibration velocity. PPV and RMS vibration velocity are normally described in inches per second (in/sec) or in millimeters per second. PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is typically used in the monitoring of transient and impact vibration and has been found to correlate well to the stresses experienced by buildings (FTA 2018; Caltrans 2013: 6).

Although PPV is appropriate for evaluating the potential for building damage, it is not always suitable for evaluating human response. It takes some time for the human body to respond to vibration signals. In a sense, the human body responds to average vibration amplitude. The RMS of a signal is the average of the squared amplitude of the signal, typically calculated over a 1-second period. As with airborne sound, the RMS velocity is often expressed in decibel notation as vibration decibels (VdB), which serves to compress the range of numbers required to describe vibration (FTA 2018; Caltrans 2020). This is based on a reference value of 1 micro inch per second.

The typical background vibration-velocity level in residential areas is approximately 50 VdB. Ground vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels (FTA 2018; Caltrans 2020).

Typical outdoor sources of perceptible ground vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground vibration is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur to fragile buildings. Construction activities can generate sufficient ground vibrations to pose a risk to nearby structures. Constant or transient vibrations can weaken structures, crack facades, and disturb occupants (FTA 2018).

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

Table 4.12-2 summarizes the general human response to different ground vibration-velocity levels.

Table 4.12-2 Human Response to Different Levels of Ground Noise and Vibration

Vibration-Velocity Level	Human Reaction
65 VdB	Approximate threshold of perception.
75 VdB	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find that transportation-related vibration at this level is unacceptable.
85 VdB	Vibration acceptable only if there are an infrequent number of events per day.

Notes: VdB = vibration decibels referenced to 1 micro-inch/second and based on the root-mean-square velocity amplitude.

Source: FTA 2018.

Common Noise Descriptors

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

Equivalent Continuous Sound Level (L_{eq}): L_{eq} represents an average of the sound energy occurring over a specified period. In effect, L_{eq} is the steady-state sound level containing the same acoustical energy as the time-varying sound level that occurs during the same period (Caltrans 2013). For instance, the 1-hour equivalent sound level, also referred to as the hourly L_{eq} , is the energy average of sound levels occurring during a 1-hour period and is the basis for noise abatement criteria used by California Department of Transportation (Caltrans) and Federal Transit Administration (FTA) (Caltrans 2013; FTA 2018).

Percentile-Exceeded Sound Level (L_x): L_x represents the sound level exceeded for a given percentage of a specified period (e.g., L_{10} is the sound level exceeded 10 percent of the time, and L_{90} is the sound level exceeded 90 percent of the time) (Caltrans 2013).

Maximum Sound Level (L_{max}): L_{max} is the highest instantaneous sound level measured during a specified period (Caltrans 2013; FTA 2018).

Day-Night Level (L_{dn}): L_{dn} is the energy average of A-weighted sound levels occurring over a 24-hour period, with a 10-dB "penalty" applied to sound levels occurring during nighttime hours between 10 p.m. and 7 a.m. (Caltrans 2013; FTA 2018).

Community Noise Equivalent Level (CNEL): CNEL is the energy average of the A-weighted sound levels occurring over a 24-hour period, with a 10-dB penalty applied to sound levels occurring during the nighttime hours between 10 p.m. and 7 a.m. and a 5-dB penalty applied to the sound levels occurring during evening hours between 7 p.m. and 10 p.m. (Caltrans 2013).

Sound Propagation

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

Geometric Spreading

Sound from a localized source (i.e., a point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Roads and highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources, thus propagating at a slower rate in comparison to a point source. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source.

Ground Absorption

The propagation path of noise from a source to a receiver is usually very close to the ground. Noise attenuation from ground absorption and reflective wave canceling provides additional attenuation associated with geometric spreading. Traditionally, this additional attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually sufficiently accurate for distances of less than 200 feet. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver, such as soft dirt, grass, or scattered bushes and trees), an additional ground-attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the attenuation rate associated with cylindrical spreading, the additional ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance. This would hold true for point sources, resulting in an overall drop-off rate of up to 7.5 dB per doubling of distance.

Atmospheric Effects

Receivers located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels, as wind can carry sound. Sound levels can be increased over large distances (e.g., more than 500 feet) from the source because of atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also affect sound attenuation.

Shielding by Natural or Human-Made Features

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

4.12.2 Regulatory Setting

FEDERAL

US Environmental Protection Agency Office of Noise Abatement and Control

The US Environmental Protection Agency (EPA) Office of Noise Abatement and Control was originally established to coordinate federal noise control activities. In 1981, EPA administrators determined that subjective issues such as noise would be better addressed at more local levels of government. Consequently, in 1982 responsibilities for regulating noise control policies were transferred to state and local governments. However, documents and research completed by the EPA Office of Noise Abatement and Control continue to provide value in the analysis of noise effects.

Federal Transit Administration

The FTA Division of Environmental Analysis developed the Transit Noise and Vibration Impact Assessment Manual, which guides engineers, planners, and consultants in assessing vibration from construction, operation, and maintenance of projects. To address the human response to ground vibration, FTA has set forth guidelines for maximum-acceptable vibration criteria for different types of land uses. These guidelines are presented below in Table 4.12-3. In addition, FTA has also established construction vibration damage criteria, shown below in Table 4.12-4.

Table 4.12-3 Ground-Borne Vibration Impact Criteria for General Assessment

Land Use Category	GBV Impact Levels (VdB re 1 micro-inch/second)		
	Frequent Events ¹	Occasional Events ²	Infrequent Events ³
<i>Category 1:</i> Buildings where vibration would interfere with interior operations.	65 ⁴	65 ⁴	65 ⁴
<i>Category 2:</i> Residences and buildings where people normally sleep.	72	75	80
<i>Category 3:</i> Institutional land uses with primarily daytime uses.	75	78	83

Notes: GBV = ground-borne vibration; VdB = vibration decibels referenced to 1 micro-inch/second and based on the root-mean-square velocity amplitude.

¹ "Frequent Events" is defined as more than 70 vibration events of the same source per day.

² "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day.

³ "Infrequent Events" is defined as fewer than 30 vibration events of the same source per day.

⁴ This criterion is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration-sensitive manufacturing or research would require detailed evaluation to define acceptable vibration levels.

Source: FTA 2018.

Table 4.12-4 FTA Construction Damage Vibration Criteria

Land Use Category	PPV, in/sec
Reinforced-concrete, steel, or timber (no plaster)	0.5
Engineered concrete and masonry (no plaster)	0.3
Non-engineered timber and masonry buildings	0.2
Buildings extremely susceptible to vibration damage	0.12

Notes: PPV= peak particle velocity; in/sec = inches per second.

Source: FTA 2018.

In addition to vibration criteria, FTA has also established construction noise criteria based on the land use type affected by noise and depending on whether construction noise would occur during the daytime or nighttime. The FTA criteria are as follows:

- ▶ Residential: 80 dB L_{eq} (day) and 70 dB L_{eq} (night)
- ▶ Commercial/Industrial: 100 dB L_{eq} (day and night)

Federal Interagency Committee on Noise

Noise level increases tend to result in different levels of annoyance under different ambient noise levels. To address this, the Federal Interagency Committee on Noise (FICON) has set thresholds for noise level increases that typically lead to significant noise impacts under different ambient noise levels. These thresholds are presented in Table 4.12-5. As depicted, a noise level increase of 5.0 or greater would typically be considered to result in increased levels of annoyance where existing ambient noise levels are less than 60 dB. Within areas where the ambient noise level ranges from 60 to 65 dB, increased levels of annoyance would be anticipated at increases of 3 dB or greater. Increases of 1.5 dB or greater could result in increased levels of annoyance in areas where the ambient noise level exceeds 65 dB. The rationale for the FICON-recommended criteria is that as ambient noise levels increase, a smaller increase in noise resulting from a project is sufficient to cause significant increases in annoyance (FICON 1992).

Table 4.12-5 Federal Interagency Committee on Noise–Recommended Criteria for Evaluation of Increases in Ambient Noise Levels

Ambient Noise Level Without Project	Increase Required for Significant Impact
<60 dB	5.0 dB, or greater
60–65 dB	3.0 dB, or greater
>65 dB	1.5 dB, or greater

Source: FICON 1992.

STATE

California General Plan Guidelines

The State of California General Plan Guidelines 2017, published by the California Governor’s Office of Planning and Research (OPR 2017), provide guidance for the compatibility of projects within areas of specific noise exposure. Acceptable and unacceptable community noise exposure limits for various land use categories have been determined to help guide new land use decisions in California communities. In many local jurisdictions, these guidelines are used to derive local noise standards and guidance. Citing EPA materials and the State Sound Transmissions Control Standards, (e.g., class ratings) the state’s general plan guidelines recommend interior and exterior CNEL of 45 and 60 dB for residential units, respectively (OPR 2017: 378).

California Department of Transportation

In 2020, Caltrans published the Transportation and Construction Vibration Guidance Manual (Caltrans 2020). The manual provides general guidance on vibration issues associated with construction and operation of projects in relation to human perception and structural damage. Table 4.12-6 presents recommendations for levels of vibration that could result in damage to structures exposed to continuous vibration.

Table 4.12-6 Caltrans Recommendations Regarding Levels of Vibration Exposure

PPV (in/sec)	Effect on Buildings
0.4-0.6	Architectural damage and possible minor structural damage
0.2	Risk of architectural damage to normal dwelling houses
0.1	Virtually no risk of architectural damage to normal buildings
0.08	Recommended upper limit of vibration to which ruins and ancient monuments should be subjected
0.006-0.019	Vibration unlikely to cause damage of any type

Notes: PPV= peak particle velocity; in/sec = inches per second.

Source: Caltrans 2020.

LOCAL

City of Fresno General Plan

The *City of Fresno General Plan* Noise Element policies listed below are relevant to the proposed plan. In addition, the Noise Element sets the standards for transportation and stationary noise sources shown below in Tables 4.12-7 and 4.12-8, respectively.

Table 4.12-7 City of Fresno Maximum Allowable Noise Exposure for Transportation Noise Sources

Land Use	Outdoor Activity Areas ¹	Interior Spaces	
	L _{dn} /CNEL, dB	L _{dn} /CNEL, dB	L _{eq} , dB ²
Residential	65	45	—
Transient Lodging	65	45	—
Hospitals, Nursing Homes	65	45	—
Theaters, Auditoriums, Music Halls	—	—	35
Churches, Meeting Halls	65	—	45
Office Buildings	—	—	45
Schools, Libraries, Museums	—	—	45

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

¹ Where the location of outdoor activity areas is unknown or is not applicable, the exterior noise level standard shall be applied to the property line of the receiving land use.

² As determined for a typical worst-case hour during periods of use.

Source: City of Fresno 2014.

Table 4.12-8 City of Fresno Maximum Allowable Noise Exposure for Stationary Noise Sources

	Daytime (7:00 a.m. to 10:00 p.m.)	Nighttime (10:00 p.m. to 7:00 a.m.)
Hourly Equivalent Sound Level (L_{eq}), dBA	50	45
Maximum Sound Level (L_{max}), dBA	70	60

¹ The Planning and Development Director, on a case-by-case basis, may designate land uses other than those shown in this table to be noise sensitive, and may require appropriate mitigation measures.

² As determined at outdoor activity areas. Where the location of outdoor activity areas is unknown or not applicable, the noise exposure standard shall be applied at the property line of the receiving land use. When ambient noise levels exceed or equal the levels in this table, mitigation shall only be required to limit noise to the ambient plus 5 dB.

Source: City of Fresno 2014.

- ▶ **Policy NS-1-a:** Establish 65 dBA L_{dn} or CNEL as the standard for the desirable maximum average exterior noise levels for defined usable exterior areas of residential and noise-sensitive uses for noise but designate 60 dBA L_{dn} or CNEL (measured at the property line) for noise generated by stationary sources impinging upon residential and noise-sensitive uses. Maintain 65 dBA L_{dn} or CNEL as the maximum average exterior noise levels for non-sensitive commercial land uses and maintain 70 dBA L_{dn} or CNEL as maximum average exterior noise level for industrial land uses, both to be measured at the property line of parcels where noise is generated which may impinge on neighboring properties.
- ▶ **Policy NS-1-b:** Establish the conditionally acceptable noise exposure level range for residential and other noise sensitive uses to be 65 dB L_{dn} or require appropriate noise reducing mitigation measures as determined by a site specific acoustical analysis to comply with the desirable and conditionally acceptable exterior noise level and the required interior noise level standards set in Table 9-2 of the General Plan.
- ▶ **Policy NS-1-c:** Establish the exterior noise exposure of greater than 65 dB L_{dn} or CNEL to be generally unacceptable for residential and other noise sensitive uses for noise generated by sources in Policy NS-1-a, and study alternative less noise-sensitive uses for these areas if otherwise appropriate. Require appropriate noise reducing mitigation measures as determined by a site-specific acoustical analysis to comply with the generally desirable or generally acceptable exterior noise level and the required 45 dB interior noise level standards set in Table 9-2 of the General Plan as conditions of permit approval.
- ▶ **NS-1-h:** Comply with the State Code requirement that any new multifamily residential, hotel, or dorm buildings must be designed to incorporate noise reduction measures to meet the 45 dB L_{dn} interior noise criterion, and apply this standard as well to all new single-family residential and noise sensitive uses.
- ▶ **Policy NS-1-i:** Require an acoustical analysis where new development of industrial, commercial or other noise generating land uses (including transportation facilities such as roadways, railroads, and airports) may result in noise levels that exceed the noise level exposure criteria established by Tables 9-2 and 9-3 of the General Plan to determine impacts, and require developers to mitigate these impacts in conformance with Tables 9-2 and 9-3 of the General Plan as a condition of permit approval through appropriate means. Noise mitigation measures may include:
 - The screening of noise sources such as parking and loading facilities, outdoor activities, and mechanical equipment;
 - Providing increased setbacks for noise sources from adjacent dwellings;
 - Installation of walls and landscaping that serve as noise buffers;
 - Installation of soundproofing materials and double-glazed windows; and
 - Regulating operations, such as hours of operation, including deliveries and trash pickup;

Alternative acoustical designs that achieve the prescribed noise level reduction may be approved by the City, provided a qualified Acoustical Consultant submits information demonstrating that the alternative designs will

achieve and maintain the specific targets for outdoor activity areas and interior spaces. As a last resort, developers may propose to construct noise walls along roadways when compatible with aesthetic concerns and neighborhood character. This would be a developer responsibility, with no City funding.

- ▶ **Policy NS-1-j:** Establish, as a threshold of significance for the City’s environmental review process, that a significant increase in ambient noise levels is assumed if the project would increase noise levels in the immediate vicinity by 3 dB Ldn or CNEL or more above the ambient noise limits established in this General Plan Update.
- ▶ **Policy NS-1-k:** Review all new public and private development proposals that may potentially be affected by or cause a significant increase in noise levels, per Policy NS-1-c, to determine conformance with the policies of this Noise Element. Require developers to reduce the noise impacts of new development on adjacent properties through appropriate means.
- ▶ **Policy NS-1-l:** Continue to enforce applicable State Noise Insulation Standards and Uniform Building Code noise requirements, as adopted by the City.
- ▶ **Policy NS-1-m:** For projects subject to City approval, require that the project sponsor mitigate noise created by new transportation and transportation-related stationary noise sources, including roadway improvement projects, so that resulting noise levels do not exceed the City’s adopted standards for noise-sensitive land uses.
- ▶ **Policy NS-1-n:** Require new noise sources to use best available control technology to minimize noise emissions.
- ▶ **Policy NS-1-o:** Acoustical studies and noise mitigation measures for projects shall specify the heights, materials, and design for sound walls and other noise barriers. Aesthetic considerations shall also be addressed in these studies and mitigation measures such as variable noise barrier heights, a combination of a landscaped berm with wall, and reduced barrier height in combination with increased distance or elevation differences between noise source and noise receptor, with a maximum allowable height of 15 feet. The City will develop guidelines for aesthetic design measures of sound walls, and may commission area wide noise mitigation studies that can serve as templates for acoustical treatment that can be applied to similar situations in the urban area.
- ▶ **Policy NS-1-p:** Implement the land use and noise exposure compatibility provisions of the adopted Fresno Yosemite International Airport Land Use Compatibility Plan, the Fresno Chandler Executive Airport Master and Environs Specific Plan, and the Sierra Sky Park Land Use Policy Plan to assess noise compatibility of proposed uses and improvements within airport influence and environs areas.

City of Fresno Municipal Code

The Noise Control Ordinance in the City of Fresno Municipal Code establishes the following standards related to noise, which are applicable to the proposed plan:

- ▶ **SEC. 10-102. Definitions. (b) Ambient Noise.** “Ambient noise” is the all-encompassing noise associated with a given environment, being usually a composite of sounds from many sources near and far. For the purpose of this ordinance, ambient noise level is the level obtained when the noise level is averaged over a period of fifteen minutes, without inclusion of the offending noise, at the location and time of day at which a comparison with the offending noise is to be made. Where the ambient noise level is less than what is presented in this section, however, the noise level specified herein shall be deemed to be the ambient noise level for that location. [The table included in the section is presented below as Table 4.12-9.]

Table 4.12-9 City of Fresno Ambient Noise Thresholds

District	Time	Sound Level, dB
Residential	10:00 p.m. to 7:00 a.m.	50
	7:00 p.m. to 10:00 p.m.	55
	7:00 a.m. to 7:00 p.m.	60
Commercial	10:00 p.m. to 7:00 a.m.	60
	7:00 a.m. to 10:00 p.m.	65
Industrial	Anytime	70

Source: City of Fresno Municipal Code Section 10-102(b).

- ▶ **SEC. 10-105. Excessive Noise Prohibited.** No person shall make, cause, or suffer or permit to be made or caused upon any premises or upon any public street, alley, or place within the city, any sound or noise which causes discomfort or annoyance to any reasonable person of normal sensitiveness residing or working in the area, unless such noise or sound is specifically authorized by or in accordance with this article. The provisions of this section shall apply to, but shall be limited to, the control, use, and operation of the following noise sources:
 - (a) Radios, musical instruments, phonographs, television sets, or other machines or devices used for the amplification, production, or reproduction of sound or the human voice.
 - (b) Animals or fowl creating, generating, or emitting any cry or behavioral sound.
 - (c) Machinery or equipment, such as fans, pumps, air conditioning units, engines, turbines, compressors, generators, motors or similar devices, equipment, or apparatus.
 - (d) Construction equipment or work, including the operation, use or employment of pile drivers, hammers, saws, drills, derricks, hoists, or similar construction equipment or tools.
- ▶ **SEC. 10-106: Prima Facie Violation.** Any noise or sound exceeding the ambient level at the property line of any person offended thereby, or, if a condominium or apartment house, within any adjoining living unit, by more than five decibels shall be deemed to be prima facie evidence of a violation of Section 8-305.
- ▶ **SEC. 10-107. School, Hospitals, and Churches.** No person shall create any noise on any street, sidewalk, or public place adjacent to any school, institution of learning, or church while the same is in use, or adjacent to any hospital, which noise unreasonably interferes with the workings of such institution or which disturbs or unduly annoys patients in the hospital, provided conspicuous signs are displayed in such street, sidewalk, or public place indicating the presence of a school, church, or hospital.
- ▶ **SEC. 10-109. Exceptions.** The provisions of this article shall not apply to:
 - (a) Construction, repair or remodeling work accomplished pursuant to a building, electrical, plumbing, mechanical, or other construction permit issued by the city or other governmental agency, or to site preparation and grading, provided such work takes place between the hours of 7:00 a.m. and 10:00 p.m. on any day except Sunday.
 - (b) Emergency work.
 - (c) Any act or acts which are prohibited by any law of the State of California or the United States.

In addition to the stationary noise standards presented above in table 4.12-9, Table 15-2506-B of the Municipal Code establishes maximum exterior noise level standards for transportation noise sources at various noise-sensitive land uses. The standards there are identical to the ones presented above in Table 4.1-9, from the City of Fresno General Plan.

In accordance with section 15-2506 of the Municipal Code, a noise sensitive receptor is defined as residential, lodging, medical facilities, theatres/auditoriums, office buildings, and schools/libraries/museums uses (City of Fresno, 2014).

4.12.3 Environmental Setting

EXISTING NOISE ENVIRONMENT

Existing land uses within the Plan Area include a mix of industrial and commercial developments, rural and medium-density residential, public facilities, open space, and vacant land. Noise sources associated with existing land uses include vehicle and truck traffic; residential maintenance; parking lots; heating, ventilation, and air conditioning (HVAC) systems; property operations and maintenance; truck loading and unloading; and agriculture-related noise.

Roadway Noise

The primary noise source in the community is vehicle traffic traveling on surface streets, on State Route (SR) 41 and SR 99. Existing modeled noise levels associated with acoustically significant roadways within the Plan Area are shown

in Table 4.12-10. The modeled noise levels do not consider factors that may reduce (e.g., existing buildings, walls) or in some cases, amplify noise sources. Table 4.12-10 summarizes the modeled existing traffic noise levels at 100 feet from the centerline of each area roadway segment, and lists distances from each roadway centerline to the 75, 70, and 65 dBA CNEL traffic noise contours. For further details on traffic-noise modeling inputs and parameters, refer to Appendix C.

Table 4.12-10 Summary of Modeled Existing Traffic Noise Levels

Roadway Segment/Segment Description	Noise Levels @ 100 feet from Centerline	Distance (feet) from Roadway Centerline to Contour		
		75 dBA	70 dBA	65 dBA
Jenson Avenue Bypass between Cherry Avenue and East Avenue	74.6	65	205	648
Jenson Avenue Bypass between Sunset Avenue and Cedar Avenue	75.0	71	224	708
North Avenue between Hayston Avenue and Maple Avenue	67.3	8	25	79
Central Avenue between Cherry Avenue and East Avenue	69.4	13	40	125
American Avenue between Orange Avenue and Cedar Avenue	65.9	6	18	56
Cherry Avenue between Church Avenue and Byrd Avenue	69.6	13	42	132
Cherry Avenue between Central Avenue and North Avenue	68.1	9	29	93
East Avenue between Central Avenue and North Avenue	62.3	2	8	25
Cedar Avenue between Central Avenue and Parkway Drive	67.4	8	25	80
Maple Avenue between North Avenue and Annadale Avenue	62.3	2	8	24
Willow Avenue between Jensen Parkway and Annadale Avenue	67.4	8	25	80
Elm Avenue between Central Avenue and North Avenue	69.8	14	44	139

Notes: CNEL = Community Noise Equivalent Level; dBA = A-weighted decibel.

All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow, and does not account for shielding of any type or finite roadway adjustments. For additional details, refer to Appendix C for detailed traffic data, and traffic-noise modeling input data and output results.

Source: Modeled by Ascent Environmental in 2023.

Rail Noise

Noise associated with the existing BNSF and Union Pacific Railroad (UPRR) lines also contribute to the noise levels in the Plan Area. The UPRR extends in a southeast/northwest direction and runs through the center of the Plan Area. Also, land has been cleared and construction is underway for the future state high-speed rail line.

Airport/Aircraft Noise

There are no airports located within the Plan Area and the Plan Area is not located within any airport noise contours. The Plan Area is, however, affected by fly-over noise associated with the Fresno Yosemite International Airport, the Fresno-Chandler Downtown Airport, and the Sierra Sky Park Airport. Commercial jet aircraft operations are limited to the Fresno Yosemite International Airport. The Air National Guard is also stationed there and operates military jets and other aircraft. Private and commercial operations with smaller aircraft use the Fresno Chandler Downtown Airport, while only small private aircraft use the Sierra Sky Park Airport.

VIBRATION SOURCES IN THE PLAN AREA

The main sources of vibration in the Plan Area are related to vehicles and trucks, rail, and construction activities. Typical roadway traffic, including heavy trucks, rarely generates vibration amplitudes high enough to cause structural or cosmetic damage. However, there have been cases in which heavy trucks traveling over potholes or other discontinuities in the pavement have caused vibration high enough to result in complaints from nearby residents.

4.12.4 Environmental Impacts and Mitigation Measures

METHODOLOGY

Construction Noise and Vibration

To assess potential short-term (construction-related) noise and vibration impacts, sensitive receptors and their relative exposure were identified. Construction source noise and vibration levels from estimated future development were determined based on methodologies, reference emission levels, and usage factors from FTA's *Guide on Transit Noise and Vibration Impact Assessment* methodology (FTA 2018) and the Federal Highway Administration's *Roadway Construction Noise Model User's Guide* (FHWA 2006). Reference levels for noise and vibration emissions for specific equipment or activity types are well documented and the usage thereof common practice in the field of acoustics.

Operational Noise and Vibration

Assessment of long-term operational impacts from stationary (non-transportation) noise sources from future Plan Area development was based on reconnaissance data, reference noise emission levels, and measured noise levels for activities and equipment associated with such development (e.g., HVAC units, delivery/loading docks), and standard attenuation rates and modeling techniques.

To assess potential long-term operational noise impacts from project-generated increases in traffic, noise levels were estimated using calculations consistent with the Federal Highway Administration's Traffic Noise Model Version 2.5 (FHWA 2004) and traffic data for the assumed level of Plan Area development (Appendix C). The analysis is based on the reference noise emission levels for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and ground attenuation factors. Truck usage and vehicle speeds on area roadways were estimated from field observations and the SCSP traffic report. Note that the modeling conducted does not account for any natural or human-made shielding (e.g., the presence of walls or buildings) or reflection off building surfaces.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines and adopted City of Fresno General Plan and Municipal Code noise standards, an impact from noise would be significant if development under the proposed plan would do any of the following:

- ▶ Generate of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies
 - substantial temporary (i.e., construction) noise level that exceed exceeding City Noise Control Ordinance standards during the more noise-sensitive evening, nighttime, and early-morning hours (10 p.m. to 7 a.m., Monday through Saturday and all day Sunday);
 - substantial permanent stationary or area noise sources that exceed the City Residential Noise Control Ordinance standards (e.g., 50 dBA L_{eq} during the day and 45 dBA L_{eq} at night);
 - substantial permanent traffic noise levels that exceed the City Traffic Noise Standards (see Table 4.12-7, above) or increase ambient noise levels in the vicinity by 3 dB L_{dn} CNEL or more as established in the General Plan Update (Policy NS-1-j);

- ▶ Generate excessive groundborne vibration or groundborne noise levels
 - construction or operational vibration levels exceeding FTA's recommended standards with respect to the prevention of structural building damage (i.e., 0.2 PPV in/sec for non-engineered timber and masonry building) or FTA's maximum-acceptable-vibration standard with respect to human response/sleep disturbance (i.e., 80 VdB for residential uses for infrequent events, 75 VdB for occasional events, and 72 VdB for frequent events) at nearby existing vibration-sensitive land uses; or
- ▶ 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 Plan Area to excessive noise levels.

ISSUES NOT DISCUSSED FURTHER

The closest airport to the Plan Area is Fresno Chandler Executive Airport, approximately 2.1 miles from the Plan Area. The Plan Area is located outside of the nearest airport land use plan area. Therefore, no impacts related to exposure of people to excessive aviation noise would occur.

PROPOSED SOUTH CENTRAL SPECIFIC PLAN POLICIES

The proposed plan includes the following policies related to noise:

- ▶ **Policy N-1:** Establish noise standards that are protective for residential and other noise-sensitive uses.
- ▶ **Policy N-2:** Identify noise-impacted areas in the Plan Area. (Note: A noise impacted area is an area that exceeds the City's noise standards.)
- ▶ **Policy N-3:** Require the protection of noise-impacted areas through effective noise mitigation measures such as barriers, berms, design and placement of buildings, sound absorption materials, and vegetation.
- ▶ **Policy N-4:** Require new sources of noise to use the best available technology to minimize noise. (Note: New development projects that generate noise in excess of the noise thresholds will be subject to this policy.)
- ▶ **Policy N-5:** When designing and improving streets and highways, consider measures to reduce traffic noise.

In addition, the SCSP includes an overlay zone (Figure 3-15), regulations and development standards that prohibit certain uses within 1,000 feet of sensitive receptors or require a conditional use permit for such uses (e.g., warehousing uses); require setbacks, screening, walls, and buffers between specific uses and sensitive receptors; and require truck routing plans from facility operators that emphasize protection of sensitive receptors.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 4.12-1: Substantial Temporary (Construction) Noise Levels That Exceed City Noise Control Ordinance Standards

It is anticipated that development of the Plan Area would occur gradually over time and that various levels of construction could occur throughout the Plan Area at any given time. While specific construction intensity, duration, and locations are not currently known, reference noise levels for typical construction equipment associated with land development were used to assess peak construction noise. Based on those reference levels, construction noise could reach levels of up to 82.9 dBA L_{eq} and 88.0 dBA L_{max} . In addition, some construction work for utility installation. This impact would be **significant**.

The effects of construction noise resulting from the implementation of development under the proposed plan would depend on the type of construction activities occurring on any given day; noise levels generated by those activities; distances to noise-sensitive receptors; potential noise attenuating features such as topography, vegetation, and

existing structures; and the existing ambient noise environment in the receptor's vicinity. Construction generally occurs in several discrete stages, each phase requiring a specific complement of equipment with varying equipment type, quantity, and intensity. These variations in the operational characteristics of the equipment change the effect they have on the noise environment of the Plan Area and in the surrounding area for the duration of the construction process. Additionally, for evaluation of construction noise, activities that occur during the more noise-sensitive evening and nighttime hours are of greater concern than daytime noise. Because exterior ambient noise levels typically decrease during the late evening and nighttime hours as traffic volumes and commercial activities decrease, construction activities performed during these more noise-sensitive periods are more conspicuous and can result in increased annoyance and potential sleep disruption for occupants of nearby residences.

Development of the Plan Area is anticipated to occur gradually over time. The sequence and pace for constructing various land uses and facilities would be market driven; therefore, specific construction schedules for individual projects are yet unknown. During some years there may be several elements under construction simultaneously and during other years there may be very little construction activity. Construction activities in the Plan Area may initially be required on currently undeveloped lands for installation of new or expanded backbone infrastructure, such as storm drainage, water and wastewater improvements, roadway improvements, and new or expanded utilities (e.g., electrical distribution lines, wastewater drainage pipes).

Construction noise can be characterized based on the types of equipment that will be used. Reference noise levels for typical construction equipment that would be used for projects carried out under the proposed plan are shown in Table 4.12-11.

Table 4.12-11 Noise Emission Levels from Construction Equipment

Equipment Type	Typical Noise Level (L_{max} dBA) @ 50 feet
Backhoe	80
Concrete Mixer	85
Compactor	80
Crane/Lift	85
Dozer	85
Dump Truck	84
Excavator	85
Flat Bed Truck	84
Front End Loader	80
Generator	70
Grader	85
Impact Pile Driver	95
Paver	89
Roller	85
Pickup Trucks	55

Notes: Assumes all equipment is fitted with a properly maintained and operational noise control device, per manufacturer specifications. The noise levels listed are manufacture-specified noise levels for each piece of heavy construction equipment.

Source: FTA 2018.

Based on reference noise levels for typical construction equipment and activities, building construction noise without pile driving could reach up to 82.3 dBA L_{eq} and 87.6 dBA L_{max} (at 50 feet from the source), and with pile driving could reach up to 82.9 dBA L_{eq} and 88.0 dBA L_{max} . Refer to Appendix C for modeling inputs and results.

Construction activities would occur throughout the Plan Area with varying construction schedules and construction-noise levels depending on the specific scale and type of development under construction. Currently, about 400

residences are located within the Plan Area that, depending on proximity to a construction site or sites, could be affected by construction work. Off-site sensitive receptors near the Plan Area include rural residential land uses generally around the southern boundaries of the Plan Area and denser medium-density residential uses along the northern boundaries.

The 5,567-acre Plan Area includes approximately 3,693 acres of development (industrial, commercial, residential, and other uses), but also contains large areas of undeveloped open space and agricultural land. Existing ambient noise levels throughout the undeveloped portions of the Plan Area are relatively low. Depending on the type and locations of future development, construction activities generating noise levels of 82.3 dBA L_{eq} or greater could result in substantial (i.e., 5 dB) increases in temporary noise at nearby off-site and on-site residences.

With the development of the Plan Area taking place gradually over time, additional sensitive land uses could be constructed that could be exposed to noise levels associated with the construction of subsequent development. Although individual construction activity location, duration, and intensity for subsequent development are unknown, road improvements, and building construction of future development could occur close to future sensitive receptors, exposing them to construction-noise levels of up to 82.9 dBA L_{eq} and 88.0 dBA L_{max} . In addition, some construction work, such as utility installation and roadway improvements may occur during nighttime hours, as is typical with this type of construction, to reduce traffic impacts, and could expose proposed future sensitive receptors to noise levels that may disrupt sleep and exceed City of Fresno nighttime noise limits of 45 dBA L_{eq} and 60 dBA L_{max} .

The proposed plan would impose conditions on new development within the Plan Area that would limit construction noise levels to protect sensitive receptors from excessive construction noise. Policy N-1, for example, would establish noise standards that are protective of residential and other noise-sensitive uses. Policy N-3 would protect noise-affected areas through effective noise attenuation measures such as barriers, berms, design and placement of buildings, sound absorption materials, and vegetation.

Noise reduction would be achieved with the implementation of proposed plan policies and implementation programs. However, depending on individual construction-noise levels and proximity to sensitive receptors, achieving nighttime standards of 45 dBA L_{eq} may not always be feasible. Future construction activities could result in a substantial (i.e., 5 dB) temporary or periodic increase in noise during daytime or nighttime hours at existing and future sensitive land uses. This impact would be **significant**.

Mitigation Measures

Mitigation Measure 4.12-1: Implement Construction Noise Reduction Requirements

The City shall require the following noise reduction measures to be implemented for all construction activities, as best management practices, that would be the responsibility of the construction contractors to implement:

- ▶ All construction equipment and equipment staging areas shall be located as far as possible from nearby noise-sensitive land uses (residences, schools, playgrounds, child-care centers, churches, hospitals, retirement homes, and convalescent homes).
- ▶ Idling of construction equipment for extended periods (i.e., 5 minutes) of time shall be prohibited.
- ▶ All construction equipment shall be properly maintained and equipped with noise reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturers' recommendations. Equipment engine shrouds shall be closed during equipment operation.
- ▶ Noise-intensive construction operations and techniques that cause noise levels to exceed City Noise Control Ordinance standards at sensitive receptors during the more noise-sensitive times of day (10 p.m. to 7 a.m., Monday through Saturday and all day Sunday) shall be replaced with quieter procedures (e.g., using welding instead of riveting, mixing concrete off site instead of on site) where such technology exists and would accomplish the same desired outcome compared to traditional construction methods.
- ▶ For construction activities required to occur at night within 3,900 feet of residential uses, noise attenuating buffers such as structures, truck trailers, temporary noise curtains, or sound walls shall be located between noise

sources and the receptor to shield sensitive receptors from construction noise to achieve a nighttime noise level of 45 dBA at the receptor.

Significance after Mitigation

Implementation of Mitigation Measures 4.12-1 would provide substantial reductions in daytime and nighttime construction noise levels by including noise reduction measures such as ensuring proper equipment use; locating equipment away from sensitive land uses; and requiring the use of barriers and berms. Even with these measures, however, construction noise could temporarily reach high levels and disrupt sensitive receptors, depending on their proximity. Thus, this impact would be **significant and unavoidable**.

Impact 4.12-2: Substantial Permanent Stationary or Area Noise Sources That Exceed the City Residential Noise Control Ordinance Standards

Future development in the Plan Area is assumed to be primarily industrial, commercial, and retail, with some additional residential in designated portions of the Plan Area. Noise sources associated with these land uses include mechanical equipment, such as HVAC units, backup emergency generators, vehicular and human activity, parking lots, loading dock and delivery activities at commercial/industrial land uses. The plan is designed to buffer residentially designated areas with less intensive land uses (e.g., Business Park) such that new industrial uses would not be located within distances that could expose existing sensitive receptors to excessive stationary noise levels. However, exact types of development, locations, building footprints, and building orientations are yet unknown; therefore, it is possible that new stationary noise sources could result in excessive noise levels at sensitive receptors and exceed applicable City of Fresno standards. This impact would be **significant**.

This impact assesses the long-term exposure of existing sensitive receptors to increased non-transportation noise sources that could occur with development under the proposed plan. Transportation-generated noise is addressed separately below in Impact 4.12-3.

Future development in the Plan Area is assumed to be primarily industrial, commercial, and retail, with some additional residential in designated portions of the Plan Area. This analysis focuses on stationary sources, such as HVAC units, mechanical equipment such as generators and other industrial equipment, loading docks, and parking lots associated, and new transmission lines and substations.

Mechanical Equipment

Mechanical equipment could be a primary noise source associated with new industrial, commercial, and retail land uses. The noise sources could take the form of fans, pumps, air compressors, chillers, or cooling towers. Noise levels associated with HVAC units and diesel backup generators would be similar to noise levels associated with other mechanical equipment such as pumps, air compressors, and exhaust pipes. Thus, this analysis of mechanical equipment is representative of typical noise sources associated with commercial and industrial land uses.

Noise levels from HVAC equipment vary substantially depending on unit efficiency, size, and location, but generally range from 45 to 70 dB L_{eq} at a distance of 50 feet (EPA 1971). Assuming the higher, more conservative value of these reference noise levels, HVAC units located within 500 feet of noise-sensitive land uses could exceed the City's noise standard for daytime noise (i.e., 50 dBA L_{eq}). In addition, HVAC units located within 890 feet of noise-sensitive land uses could exceed the City's noise standard for nighttime noise (i.e., 45 dBA L_{eq}).

The nature and location of new development in the Plan Area is yet unknown, so specific locations of new HVAC units on future structures are also unknown. However, because of the amount of proposed new construction, and the potential proximity of housing to nonresidential uses, it is possible that HVAC units located on new structures within the industrial, office, and business park land uses could result in substantial noise exposure to existing or future sensitive land uses.

Backup generators may be used to supply necessary power requirements to vital systems within facilities constructed on commercial/industrial and mixed-use land uses. Reference noise-level measurements of emergency generators with rated power outputs from 50 to 125 kilowatts result in noise levels ranging from 61 to 73 dB L_{eq} and 63–84 dB L_{max} at a distance of 45 feet (EPA 1971; FHWA 2006). Assuming the higher, more conservative value of these reference

noise levels, emergency electrical generators located within 650 feet of noise-sensitive land uses could exceed the City's noise standard for daytime noise (i.e., 50 dBA L_{eq}). In addition, generators located within 1,300 feet of noise-sensitive land uses could exceed the City's noise standard for nighttime noise (i.e., 45 dBA L_{eq}).

Proposed development includes various land uses that could result in the placement of new mechanical equipment close (i.e., within 1,150 feet) to existing sensitive land uses. Although specific building footprint locations, building orientations, and specific location of stationary equipment are not known at this time, considering the density of proposed development, it is possible that new emergency electrical generators could be located within distances that could expose existing sensitive receptors to noise levels that exceed the City of Fresno daytime and nighttime noise standards for sensitive receptors.

Parking Lot Activities

Development under the proposed plan would result in new parking facilities to serve new industrial, commercial, and business-oriented land uses. Noise levels from parking lots can vary depending on the number of vehicles at any given time in the parking lot, the speed at which vehicles are traveling, and the types of vehicles present. Typical noise sources include car engines, car doors, car alarms, honking, and the like. Based on available reference noise levels, typical noise levels from parking lot activities could reach approximately 60 L_{eq} at 15 feet from the noise source (i.e., car door slamming). Therefore, based on this information and the reference noise level for a parking lot, noise from new parking facilities could exceed the City of Fresno daytime noise standard (i.e., 50 dBA L_{eq}) within 50 feet and the nighttime standard (i.e., 45 dBA L_{eq}) within 85 feet of existing sensitive receptors. Although this noise source is unlikely to result in substantial increases in noise, depending on the location and size of new development, there remains a potential to result in nighttime noise standard exceedances.

Loading Dock and Delivery Activity

Noise sources associated with loading dock and delivery activities include trucks idling, on-site truck circulation, trailer-mounted refrigeration units, pallets dropping, and the operation of forklifts. These activities could occur primarily within industrial, commercial, and mixed-use land uses. Some developments constructed under the proposed plan may include loading docks or designated areas for sending and receiving shipments by trucks. Noise sources from truck activity associated with delivery areas are usually short-term and can include activities such as engine rewing, and the release of air brakes on heavy trucks. Based on measurements taken at an existing warehouse distribution center, loading/unloading activities involving trucks could result in noise levels of 59.3 dBA L_{eq} and 79.6 dBA L_{max} at 100 feet from the source (see Appendix C for measurement data). Applying standard attenuation rates for these activities, loading docks could exceed the City of Fresno's daytime noise standard (i.e., 50 dBA L_{eq}) within 300 feet and the nighttime standard (i.e., 45 dBA L_{eq}) within 522 feet of sensitive receptors.

Transmission Corona Noise and Electric Substations

Audible noise from power lines is primarily attributable to point source corona effect (crackling and hissing hum-like sound) resulting from small variability in the conductor materials. Such noise is common and not harmful and routinely occurs when air is ionized around a gap, a burr (raised area), a small irregularity, or some non-insulated component during the conductance of electricity through power lines. Corona is also produced when power lines break down over time and their fastener components loosen, resulting in an air gap. Corona noise is most prominent during periods of rain, fog, or high humidity.

In addition to new transmission lines, development within the Plan Area may require additional PG&E electrical substations. At substation sites, the primary sources of operating noise would be the on-site transformers. Noise from transformers is similar to coronal noise from power lines (i.e., a slight humming sound) and thus a reference noise level for a 230-kV transmission line of 49.6 dBA at 18 feet is used in this analysis (PG&E 2010). Based on this reference noise level, City of Fresno nighttime noise standards of 45 dBA L_{eq} would be exceeded if a new transmission line or substation were located within 31 feet of a sensitive land use. The California Public Utilities Commission requires a minimum vertical clearance of 12 feet from structures for transmission lines from 22.5 to 300 kV (General Order 95). Thus, new transmission lines could potentially result in noise levels that exceed City of Fresno standards at sensitive receptors, depending on final design and location.

Conclusion

The land use development that could occur within the Plan Area would include various new stationary sources, as described above. Specific locations of new HVAC units, mechanical equipment, loading docks/industrial equipment, or electricity transmission facilities associated with new commercial structures are not known at this time. Thus, because of the amount of proposed new construction and mix of various land uses, it is possible that new stationary sources associated with new development could result in noise exposure of sensitive land uses to levels that exceed City of Fresno daytime and nighttime noise limits. This impact would be **significant**.

Mitigation Measures

Mitigation Measure 4.12-2a: Conduct Acoustic Study

In accordance with General Plan Policy NS-1-i, all new development applications that would include new stationary or mobile noise sources, significant remodels requiring discretionary review, and redevelopment adjacent to noise-sensitive land uses, will be required to prepare an acoustical analysis that evaluates potential noise impacts and recommends noise abatement mitigation to ensure compliance with the City's General Plan and Noise Ordinance. The City will require acoustical analyses for the purpose of identifying project-specific noise effects and required noise abatement measures.

Mitigation Measure 4.12-2b: Require Consistency with Noise Code

For future noise-generating developments proposed in the Plan Area, the City will require findings of consistency with SCSP noise policies and development standards; Fresno General Plan goals, objectives, policies, and implementation actions; Zoning Ordinance; Municipal Code; Building Code; and other local, federal, state, and regional regulations applicable to noise impacts as conditions of project approval and entitlement.

Mitigation Measure 4.12-2c: Require Noise-Reducing Design Elements

New non-residential projects adjacent to residential uses will be required to incorporate noise-reducing features (e.g., siting and orienting noise-intensive elements such as loading docks and HVAC units as far possible from sensitive receptors, use of soundproofing materials, noise barriers) into the project design to minimize impacts to nearby residential uses and other noise-sensitive land uses.

Mitigation Measure 4.12-2d: Minimize Stationary Noise near Sensitive Uses

New buildings proposed adjacent to existing and/or planned residential or other noise-sensitive land uses will be required to site and operate stationary equipment in a manner that limits adverse noise impacts and complies with adopted Municipal Code noise standards.

Mitigation Measure 4.12-2e: Minimize Parking Lot Noise near Sensitive Uses

Parking areas for new or redeveloped non-residential developments near sensitive receptors shall be buffered and shielded by noise-attenuating features and structures such as solid walls, solid fences, and/or adequate landscaping.

Significance after Mitigation

The implementation of Mitigation Measures 4.12-2a through 4.12-2e would reduce noise exposure from existing and new stationary sources; however, because the specific noise sources and available noise reducing technology/design features for each cannot be determined at this time, it is possible that even with all the available noise reducing design considerations that noise standards be exceeded. This impact would be **significant and unavoidable**.

Impact 4.12-3: Substantial Permanent Traffic Noise Levels That Exceed City Traffic Noise Standards

Development of the Plan Area could result in new and expanded roadways to serve future development as well as increases in long-term truck and passenger vehicle traffic and associated noise increases on existing affected roadways. Existing and future development within and near the Plan Area could be exposed to substantial increases in traffic noise levels that exceed City residential noise standards of 65 dBA L_{dn} /CNEL. While the focus of the SCSP is industrial development, it is possible that future development could result in the construction of sensitive uses (e.g., houses, schools, churches) near existing or future roads that generate substantial traffic noise. In addition, while the potential is limited, new development of sensitive uses could occur near the existing UPRR and BNSF tracks, exposing these new receptors to noise levels that exceed applicable noise standards. This impact would be **significant**.

Future development would generate additional vehicle and truck traffic on new and existing roadways in the Plan Area. Increases in traffic could expose sensitive receptors to increased traffic noise levels that exceed maximum allowable transportation noise levels established in the City of Fresno General Plan and Noise Ordinance.

Traffic noise modeling was conducted using project-specific average daily trip volumes for affected roadways. Reported traffic noise levels in this discussion represent additional traffic that would occur with assumed development in the Plan Area. Table 4.12-12 summarizes roadway segments that, under Plan Area development assumptions, would generate exterior noise levels that exceed 65 dBA L_{dn} /CNEL. Note that, per City policies (see Table 4.12-7), this standard only applies to sensitive land uses (e.g., residences, lodging, hospitals, churches) and several modeled segments neither contain such uses, nor would they be allowed under proposed land use designations. Impacts on sensitive receptors, specifically, are discussed separately.

Table 4.12-12 Summary of Traffic Noise Levels from Existing to Existing Plus Project Conditions

Roadway Segment			L_{dn} /CNEL (dB) at 100 feet from Roadway Centerline		Net Change (dB)
Road	From	To	Existing Conditions	Existing Plus Project Conditions	
Jenson Avenue Bypass	Cherry Avenue	East Avenue	74.6	76.5	+1.9
Jenson Avenue Bypass	Sunset Avenue	Cedar Avenue	75.0	77.0	+1.9
North Avenue	Hayston Avenue	Maple Avenue	67.3	68.2	+0.9
Central Avenue	Cherry Avenue	East Avenue	69.4	72.7	+3.3
American Avenue	Orange Avenue	Cedar Avenue	65.9	65.9	+0.0
Cherry Avenue	Church Avenue	Byrd Avenue	69.6	70.3	+0.7
Cherry Avenue	Central Avenue	North Avenue	68.1	69.4	+1.3
East Avenue	Central Avenue	North Avenue	62.3	69.5	+7.2
Cedar Avenue	Central Avenue	Parkway Drive	67.4	69.2	+1.7
Maple Avenue	North Avenue	Annadale Avenue	62.3	64.4	+2.2
Willow Avenue	Jensen Parkway	Annadale Avenue	67.4	71.0	+3.6
Elm Avenue	Central Avenue	North Avenue	69.8	70.3	+0.5

Notes: CNEL = Community Noise Equivalent Level; dB = A-weighted decibels; L_{dn} = day-night average noise level; "Project" means assumed levels of Plan Area development through 2040.

The net change may not be the exact difference between existing and existing plus project conditions because of rounding.

Source: Data modeled by Ascent Environmental in 2023.

Existing Sensitive Receptors

Traffic noise modeling was conducted for existing and existing plus project (i.e., existing plus assumed levels of development in the Plan Area through 2040) traffic conditions. The City of Fresno has maximum allowable exterior and interior transportation-noise limits for various land uses. Noise increases would occur on existing and newly

expanded roads that could affect new and existing receptors. Impacts were identified where maximum allowable residential noise standards would be exceeded as a result of traffic noise increases. Existing residential land uses are located within 100 feet of some of the identified road segments that would experience substantial increases in noise. Thus, noise levels on some of the identified roadway segments would increase from below the residential maximum exterior noise limit to above it. All new/extended roads except Maple Avenue would result in exceedances of 65 dBA $L_{dn}/CNEL$ at 100 feet from the roads centerline (Table 4.12-12).

Future Sensitive Receptors

As development occurs over time, new sensitive land uses could be placed in proximity to new or existing roads that could be exposed to noise levels that exceed City of Fresno allowable noise limits for various land uses. Existing noise levels on project-affected roadways are shown above in Table 4.12-12 and Appendix C. Future projected traffic noise levels were modeled based on traffic increases that would result from buildout of the proposed plan, shown above in Table 4.12-12.

New land uses in the Plan Area would primarily be those allowed under the Heavy Industrial, Light Industrial, Business Park, and Regional Business Park land use designations. The SCSP designates existing residential uses under Low-Medium-Low, and Medium-Density Residential, as appropriate, but no new residential land use designations are proposed (with the exception of a few scattered parcels to eliminate the potential for "spot" zoning; for example, a vacant parcel between two residences). It is possible, however, that existing residential areas could be redeveloped with new residential uses, and other sensitive uses (e.g., places of worship, day care centers) would be allowed in areas designated as Business Park. Although proximity to specific roadway segments and associated noise levels are not known at this time, based on the noise modeling conducted, new sensitive receptors could be exposed to noise levels of up to 77.0 dBA $L_{dn}/CNEL$. These are the highest modeled noise levels to which a receptor could be exposed (Appendix C). Modeled increases in noise would be as much as 7.2 dBA on a roadway segment that does not support existing or future sensitive receptors, and as much as 3.6 dBA on a roadway segment that does have such receptors). These noise increases would be clearly noticeable, resulting in a substantial increase in long-term noise. Thus, sensitive receptors could be exposed to noise levels that exceed exterior noise limits. Exterior noise levels of above 65 dBA $L_{dn}/CNEL$ could, in turn, result in exceedances of interior noise standards of 45 dBA.

Conclusion

Although sensitive land uses are less prominent and scattered throughout the Plan Area, modeling suggests that traffic generated from projected development could result in noise levels that exceed City of Fresno standards for such uses. Depending on the specific location of future land development and specific land uses located close to high-volume roads, exterior and interior noise limits could be exceeded at existing and future sensitive land uses. This impact would be **significant**.

Mitigation Measures

Implement Mitigation Measure 4.12-2b.

Mitigation Measure 4.12-3a Reduce Transportation Noise Exposure

All new transportation noise sources shall be evaluated for consistency with adopted transportation noise exposure levels (Table 15-2506-B of the City of Fresno Municipal Code).

Mitigation Measure 4.12-3b: Reduce Noise Levels Associated with New, Expanded, or Extended Roads

Before finalizing roadway design for any new or expanded roadway, along which sensitive land uses currently exist or could be allowed in the future based on proposed land use designation, a design-level acoustical study shall be prepared to identify specific noise-abating roadway design considerations, which shall be incorporated into final road design and approved by the City of Fresno. Design considerations may include, but are not limited to, minimum setback distances, the use of quiet pavement materials, sound barriers, and building/window retrofits for existing structures.

Significance after Mitigation

New sensitive land uses would be designed to meet interior noise standards thus minimizing noise exposure during the more sensitive times of the day. However, the addition of transportation noise generated by future development under the plan could result in exceedance of the 65 dBA L_{dn} /CNEL transportation noise standard for sensitive uses on many roads. Exterior noise levels at existing noise-sensitive residences could be remediated by implementing such actions as building sound walls, retrofitting buildings (including windows), and relocating sensitive receptors, but in the case of the proposed plan, these measures may not be feasible in all areas. For example, concrete cinderblock noise barriers would be less effective with gaps (e.g., for residential driveway access). Also, property owners of existing residential uses affected by increased traffic noise may not agree to the installation of sound walls on their properties. In addition, the traffic noise reduction from the use of "quiet" pavement would diminish over time because of normal wear and tear from traffic and weather. This impact would be **significant and unavoidable**.

Impact 4.12-4: Construction or Operational Vibration Levels That Exceed FTA's Recommended Standards with Respect to the Prevention of Structural Damage and Human Response

Potential vibration impacts could occur when project-related construction activities are close (i.e., within 550 feet) to sensitive land uses. Because the nature and locations of future development in the Plan Area are unknown at this time, the vibration impacts of pile-driving and other vibration-causing activities are similarly unknown. Given the emphasis on industrial development, however, it is possible that pile-driving and other vibration-inducing construction activities could occur near sensitive land uses. Specifically, the potential exists for pile driving to occur within 100 feet of a structure, exceeding FTA-recommended levels for structural damage (i.e., 0.2 in/sec PPV), and within 550 feet of a sensitive land use, exceeding FTA-recommended levels for vibration annoyance (i.e., 72 VdB). In addition, while most of the land adjacent to existing railroad tracks is designated Heavy Industrial under the plan, there are three areas adjacent to railroad tracks with Business Park and Residential land use designations. If sensitive uses were to be constructed in these areas within 350 feet of the railroad tracks, new sensitive receptors could be exposed to levels of vibration that exceed FTA-recommended levels of 65 VdB for infrequent events, such as passing trains. This impact would be **significant**.

Construction

Construction activities generate varying degrees of temporary ground vibration, depending on the specific construction equipment used and activities involved. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with distance from the source. The effects of ground vibration may be imperceptible at the lowest levels, result in low rumbling sounds and detectable vibrations at moderate levels, and, at high levels, can cause annoyance and sleep disturbance.

When considering new construction, pile driving generates the highest vibration levels and is, therefore, of greatest concern when evaluating construction-related vibration impacts. According to FTA, vibration levels associated with pile driving are 1.518 in/sec PPV at 25 feet. Based on FTA's recommended procedure for applying a propagation adjustment to these reference levels, vibration levels from pile driving could exceed the threshold of significance of 0.2 in/sec PPV for structural damage within 100 feet of pile-driving activities (refer to Appendix C for modeling details).

Vibration levels can also result in interference or annoyance impacts for residences or other land uses where people sleep, such as hotels and hospitals. According to FTA, vibration levels associated with pile driving are 112 VdB at 25 feet (FTA 2018). FTA vibration annoyance potential criteria depend on the frequency of the vibration events. When vibration events occur more than 70 times per day, as would likely be the case with pile driving, they are considered "frequent events." Frequent events in excess of 72 VdB are considered to result in a significant vibration impact. Based on FTA's recommended procedure for applying propagation adjustments to these reference levels, vibration levels from pile driving could exceed threshold of significance for "frequent events" within 550 feet of a sensitive land use (refer to Appendix C for modeling details).

Existing residential and other sensitive land uses (e.g., places of worship) are located within and in proximity to the Plan Area and could be exposed to vibration activities associated with new construction if they were to occur near these uses. Potential vibration impacts could also occur at any future sensitive uses, if constructed in the Plan Area. It is unknown at this time where specific pile-driving activities would be required and to what extent they would occur. Therefore, it is possible that pile-driving and other vibration-inducing construction activities could occur near future sensitive land uses. Specifically, the potential exists for pile driving to occur within 100 feet of a structure, exceeding the threshold of significance for structural damage, and within 550 feet of a sensitive land use, exceeding thresholds of significance for vibration annoyance.

Operation

Operation of development resulting from implementation of development under the proposed plan would not result in any new or additional major sources of ground vibration, such as commercial railways, passenger rail transit lines, or major transit stations; therefore, the focus of this analysis is on the placement of new sensitive land uses or structures near the existing UPRR and BNSF tracks as well as new potential stationary and mobile vibration sources from industrial uses. Regarding vibration impacts on proposed development that could be located near the UPRR and/or BNSF tracks, human disturbance (rather than structural damage) is the primary concern. This is because all new development that could potentially be located close to existing rail would be constructed in accordance with all current building code requirements and new materials that would not be prone to damage from vibration levels associated with passing trains. In addition, depending on the specific land use at industrial sites, operational activities could result in vibration sources such as from heavy-duty trucks traveling on truck routes or from new stationary equipment. At this time, specific information regarding the locations of such sources and associated vibration levels cannot be determined, however, depending on the daily activity, type of equipment, and proximity to existing or future sensitive land use, could result in excessive vibration levels that cause disturbance people.

Based on FTA guidance, sensitive land uses such as schools and places of worship located within 150 feet of the centerline of the UPRR and BNSF tracks could be exposed to levels that exceed 75 VdB. Land uses that are even more sensitive, such as laboratories and medical facilities located within 350 feet of the centerline of UPRR and BNSF tracks could be exposed to levels that exceed 65 VdB. While most of the land adjacent to existing railroad tracks is designated Heavy Industrial under the plan, there are three areas adjacent to railroad tracks with land designated as Business Park and Residential: a parcel near Sunset Avenue and E. Vine Avenue in the north-central portion of the Plan Area, parcels along E. Annadale Avenue in the eastern portion of the Plan Area, and parcels adjacent to the north-south trending tracks between S. Cedar and S. Maple Avenues, and between E. Malaga and E. American Avenues. If sensitive uses were to be constructed in these areas within 350 feet of the railroad tracks, new sensitive receptors could be exposed to levels of vibration that exceed FTA-recommended levels of 65 VdB for infrequent events, such as passing trains. Thus, while unlikely given the small amount of land designated as Business Park and Residential (versus Heavy Industrial) adjacent to the railroad tracks, new sensitive land uses located within 350 feet of the existing railroad tracks could be exposed to excessive vibration-noise levels.

Because operation of future projects could result in truck-generated vibration impacts on sensitive receptors and—though unlikely—sensitive uses could be developed within the small areas of land in the proposed Business Park and Residential land use designations adjacent to existing railroad tracks, operational vibration impacts would be **significant**.

Mitigation Measures

Mitigation Measure 4.12-4a: Reduce Construction Vibration

For construction activities that would require high-impact equipment (e.g., pile-driving, vibratory equipment, jackhammers) occurring within 100 feet of any building, to reduce the potential for structural damage, and within 550 feet of an occupied residence/building, to minimize disturbance from impact equipment, a vibration control plan shall be developed by the project applicant and construction contractors to be submitted to and approved by Fresno prior to approval of issuance of grading permits for development under the proposed plan. The plan shall be developed to achieve recommended vibration limits for structural damage and human disturbance, depending on site-specific structure type and vibration source, in accordance with Federal Transit Administration's Transit Noise and

Vibration Impact Assessment Manual methods and guidance, or more appropriate and available guidance at the time of development review. The plan may include measures such as, but not limited to, alternatives to impact pile driving and restrictions on pile driving activity.

Mitigation Measure 4.12-4b: Reduce Rail Operations Vibration Exposure

Construction of sensitive uses (e.g., residences, places of worship, day care centers) shall be prohibited within 350 feet of railroad tracks that are actively used or that could be used in the future. For sensitive uses proposed within 500 feet of an existing rail line, the City will require a project-level vibration assessment conducted by a qualified acoustical engineer or noise specialist in accordance to determine vibration levels at specific building locations and recommend feasible structural mitigation measures (e.g., isolation strip foundations, insulated windows and walls, sound walls or barriers, distance setbacks, or other construction or design measures), if necessary, to reduce vibration-noise to acceptable levels.

Mitigation Measure 4.12-4c: Reduce Truck Operation Vibration Exposure

The City shall formally designate truck routes in the Plan Area that avoid streets with existing and future sensitive receptors. The City shall implement physical improvements (e.g., relative to turning radii, lane widths, access management), signage, enforcement and other appropriate measures to limit truck traffic to approved routes.

Mitigation Measure 4.12-4d: Reduce Vibration Exposure from Operational Stationary Equipment

New industrial uses that would include vibration-generating stationary equipment within 550 feet of sensitive land uses shall be required to conduct site-specific noise and vibration assessments to determine potential vibration levels at sensitive receptors. If vibration levels are found to exceed FTA thresholds at any such receptor, the vibration-generating equipment shall be relocated such that the standard is achieved at the receptor, or the use shall be prohibited.

Significance after Mitigation

The implementation of Mitigation Measures 4.12-4a through 4.12-4d would reduce construction and operational vibration impacts to the extent feasible and require future development to be designed and located in a manner that minimizes vibration exposure to existing and new sensitive receptors. However, given that the details of future developments under the plan and potential truck routes are yet unknown, it is possible that such uses, even with mitigation, could disrupt sensitive receptors. This impact would be **significant and unavoidable**.

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4.13 POPULATION AND HOUSING

This section describes the existing population, employment, and housing supply in the Plan Area and the City of Fresno, and the plan's potential contributions to population growth, employment opportunities, and housing.

Comments pertaining to population and housing that were received in response to the notice of preparation relate to the potential changes to population distribution and concentration, and potential physical displacement. Additionally, comments express the need for additional housing outside of the Plan Area and the immediate surrounding communities.

4.13.1 Regulatory Setting

FEDERAL

No federal plans, policies, regulations, or laws applicable to population and housing apply to the proposed plan.

STATE

California Housing Element Law

The State Housing Element Law (Government Code Chapter 1143, Article 10.6, §§ 65580 and 65589) requires each city and county to adopt a general plan for future growth. This plan must include a housing element that identifies housing needs for all economic segments and provides opportunities for housing development to meet that need. The amount of housing that must be accounted for in a local housing element is determined through a process called the Regional Housing Needs Allocation (RHNA). In the RHNA process, the State gives each region a number representing the amount of housing needed, based on existing need and expected population growth.

At the State level, the California Department of Housing and Community Development (HCD) estimates the relative share of the State's anticipated population growth that would occur in each county in the State, based on CDF population projections and historic growth trends. Where there is a regional Council of Governments (COG), such as the Fresno Council of Governments (FCOG), the HCD provides the regional housing need to the council. The council then assigns a share of the regional housing need to each of its cities and counties. The process of assigning shares provides cities and counties the opportunity to comment on the proposed allocations. The HCD oversees the process to ensure that the COG distributes its share of the State's projected housing need.

Each city and county must update its general plan housing element on a regular basis pursuant to the requirements of Government Code Section 65580, *et seq.* Among other things, the housing element must incorporate policies and identify potential sites that would accommodate a city's share of the regional housing need. Before adopting an update to its housing element, a city or county must submit the draft to the HCD for review. The HCD will advise the local jurisdiction whether its housing element complies with the provisions of California Housing Element Law. The regional COGs are required to assign regional housing shares to the cities and counties within their region on a similar schedule. At the beginning of each cycle, the HCD provides population projections to the regional COGs, who then allocate shares to their cities and counties. The shares of the regional need are allocated before the end of the cycle so that the cities and counties can amend their housing elements by the deadline.

LOCAL

City of Fresno General Plan

The *City of Fresno General Plan: 2015-2023 Housing Element* contains the following policies related to population and housing that apply to the proposed plan. These policies are contained in Chapter 6, "Housing Plan" (City of Fresno 2017).

- ▶ **Policy H-1-a:** Implement land use policies and standards that allow for a range of residential densities and products that will enable households of all types and income levels the opportunity to find suitable ownership or rental housing.
- ▶ **Policy H-1-b:** Encourage development of residential uses in strategic proximity to employment, recreational facilities, schools, neighborhood commercial areas, and transportation routes.
- ▶ **Policy H-1-c:** Promote the development of affordable and special needs housing near transit and/or smart growth areas.
- ▶ **Policy H-2-a:** Facilitate housing development that is affordable to extremely low-, very low-, low-, and moderate-income households by providing technical assistance, regulatory incentives and concessions, and financial resources as funding permits.
- ▶ **Policy H-2-b:** Encourage both the private and public sectors to produce or assist in the production of housing, with particular emphasis on housing affordable to persons with disabilities, elderly, large families, female-headed households with children, and people experiencing homelessness.
- ▶ **Policy H-3-e:** Encourage the new construction of housing in the Central City, Inner City, and other targeted areas.
- ▶ **Policy H-5-g:** Create equitable and affordable housing options throughout the City that provide incentives to residents for finding housing in high opportunity areas and to developers for building affordable housing in high opportunity areas.
- ▶ **Policy H-5-h:** Consult with a wide range of groups throughout the community and consider environmental justice issues in the development and update of regulations, guidelines and other local programs.

Fresno Council of Governments

The Fresno Council of Governments (FCOG) is an association of local governments from cities within Fresno County. The member agencies include the Cities of Clovis, Coalinga, Firebaugh, Fowler, Fresno, Huron, Kerman, Kingsburg, Mendota, Orange Cove, Parlier, Reedley, San Joaquin, Sanger, and Selma and Fresno County. FCOG is mainly responsible for transportation planning and programming for the region. Furthermore, FCOG is responsible for and oversees the Regional Housing Needs Allocation, a process mandated by California state law that requires each city and county to have land zoned to accommodate a fair share of the regional housing need.

Adopted on July 28, 2022, the Fresno County RHNA Plan covers an 8-year planning period that is between June 30, 2023 and December 31, 2031 (FCOG 2023). The Plan includes housing at four different income levels, including very low, low, moderate, and above-moderate. As determined by Fresno COG, the City of Fresno's total housing unit capacity allocation is 36,866. This allocation translates into sites that could accommodate housing affordable to households that fall within the various income categories as follows:

- ▶ Very Low Income: 9,440 dwelling units
- ▶ Low Income: 5,884 dwelling units
- ▶ Moderate Income: 5,638 dwelling units
- ▶ Above-Moderate: 15,904 dwelling units

The City is not required to make development occur; however, the City must facilitate housing production by ensuring that land is available and that unnecessary development constraints have been removed. The City is

currently in the process of preparing the 2023-2031 Housing Element to show how it will accommodate the RHNA. The Public Review Draft Housing Element, published in July 2023, showed capacity for over 46,000 housing units and a surplus of capacity for all income levels. However, the Housing Element is still in the process of being updated and the capacity numbers are subject to change.

4.13.2 Environmental Setting

This section describes the existing population and housing conditions within the Plan Area, as well as in the City of Fresno as a whole, to provide context for the analysis of the proposed plan.

POPULATION

The city as a whole experienced moderate population growth from 1990 to 2000, increasing from 354,091 to 427,719 persons at an annual average increase of 2.1 percent (Table 4.13-1). During the decade from 2000 to 2010, the rate of growth slowed to an annual average of 1.6 percent, reaching a total population of 494,665 in 2010. The City's population growth rate has slowed since 2010 to a population of 542,829 in 2022.

Table 4.13-1 Population Growth - Fresno

Year	Population	Annual Average Change
1990	354,091	--
2000	427,719	2.1%
2010	494,665	1.6%
2015	522,016	1.1%
2017	530,523	0.8%
2019	540,180	0.9%
2020	543,451	0.6%
2022	542,829	-0.01%

Sources: DOF 2010a.

Currently, the Plan Area consists of a population of approximately 1,130 residents (City of Fresno 2024). The General Plan does not project any new housing in the Plan Area. Therefore, no population growth is expected for the Plan Area. However, the City is projected to add an estimated 176,000 to 216,000 new residents between 2022 to 2040 (City of Fresno 2024).

HOUSING STOCK

As described in Section 3.2.2, the Plan Area has only a small residential population, residing in approximately 400 housing units. Residential uses in the planning area are largely characterized by rural residential and small subdivisions. Housing stock in the city as a whole has increased from 171,288 housing units in 2010 to 186,993 units in 2022, an average annual increase of 0.8 percent. According to the DOF, the average number of persons residing in a dwelling unit in Fresno is 3.44¹.

¹ Calculated by Ascent Environmental in 2023.

Table 4.13-2 Housing Unit Growth – City of Fresno

Year	Housing Units	Annual Average Change
2000	149,053	--
2010	171,288	1.5%
2015	176,915	0.7%
2017	178,819	0.5%
2019	180,632	0.5%
2020	184,226	2.0%
2022	186,993	0.8%

Sources: DOF 2010b.

EMPLOYMENT

According to the California Employment Development Department, there are 224,000 people employed in the City of Fresno in 2023 (EDD 2023). As of September 2023, the unemployment rate in the City is 6.8 percent. The City is projected to add nearly 70,000 employees between 2022 and 2040 (Fresno 2024).

4.13.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

Impacts on population and housing were assessed by reviewing existing and anticipated population and housing projections provided by the City of Fresno (*Fresno General Plan*), DOF, and FCOG, and determining the project's consistency with these estimates and growth projections. Population and employment growth, as an economic or social change, is not considered a significant effect on the environment pursuant to State CEQA Guidelines Section 15131. Growth that is consistent with planning documents that have undergone environmental evaluation would generally result in similar potential for environmental impacts and the requisite demand for infrastructure would typically be incorporated into the plans of the respective utility providers. However, where growth could lead to physical environmental changes, the potential for environmental effects is evaluated.

THRESHOLDS OF SIGNIFICANCE

A population, employment, and housing impact would be significant if implementation of the proposed plan would:

- ▶ 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 homes, necessitating the construction of replacement housing elsewhere.

ISSUES NOT DISCUSSED FURTHER

All the issues identified in the thresholds of significance are addressed in the following analysis.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 4.13-1: Directly or Indirectly Induce Substantial Unplanned Population Growth and Housing Demand

The proposed plan has the potential to generate future development of approximately 12,021,744 square feet (sf) of non-residential uses (including industrial, retail, and office) and 91 new residential dwelling units. Resulting in a minimal population increase of approximately 313 net new persons by 2040. Consistent with the General Plan, the purpose of the proposed plan is to create jobs for the City. The City is projected to add nearly 70,000 employees between 2022 and 2040. Therefore, implementation of the proposed plan will create jobs for the City's projected growth in population and employment. The proposed plan would not induce substantial unplanned population growth, either directly (i.e., by proposed new unplanned homes) or indirectly (i.e., by the extension of roads or other infrastructure). Therefore, this impact would be **less than significant**.

The proposed plan has the potential to generate future development of approximately 12,021,744 square feet (sf) of non-residential uses (including industrial, retail, and office) and 91 new residential dwelling units. Based on the proposed 91 new dwelling units and the development capacity calculation of approximately 3.44 persons per dwelling unit, the proposed plan is estimated to result in the addition of approximately 313 new residents in the City of Fresno by 2040. Population growth by itself is not considered a significant environmental impact.

The purpose of the proposed plan is to create jobs for the City and accommodate industrial, commercial and office development, and a minimal amount of residential units. As discussed above, the City is projected to add nearly 70,000 employees between 2022 and 2040. Therefore, implementation of the proposed plan will create jobs for the City's projected growth in population and employment. Consistent with the General Plan, the proposed plan would promote balance of jobs and housing within the City. The additional growth of industrial, office, and retail and the minimal amount of residential units is consistent with citywide planning efforts. The proposed plan would not induce substantial unplanned population growth, either directly (i.e., by proposed new unplanned homes) or indirectly (i.e., by the extension of roads or other infrastructure). Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.13-2: Displace Substantial Numbers of People or Existing Housing

Although some existing housing may be demolished and/or renovated as a result of the proposed plan, the addition of 91 new dwelling units would offset the potential loss of existing housing. Additionally, the proposed plan does not involve any actions that would permanently displace substantial numbers of people. Therefore, implementing the proposed plan would not displace substantial numbers of people or housing. As a result, there would be no new significant effect, and the impact would not be more severe than the impact identified in the General Plan EIR. This impact would be **less than significant**.

The proposed plan focuses new development primarily on vacant and/or existing light and heavy industrial sites and would not result in displacements of residents or the loss of existing dwelling units. New development in the Plan Area could result in the loss of a limited number of dwelling units as future sites are redeveloped to a more efficient mixed use or residential project. However, any loss of existing units that may occur as a result of future development is not expected to be significant. Overall, implementation of the proposed plan includes approximately 91 additional residential units (an approximate increase of 313 residents) in the Plan Area, primarily complementary in nature to existing single family residential homes currently existing in the Plan Area. Overall, implementation of the proposed plan, including potential development/redevelopment of areas in the Plan Area, would not displace substantial numbers of existing housing or people. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

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4.14 PUBLIC SERVICES AND RECREATION

This section provides an overview of existing public services and recreation in the City of Fresno and evaluates the potential for implementation of the proposed plan to affect availability, service level, and/or capacity of public services, including fire protection services, law enforcement services, public schools, and parks and recreation, and, if such an effect is determined to occur, whether new or expanded facilities would be required that could result in a potentially significant impact to the environment.

Comments received in response to the NOP that pertain to public services and recreation suggest evaluation of greenspace availability, particularly for children. Greenspace, which provides recreational value, is evaluated below in the discussion of Impact 4.14-4 as part of the overall discussion related to recreation.

4.14.1 Regulatory Setting

FEDERAL

No federal plans, policies, regulations, or laws are applicable to the provision of public services for the proposed plan.

STATE

California Fire Code

The 2016 California Fire Code, which incorporates by adoption the 2015 International Fire Code, contains regulations related 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 California Fire Code contains specialized technical regulations related to fire and life safety.

California Health and Safety Code

State fire regulations are set forth in Section 13000 et seq. of the California Health and Safety Code, which includes regulations for building standards (as set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers, smoke alarms, high-rise building and childcare facility standards, and fire-suppression training.

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.

Leroy F. Greene School Facilities Act of 1998 (Senate Bill 50)

The Leroy F. Greene School Facilities Act of 1998, also known as Senate Bill (SB) 50 Proposition 1A (Chapter 407, Statutes of 1998), governs a school district’s authority to levy school impact fees. This comprehensive legislation 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 based on justification studies, for the purposes of funding construction of school facilities, subject to established limits.

LOCAL

City of Fresno General Plan

The City of Fresno General Plan contains the following objectives and policies that are relevant to public services and recreation:

Public Utilities and Services Element

- ▶ **Objective PU-1:** Provide the level of law enforcement and crime prevention services necessary to maintain a safe, secure, and stable urban living environment through a Police Department that is dedicated to providing professional, ethical, efficient and innovative service with integrity, consistency and pride.
 - **Policy PU-1-c: Safety Considerations in Development Approval.** Continue to identify and apply appropriate safety, design and operational measures as conditions of development approval, including, but not limited to, street access control measures, lighting and visibility of access points and common areas, functional and secure on-site recreational and open space improvements within residential developments, and use of State licensed, uniformed security.
 - **Policy PU-1-d: New Police Station Locations.** Consideration will be given to collocating new police station facilities with other public property including, but not limited to, schools, parks, playgrounds, and community centers to create a synergy of participation in the neighborhood with the potential result of less vandalism and promotion of a better sense of security for the citizens using these facilities.
 - **Policy PU-1-g: Plan for Optimum Service.** Create and adopt a program to provide targeted police services and establish long-term steps for attaining and maintaining the optimum levels of service - 1.5 unrestricted officers per 1,000 residents.
- ▶ **Objective PU-2:** Ensure that the Fire Department's staffing and equipment resources are sufficient to meet all fire and emergency service level objectives and are provided in an efficient and cost-effective manner.
 - **Policy PU-2-b: Maintain Ability.** Strive to continually maintain the Fire Department's ability to provide staffing and equipment resources to effectively prevent and mitigate emergencies in existing and new high-rise buildings and in other high-density residential and commercial development throughout the city.
 - **Policy PU-2-d: Station Siting.** Use the General Plan, community plans, Specific Plans, neighborhood plans, and Concept Plans, the City's Geographic Information Systems (GIS) database, and a fire station location program to achieve optimum siting of future fire stations.
 - **Policy PU-2-e: Service Standards.** Strive to achieve a community wide risk management plan that includes the following service level objectives 90 percent of the time:
 - First Unit on Scene – First fire unit arriving with minimum of three firefighters within 5 minutes and 20 seconds from the time the unit was alerted to the emergency incident.
 - Effective Response Force – Provide sufficient number of firefighters on the scene of an emergency within 9 minutes and 20 seconds from the time of unit alert to arrival. The effective response force is measured as 15 firefighters for low risk fire incidents and 21 firefighters for high risk fire incidents and is the number of personnel necessary to complete specific tasks required to contain and control fire minimizing loss of life and property.
 - **Policy PU-2-f: Plan for Optimum Service.** Create and adopt a program to provide appropriate number of employees to effectively respond to call volume and type; and establish a long-term plan to attain a level of service of 0.81 firefighters per 1,000 residents.

- ▶ **Objective PU-3:** Enhance the level of fire protection to meet the increasing demand for services from an increasing population.
 - **Policy PU-3-d: Review Development Applications.** Continue Fire Department review of development applications, provide comments and recommend conditions of approval that will ensure adequate on-site and off-site fire protection systems and features are provided.
 - **Policy PU-3-f: Adequate Infrastructure.** Continue to pursue the provision of adequate water supplies, hydrants, and appropriate property access to allow for adequate fire suppression throughout the City.
 - **Policy PU-3-h: Annexations.** Develop annexation strategies to include the appropriate rights-of-way and easements necessary to provide cost effective emergency services.
 - **Policy PU-3-i: New Fire Station Locations.** Consideration will be given to co-locating new Fire Station facilities with other public property including, but not limited to, police substations, schools, parks, playgrounds, and community centers to create a synergy of participation in the neighborhood with the potential result of less vandalism and promotion of a better sense of security for the citizens using these facilities.

Urban Form, Land Use, and Design Element

- ▶ **Objective D-4:** Preserve and strengthen Fresno’s overall image through design review and create a safe, walkable, and attractive urban environment for the current and future generations of residents.
 - **Policy D-4-d: Design for Safety.** Continue to involve the City’s Police Department in the development review process to ensure new buildings are designed with security and safety in mind.

Fresno Parks Master Plan

The Fresno Parks Master Plan was adopted in December 2017 (City of Fresno 2017). The plan articulates a vision for improving Fresno’s park and open space system based on robust community engagement and thorough analysis. The Parks Master Plan is an update to the 1989 Master Plan for Parks and Recreation, which was a component of the 1984 General Plan Open Space and Recreation Element. The 2017 plan accounts for changes that have occurred since the 1984 General Plan was drafted and reflects a vision for improving the City’s park and recreation system so that it better serves current and future needs of the people of Fresno.

City of Fresno Impact Fees

The City includes a development impact fee schedule to fund public services and facilities, including but not limited to fees to fund police and fire, library, and recreation services. The fees are established in Chapter 12, “Impact Fees, Historic Resources, and Other Miscellaneous Topics,” of the Fresno Municipal Code. Article 4.6 – Payment of Development Fees and Charges, notes that the development of real property within the city creates demands on existing municipal facilities, improvements, and services. Various development fees and charges are imposed upon new development to mitigate such demands. Payment of those fees and charges is required at various stages of the development process, including the amendment of applicable land use plans, rezoning, tentative tract map, tentative parcel map, Urban Growth Management permit, the issuance of special permits, building permits, certificates of occupancy, and similar entitlements. To facilitate the orderly collection and administration of such development fees and charges, Article 4.6 sets forth the terms and conditions upon which the payment thereof may be deferred and paid simultaneously upon the issuance of a certificate of occupancy for the buildings or structures within such development.

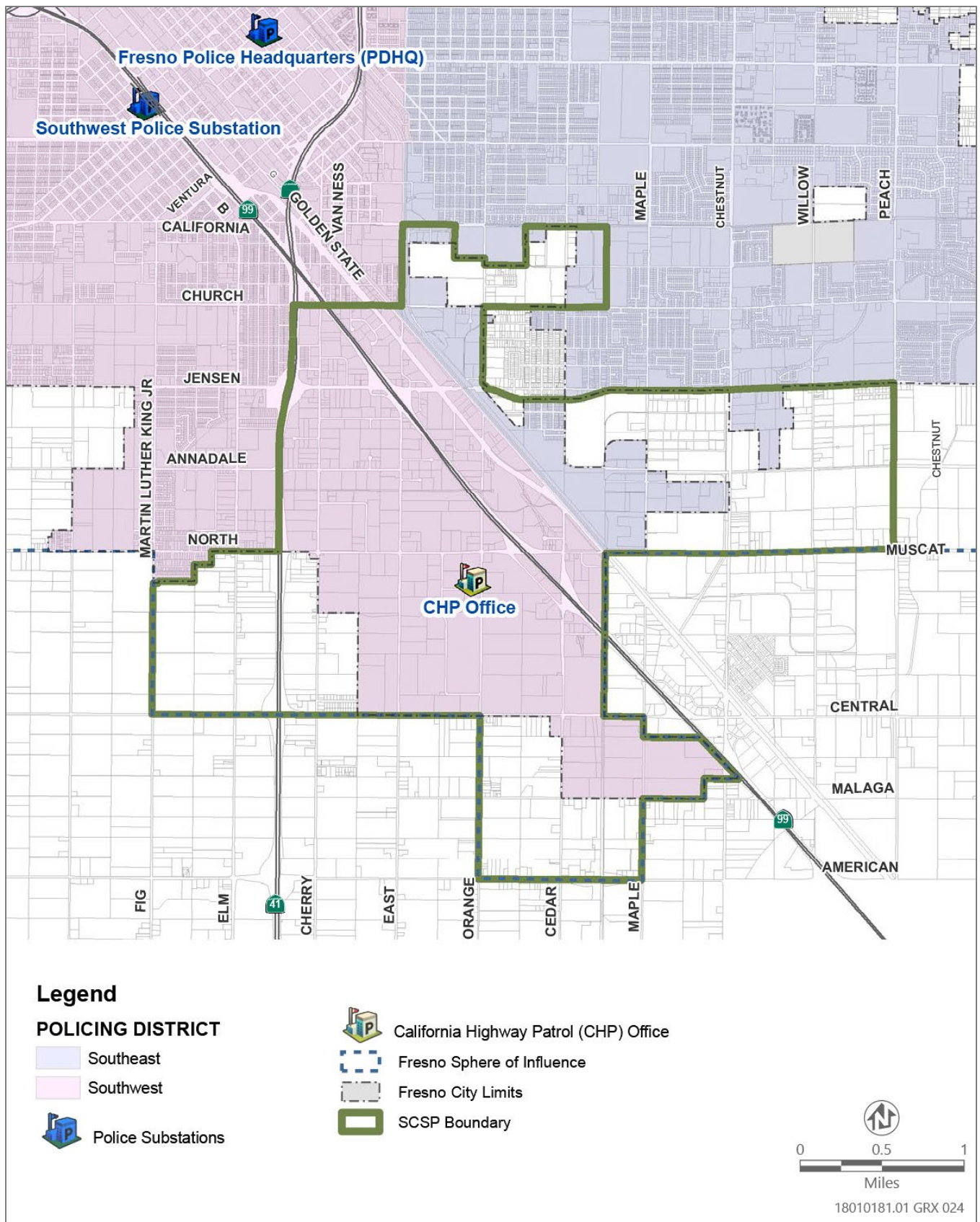
Article 4.8 (Police Facilities Fee) notes that to implement the goals and objectives of the City’s General Plan, and to mitigate the impacts caused by future development in the city, certain police facilities must be constructed. The City Council has determined that a Police Facilities Fee is needed to finance these public facilities and to pay for each development’s fair share of the construction and acquisition costs of these improvements.

Article 4.9 (Fire Facilities Fee) notes that to implement the goals and objectives of the City’s General Plan, and to mitigate the impacts caused by future development in the city, certain fire department facilities must be constructed. The City Council has determined that a Fire Facilities Fee is needed to finance these public facilities and to pay for each development’s fair share of the construction and acquisition costs of these improvements.

4.14.2 Environmental Setting

LAW ENFORCEMENT

The Fresno Police Department is responsible for enforcement of state and City laws, investigation of crimes, apprehension of criminals, reducing traffic collisions, maintenance of ongoing crime prevention programs, and building ties with the community and other local law enforcement agencies. The Police Department is divided into four divisions—the patrol division, the investigation division, the administrative division, and the support division. The Chief of Police supervises all divisions. As of 2021, there were 776 sworn officers and 308 professional staff (Fresno Police Department 2021). The Police Department Patrol Division is divided into five policing districts, two of which serve the Plan Area: Southwest Policing District and Southeast Policing District. The Police Department operates five police stations and one headquarters office, none of which are located in the Plan Area. The nearest Police Station to the Plan Area is in Southwest Fresno, located at 1211 Fresno Street, two miles north of the northern edge of the Plan Area near Downtown Fresno, and the other station is approximately 3.7 miles northeast of the Plan Area boundary at 224 S. Argyle Avenue. According to the Fresno Police Department, the existing law enforcement staffing and infrastructure are not meeting the current service load (Gross, pers. comm., 2023). To accommodate projected growth, the City is planning to develop a new centralized police headquarters and communications center building, two new substations, and a new 911 emergency operations dispatch center by 2035 (EPS 2022). Figure 4.14-1 depicts the existing law enforcement facilities within and surrounding the Plan Area.



Source: 2023 City of Fresno South Central Specific Plan, adapted by Ascent in 2023.

Figure 4.14-1 Law Enforcement

FIRE PROTECTION

The Fresno City Fire Department (FCFD) provides fire prevention, suppression and investigation services, airport fire and rescue, urban search and rescue, response to medical emergencies, and response to hazardous materials incidents. Resources attributed to FCFD include 19 engine companies, five truck companies, and four squads. Three fire stations are designated for specialty teams addressing hazardous materials, water rescue, and urban search and rescue services. In 2022, firefighter staff included 103 on-duty personnel (FCFD 2023a). There are two fire stations located within the Plan Area: City of Fresno Station 7, located at 2571 South Cherry Avenue, and Fresno County Fire Station 87, located at 4706 E Drummond Avenue just southeast of the intersection of Jensen and Maple Avenues. Fire Station 8 is located outside the Plan Area at 1428 S. Cedar Avenue but provides services to its northern portion. Station 7 houses a single-engine company, an ICS/FIRESCOPE type 6 patrol, and a water tender (FCFD 2023b); Station 87 houses two-engine company, rescue boat, large rescue unit; and Station 8 houses an engine company and is home of the FCFD Communications Team.

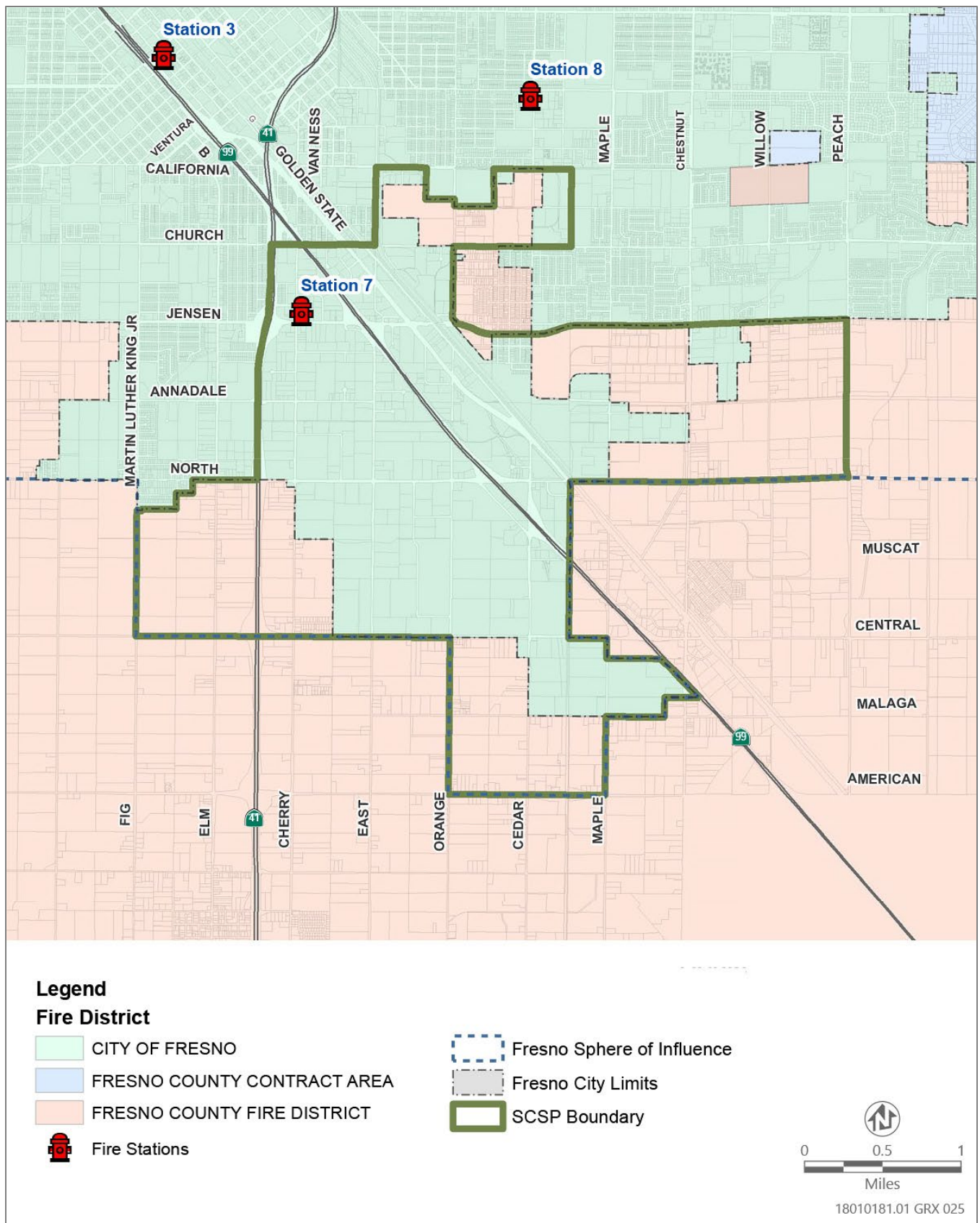
According to FCFD, several factors are used to determine the need for new fire facilities. Based on communications with FCFD, the southern industrial area of the city currently experiences reduced response reliability. The City has considered development of a new fire station near North Avenue and Orange Avenue; however, project-level planning has not begun (Semonious, pers. comm., 2023). Figure 4.14-2 depicts the existing fire protection facilities within and surrounding the Plan Area.

SCHOOLS

The Plan Area includes portions of the Fresno Unified School District (FUSD), Washington Unified School District (WUSD), Orange Center School District, Sanger Unified School District, and Fowler Unified School District. There is one elementary school in the Plan Area. Orange Center Elementary School is located on the east side of Cherry Avenue, between Central and North Avenues. Figure 4.14-3 shows the school district boundaries within the Plan Area.

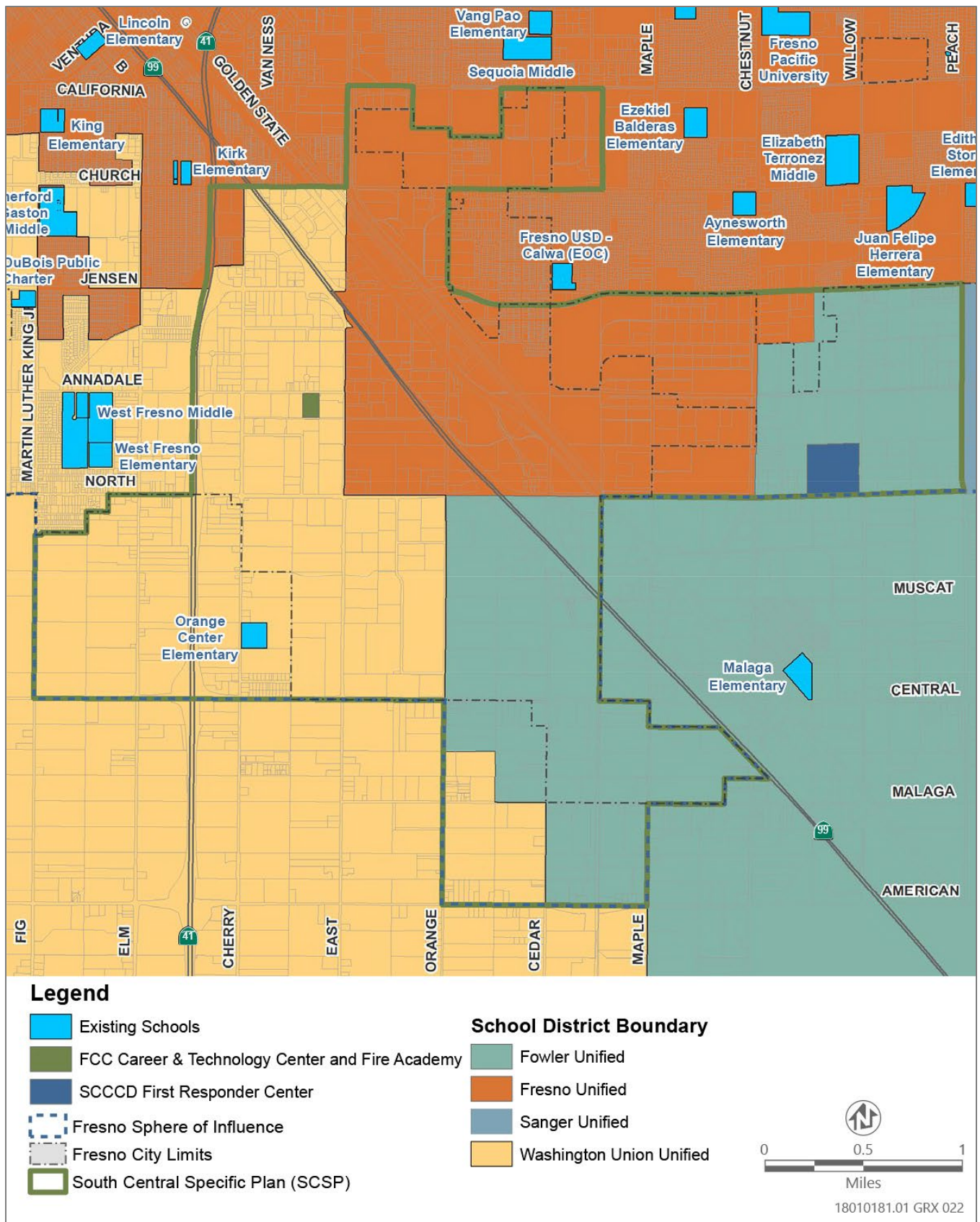
RECREATION

There are several types of parks in the city of Fresno, including pocket parks, neighborhood parks, community parks, regional parks, special-use parks, greenbelts/trails, and open space/natural areas. To ensure that park and open space recreation needs of Fresno residents are being met, the General Plan identifies level of service goals by park type: 3 acres per 1,000 residents for pocket parks, neighborhood parks, and community parks and 2 acres per 1,000 residents for regional parks, open space/natural areas, and special use parks. Currently, there are no parks within the Plan Area. Outside the Plan Area there are four parks within 0.5 mile of the Plan Area. The closest park is Almy Park, located at 255 West Almy Avenue, in Fresno, southeast of the Fig Avenue/North Avenue intersection. This approximately half-acre neighborhood park is consistent with the Fresno Parks Master Plan. Other parks located near but outside the Plan Area include Hinton Park (2385 South Fairview Avenue, Fresno), Regional Sports Complex (1707 W Jesen Avenue, Fresno), and Mary Ella Brown Park (1350 East Annadale Avenue, Fresno). As shown in Figure 3-14 approximately three acres of planned park space is identified near the neighborhoods of Roy and Almy. The rest of the open space is limited to existing and planned ponding basins dispersed through the Plan Area and are inaccessible to the public. Figure 4.14-4 shows the existing and planned ponding basin locations within the Plan Area.



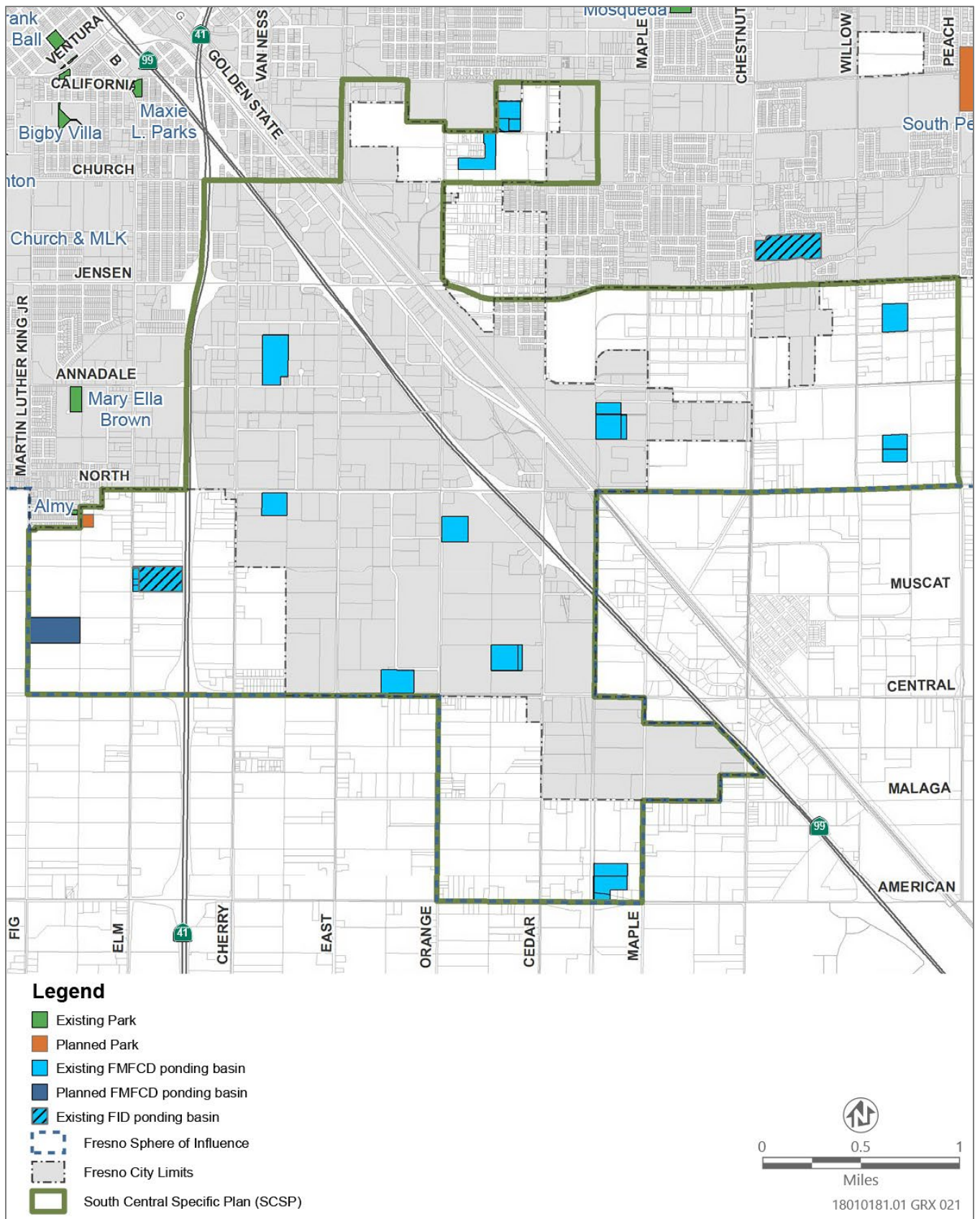
Source: 2023 City of Fresno South Central Specific Plan, adapted by Ascent in 2023.

Figure 4.14-2 Fire Protection



Source: 2023 City of Fresno South Central Specific Plan, adapted by Ascent in 2023.

Figure 4.14-3 Existing Schools and School District Boundaries



Source: 2023 City of Fresno South Central Specific Plan, adapted by Ascent in 2023.

Figure 4.14-4 Existing and Planned Parks and Ponding Basins

4.14.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

Evaluation of potential public service and recreation impacts was based on a review of documents pertaining to the SCSP, including the City's General Plan, and consultation with public service providers, such as FCFD and Fresno Police Department. Impacts related to public services that would result from the proposed plan were identified by comparing existing service capacities and facilities against future demand associated with plan implementation, determining the possible need for new or physically altered facilities, and assessing the potential for construction of those facilities to result in significant effects. The Police and Fire Departments consider other factors including population, response times, allocated personnel and budget to determine the need to construct new facilities

Student generation rates were based on information provided in the *Fresno Unified School District Development Fee Justification Study* (Odell Planning & Research 2022), which provides the following student generation rates for single-family homes in FUSD:

- ▶ elementary (transitional kindergarten [TK]–6): 0.346,
- ▶ middle school (7–8): 0.083,
- ▶ high school (9–12): 0.625, and
- ▶ total (TK–12): 0.625.

THRESHOLDS OF SIGNIFICANCE

An impact related to public services or recreation would be significant if implementation of the proposed plan would:

- ▶ result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:
 - fire protection,
 - police protection,
 - schools,
 - parks, and/or
 - other public facilities;
- ▶ increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or
- ▶ include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

ISSUES NOT DISCUSSED FURTHER

Result in Substantial Adverse Physical Impacts Associated with the Provision of New or Physically Altered School Facilities

Based on applicable student generation factors, the estimated 91 dwelling units developed by 2040 would generate approximately 57 students, including 31 TK-6 students, 8 middle school students, and 18 high school students. While the future distribution of students in terms of enrollment location and grade level is unknown, students would attend one of 19 nearby schools across three school districts. This small increase over such a large number of schools and

school districts would represent a minor increase in enrollment in any one school and would not represent substantial growth that would require acquisition, modernization, or modification of school sites. Therefore, there would be no impacts related to new or physically altered school facilities and this topic is not discussed further.

Increase the Use of Existing Neighborhood and Regional Parks or Other Recreational Facilities Such That Substantial Physical Deterioration Would Occur or be Accelerated, or Require the Construction or Expansion of Recreational Facilities That Might Have an Adverse Physical Effect on the Environment

As discussed above, the projected future development of the proposed plan would include an estimated 91 dwelling new residential units by 2040, which is anticipated to support approximately 279 new residents at buildout. As indicated in Policy POSS-1-a, the City has established a standard of 3 acres of public parkland per 1,000 residents. Based on this standard, less than one acre of parkland would be necessary to support the anticipated population growth in the Plan Area through 2040. Consistent with Figure 3-14 of Chapter 3, "Project Description," there are no parks within the Plan Area, but there are several parks located nearby as noted above under Section 4.14.2, "Environmental Setting." The projected number of residents in the Plan Area would be relatively small and dispersed and would not require the construction or expansion of recreational facilities beyond those included within the Parks Master Plan. Therefore, there would be no impact and this topic is not discussed further.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 4.14-1: Result in Substantial Adverse Physical Impacts Associated with the Provision of New or Physically Altered Fire Facilities

Under the proposed plan, development would be intensified within the Plan Area and may increase demand for fire protection services that could require new or expanded facilities. Expansion of an existing fire station or construction of a new facility would involve minor land clearing, grading, installation of utilities, and building construction, generally on a modest-sized lot (approximately 2.5 acres). Construction activities and duration would be typical of such facilities and would be required to comply with applicable City policies and regulatory requirements to reduce adverse environmental effects. For these reasons, there is no evidence to suggest that such construction would result in unmitigable, adverse effects on the environment. Therefore, this impact would be **less than significant**.

The proposed plan is estimated to result in the future development of approximately 91 new residential dwelling units and approximately 12 million square feet (sf) of non-residential (industrial, retail, and office) uses by 2040 (see Chapter 3, "Project Description"). Development would be intensified in the Plan Area through the horizon year and may increase demand for fire protection service that could require development of new or expanded facilities.

Funding for fire protection services would come from a number of different sources. New development in the Plan Area would be required to pay development fees to assist in funding public services, including fire protection, fire facilities, and related services in the city. Additionally, all development associated with implementation of the proposed plan would be required to meet FCFD standards related to access, fire hydrants, automatic sprinkler systems, fire alarm systems, water flow, and other requirements. As applicable, FCFD would review project construction plans and inspect the construction work as it progresses to ensure that future projects in the Plan Area meet State and local Building and Fire Code requirements.

Development of new fire facilities would include construction activities that are typical of other allowable land use types within the Plan Area (e.g., industrial, retail, office), including such things as clearing and grading, utility installation, and construction of new structures. Construction would result in impacts that are similar to those discussed throughout this EIR, including temporary traffic, noise, and air quality impacts from construction. Generally, fire facilities are small (e.g., on the order of 2.5 acres) and their construction and operation would be required to comply with applicable City policies and regulatory requirements to reduce adverse environmental effects. There is no evidence to suggest that expansion of a fire station or construction of a new facility would result in unmitigable, adverse effects on the environment. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.14-2: Result in Substantial Adverse Physical Impacts Associated with the Provision of New or Physically Altered Police Facilities

Development under the SCSP (e.g., industrial, retail, office uses), would result in an increased demand for law enforcement services. A new centralized police headquarters and communications center building, two new police substations, and a new 911 emergency operations dispatch center are proposed in the city, but it is not clear if these would be sufficient to meet the demand for law enforcement services associated with the proposed plan. If new or physically altered police facilities are required to adequately serve development within the Plan Area, expansion of an existing police station or construction of a new facility could involve minor land clearing, grading, installation of utilities, and building construction, generally on a modest-sized parcel. Construction activities and duration would be typical of such facilities and would be required to comply with applicable City policies and regulatory requirements to reduce adverse environmental effects. For these reasons, there is no evidence to suggest that such construction would result in unmitigable, adverse effects on the environment. Therefore, this impact would be **less than significant**.

Development in the Plan Area would result in approximately 12 million square feet of non-residential (industrial, retail, and office) uses and approximately 91 new residential dwelling units by 2040 (see Chapter 3, "Project Description"). The City has established a service ratio of 1.5 unrestricted officers per 1,000 residents (General Plan Policy PU-2-g). Residential growth in the plan area would result in a relatively small population increase (approximately 279 new residents by 2040), which would create an additional demand of less than one new officer. However, the proposed plan consists primarily of land use types other than residential uses, including industrial, retail, and office uses. Development of such uses may also increase demand for police services due to the related increase in employment and urban activity in the Plan Area.

Similar to fire protection, funding for police protection services in the city comes from a number of different sources. New development in the Plan Area would be required to pay development fees to assist in funding public services, including police protection services. Additionally, operation of non-residential uses such as industrial, retail, and office uses may include on-site security provisions. A new centralized police headquarters and communications center building, two new police substations, and a new 911 emergency operations dispatch center are proposed in the city (EPS 2022), but it is not clear if these would be sufficient to meet demand for law enforcement services in the Plan Area. If new or expanded facilities are necessary to provide adequate police service, development of such facilities would include construction activities that are typical of other allowable land use types within the Plan Area (e.g., industrial, retail, office), including such things as clearing and grading, utility installation, and construction of new structures. Construction would result in impacts that are similar to those discussed throughout this EIR, including temporary traffic, noise, and air quality impacts from construction. Generally, law enforcement facilities are small (e.g., less than 10,000 square feet on a parcel of 2.5 acres) and their construction and operation would be required to comply with applicable City policies and regulatory requirements to reduce adverse environmental effects. There is no evidence to suggest that expansion of a police station or construction of a new facility would result in unmitigable, adverse effects on the environment. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

4.15 TRANSPORTATION AND CIRCULATION

This section describes applicable federal, state, and local transportation regulations and policies; discusses the existing roadway network and transportation facilities in the vicinity of the Plan Area; and evaluates the potential transportation impacts from implementation of the proposed plan. Data and analysis in this section was derived primarily from *Transportation Impact Analysis: South Central Specific Plan (SCSP TIA)* (TJKM 2023), which is included as Appendix D of this EIR and incorporated herein.

Pursuant to SB 743, PRC Section 21099, and CCR Section 15064.3(a), generally, vehicle miles traveled (VMT) is the most appropriate measure of transportation impacts, and a project's effect on automobile delay shall no longer constitute a significant impact under CEQA. Therefore, the transportation analysis herein evaluates impacts using VMT and does not include level of service (LOS) analysis as it pertains to vehicle delay. Although not addressed in this EIR for purposes of CEQA, the analysis of traffic operations (i.e., intersection and freeway LOS analysis) for the proposed plan was conducted by TJKM at the direction of the City and is included in the SCSP TIA (TJKM 2023) attached as Appendix D. Additionally, PRC Section 21099(b)(3) states that "This subdivision does not relieve a public agency of the requirement to analyze a project's potentially significant transportation impacts related to air quality, noise, safety, or any other impact associated with transportation." Therefore, impacts associated with these environmental issue areas are discussed in Sections 4.3, "Air Quality," 4.8, "Greenhouse Gas Emissions," 4.12, "Noise," and 4.9, "Hazards and Hazardous Materials". Potential impacts related to transportation safety hazards are discussed under Impact 4.15-3, below.

Comments received regarding transportation in response to the notice of preparation include safety concerns during construction and operations, road surface conditions, truck routing and traffic, and increased VMT. See Appendix A for all comments received in response to the notice of preparation.

4.15.1 Regulatory Setting

FEDERAL

Federal Highway Administration

The Federal Highway Administration (FHWA), an agency of the U.S. Department of Transportation, provides stewardship over the construction and preservation of the nation's highways, bridges, and tunnels. FHWA also conducts research and provides technical assistance to state and local agencies to improve safety, mobility, and livability and to encourage innovation in these areas. FHWA also provides regulation and guidance related to work zone safety, mobility, and temporary traffic control device implementation.

STATE

California Department of Transportation

The California Department of Transportation (Caltrans) is the state agency responsible for the design, construction, maintenance, and operation of the California State Highway System, as well as the segments of the Interstate Highway System that lie within California. Caltrans District 6 is responsible for the operation and maintenance of State Route (SR) 99 and SR 41 in the vicinity of the Plan Area. Caltrans requires a transportation permit for any transport of heavy construction equipment or materials that necessitates the use of oversized vehicles on state highways.

The Caltrans Transportation Impact Study Guide (TISG) was prepared to provide guidance to Caltrans districts, lead agencies, tribal governments, developers, and consultants regarding Caltrans' review of a land use project or plan's transportation analysis using a VMT metric. This guidance is not binding on public agencies, and it is intended to be a reference and informational document. The TISG replaces the Guide for the Preparation of Traffic Impact Studies and is for use with local land use projects, not for transportation projects on the State Highway System (Caltrans 2020).

Senate Bill 743

SB 743, passed in 2013, required the California Governor's Office of Planning and Research (OPR) to develop a new guideline that addresses transportation metrics under CEQA. Enacted as part of SB 743 (2013), PRC Section 21099(b)(1), directed OPR to prepare, develop, and transmit to the Secretary of the Natural Resources Agency for certification and adoption proposed CEQA Guidelines addressing "criteria for determining the significance of transportation impacts of projects within transit priority areas. Those criteria shall promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses. In developing the criteria, [OPR] shall recommend potential metrics to measure transportation impacts that may include, but are not limited to, vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated."

PRC Section 21099(b)(2) further provides that "[u]pon certification of the guidelines by the Secretary of the Natural Resources Agency pursuant to this section, automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion *shall not be considered a significant impact on the environment* pursuant to [CEQA], except in locations specifically identified in the guidelines, if any" (emphasis added). As noted above, however, the emphasis on VMT analysis does not relieve a public agency of the requirement to analyze a project's potentially significant transportation impacts related to air quality, noise, safety, or any other impact associated with transportation (PRC Section 21099(b)(3)).

OPR published its proposal for the comprehensive updates to the CEQA Guidelines in November 2017 which included proposed updates related to analyzing transportation impacts pursuant to SB 743. The updated CEQA Guidelines were adopted on December 28, 2018; and according to the new CEQA Guidelines Section 15064.3, VMT replaced congestion as the metric for determining transportation impacts. The guidelines state that "lead agencies may elect to be governed by these provisions of this section immediately. Beginning July 1, 2020, the provisions of this section shall apply statewide."

To provide guidance to agencies implementing the new CEQA requirements, OPR published the *Technical Advisory on Evaluating Transportation Impacts in CEQA* (OPR Technical Advisory) in December 2018. The *OPR Technical Advisory* describes considerations agencies may use in selecting VMT metrics, calculation methodologies, and significance thresholds. The OPR Technical Advisory does not mandate the use of specific metrics, methodologies, or significance thresholds, because agencies have discretion to select those that are appropriate for the local land use and transportation context (OPR 2018).

The OPR Technical Advisory also provides guidance on impacts to transit. Specifically, the OPR Technical Advisory suggests that lead agencies generally should not treat the addition of new transit users as an adverse impact. As an example, the OPR Technical Advisory suggests the following:

[An] infill development may add riders to transit systems and the additional boarding and alighting may slow transit vehicles, but it also adds destinations, improving proximity and accessibility. Such development also improves regional vehicle flow by adding less vehicle travel onto the regional network.

REGIONAL

Fresno Council of Governments

The Fresno County Council of Governments (FCOG) is a voluntary association of local governments and a regional planning agency composed of 16 member agencies, including the City of Fresno. FCOG is one of 18 metropolitan planning organizations (MPOs) across California. The primary functions of FCOG involve transportation planning and programming. FCOG is responsible for developing and adopting the regional transportation plan (RTP) and sustainable communities strategy (SCS) in an effort to meet state goals to reduce greenhouse gas emissions through coordinated land use and transportation planning.

Regional Transportation Plan

The most recent RTP was adopted by the FCOG board of directors in July 2022. The RTP serves as a blueprint establishing long term goals and policies to meet a regional vision for the future transportation system. The SCS is a state-mandated component of the RTP which requires MPOs to determine an approach to meet greenhouse gas emission reductions through land use and transportation planning strategies. The 2022 RTP includes goals and policies streamlined to focus on five key policy areas: equity, sustainability and resiliency, infrastructure and safety, economy, and innovation (FCOG 2022).

Fresno County SB 743 Implementation Regional Guidelines

The Fresno County SB 743 Implementation Regional Guidelines was developed as a guide for FCOG's 16 member agencies choosing to establish their own VMT guidance and thresholds as appropriate for their individual jurisdictions (FCOG 2021a). The document contains recommended project screening criteria, threshold and VMT analysis for development projects, transportation projects, and land use plans, and potential mitigation strategies.

Fresno County Transportation Authority and Measure C

The Fresno County Transportation Authority (FCTA) is a regional agency that was created to administer the voter-passed Measure C program in 1986. Measure C was a 20-year program that achieved a half-cent sales tax for transportation expenditures and infrastructure. After its 20-year duration, the program was extended in 2006 for another 20 years. FCTA established goals and core values for using these funds for building roads, expanding the bicycling network, expanding the transit network and transit services, and supporting vanpools and ride hailing services.

Fresno County Regional Active Transportation Plan

The Fresno County Regional Active Transportation Plan (ATP) was adopted in January 2018. The Fresno County ATP serves as a guide for planning and program development involving biking, walking, and other human-powered transportation in the region (FCOG 2018: ES-1). The Fresno County ATP proposed several projects to build out the active transportation network and meet regional goals to increase safety and walking and bicycling trips. The Fresno County ATP recommends specific improvements for jurisdictions without their own adopted active transportation plans and reproduces the planned bicycle and pedestrian network maps for the four jurisdictions that had already developed their own active transportation plans at the time the FCOG ATP was adopted. The City's planned bicycle and pedestrian networks are included in Chapter 18 of the FCOG ATP.

Fresno County Regional Long-Range Transit Plan 2019-2050

The Fresno County Regional Long-Range Transit Plan (LRTP), adopted by FCOG in May 2019, is intended to guide transit and related multimodal investments and services in the Fresno region through the year 2050. The LRTP was built on the FCOG 2018 RTP and SCS and prior transit planning studies to inform the public transportation element of the RTP/SCS adopted in 2022. The LRTP seeks to integrate public transportation planning and projects into the fabric of the region's overall circulation networks and systems – to make transit a more integral part of the community (FCOG 2019).

Fresno County Regional Safety Plan

The Fresno County Regional Safety Plan (RSP), adopted by FCOG in December 2021, sets forth a roadway safety vision for Fresno County and provides information and strategies to help FCOG and its member agencies make decisions that will improve roadway safety through projects, policies, programs, and funding decisions. The RSP formalizes safety planning for FCOG and aligns its efforts with the State of California's Strategic Highway Safety Plan. It was developed in partnership with FCOG member agencies through engagement with a Regional Safety Steering Committee (FCOG 2021b).

LOCAL

City of Fresno Municipal Code

Chapter 10 of the City Municipal Code provides regulations related to Fire Prevention including the City's adoption of the 2022 California Fire Code, which contains road design standards for fire apparatus circulation and emergency access regulations during construction. Chapter 13 addresses the general provisions for sidewalks streets, parkways, and underground utilities. Chapter 14 addresses traffic and circulation. Chapter 15 includes the citywide development code.

City of Fresno General Plan

The General Plan, adopted in December 2014, is the City's blueprint for future growth and development. The General Plan's Mobility and Transportation Element identifies objectives and policies to meet goals for the local transportation and circulation system (City of Fresno 2014). The following policies from the Mobility and Transportation Element pertain to the proposed plan:

- ▶ **Policy MT-1-a: Transportation Planning Consistent with the General Plan.** Continue to review local, regional, and inter-regional transportation plans and capital improvement plans, and advocate for the approval and funding of State highway and rail projects, consistent with the General Plan and discourage projects inconsistent with the General Plan.
- ▶ **Policy MT-1-b: Circulation Plan Diagram Implementation.** Design and construct planned streets and highways that complement and enhance the existing network, as well as future improvements to the network consistent with the goals, objectives and policies of the General Plan, as shown on the Circulation Diagram (Figure MT-1), to ensure that each new and existing roadway continues to function as intended.
- ▶ **Policy MT-1-d: Integrate Land Use and Transportation Planning.** Plan for and maintain a coordinated and well integrated land use pattern, local circulation network and transportation system that accommodates planned growth, reduces impacts on adjacent land uses, and preserves the integrity of established neighborhoods.
- ▶ **Policy MT-1-f: Match Travel Demand with Transportation Facilities.** Designate the types and intensities of land uses at locations such that related travel demands can be accommodated by a variety of viable transportation modes and support Complete Neighborhoods while avoiding the routing of excessive or incompatible traffic through local residential streets.
- ▶ **Policy MT-1-g: Complete Streets Concept Implementation.** Provide transportation facilities based upon a Complete Streets concept that facilitates the balanced use of all viable travel modes (pedestrians, bicyclists, motor vehicle and transit users), meeting the transportation needs of all ages, income groups, and abilities and providing mobility for a variety of trip purposes, while also supporting other City goals.
- ▶ **Policy MT-1-i: Local Street Standards.** Establish and implement local roadway standards addressing characteristics such as alignment, width, continuity and traffic calming, to provide efficient neighborhood circulation; to allow convenient access by residents, visitors, and public service and safety providers; and to promote neighborhood integrity and desired quality of life by limiting intrusive pass-through traffic.
- ▶ **Policy MT-1-j: Transportation Improvements Consistent with Community Character.** Prioritize transportation improvements that are consistent with the character of surrounding neighborhoods and supportive of safe, functional and Complete Neighborhoods; minimize negative impacts upon sensitive land uses such as residences, hospitals, schools, natural habitats, open space areas, and historic and cultural resources. In implementing this policy, the City will design improvements to:
 - Facilitate provision of multi-modal transportation opportunities;
 - Provide added safety, including appropriate traffic calming measures;
 - Promote achievement of air quality standards;
 - Provide capacity in a cost effective manner; and
 - Create improved and equitable access with increased efficiency and connectivity.

- ▶ **Policy MT-2-a: Intensification of Bus Rapid Transit Corridors.** Where traffic has previously been diverted to freeways, encourage incentives for more intense development along transportation corridors, such as the Blackstone Corridor, where there is now additional capacity.
- ▶ **Policy MT-2-b: Reduce Vehicle Miles Traveled and Trips.** Partner with major employers and other responsible agencies, such as the San Joaquin Valley Air Pollution Control District and the Fresno Council of Governments, to implement trip reduction strategies, such as eTRIP, to reduce total vehicle miles traveled and the total number of daily and peak hour vehicle trips, thereby making better use of the existing transportation system.
- ▶ **Policy MT-2-c: Reduce VMT through Infill Development.** Provide incentives for infill development that would provide jobs and services closer to housing and multi-modal transportation corridors in order to reduce citywide vehicle miles travelled (VMT).
- ▶ **Policy MT-2-d: Street Redesign where Excess Capacity Exists.** Evaluate opportunities to reduce right of way and/or redesign streets to support nonautomobile travel modes along streets with excess roadway capacity where adjacent land use is not expected to change over the planning period.
- ▶ **Policy MT-2-e: Driveway and Access Consolidation.** Take advantage of opportunities to consolidate driveways, access points, and curb cuts along designated major roadways when a change in development or a change in intensity occurs or when traffic operation or safety warrants.
- ▶ **Policy MT-2-i: Transportation Impact Studies.** Require a Transportation Impact Study (currently named *Traffic Impact Study*) to assess the impacts of new development projects on existing and planned streets for projects meeting one or more of the following criteria, unless it is determined by the City Traffic Engineer that the project site and surrounding area already has appropriate multi-modal infrastructure improvements.
 - When a project includes a General Plan amendment that changes the General Plan Land Use Designation.
 - When the project will substantially change the off-site transportation system (auto, transit, bike, or pedestrian) or connection to the system, as determined by the City Traffic Engineer.
 - Transportation impact criteria are tiered based on a project's location within the City's Sphere of Influence. This is to assist with areas being incentivized for development.
- ▶ **Policy MT-2-l: Region-Wide Transportation Impact Fees.** Continue to support the implementation of metropolitan-wide and region-wide transportation impact fees sufficient to cover the proportional share of a development's impacts and need for a comprehensive multi-modal transportation system that is not funded by other sources. Work with the Council of Fresno County Governments, transportation agencies (e.g., Caltrans, Federal Transportation Agency) and other jurisdictions in the region to develop a method for determining:
 - Regional transportation impacts of new development;
 - Regional highways, streets, rail, trails, public transportation, and goods movement system components, consistent with the General Plan, necessary to mitigate those impacts and serve projected demands;
 - Projected full lifetime costs of the regional transportation system components, including construction, operation, and maintenance; and
 - Costs covered by established funding sources.
- ▶ **Policy MT-2-m: Use VMT Analysis for CEQA.** Use VMT as the criteria for evaluating transportation impacts under the CEQA, pursuant to Senate Bill 743. LOS may still be used for planning purposes and implementation of Capital Improvement Projects, however VMT shall be used for determining mitigation under CEQA beginning in July of 2020.
- ▶ **Policy MT-4-b: Bikeway Improvements.** Establish and implement property development standards to assure that projects adjacent to designated bikeways provide adequate right-of-way and that necessary improvements are constructed to implement the planned bikeway system shown on Figure MT-2 to provide for bikeways, to the extent feasible, when existing roadways are reconstructed; and alternative bikeway alignments or routes where inadequate right-of-way is available.

- ▶ **Policy MT-4-c: Bikeway Linkages.** Provide linkages between bikeways, trails and paths, and other regional networks such as the San Joaquin River Trail and adjacent jurisdiction bicycle systems wherever possible.
- ▶ **Policy MT-4-d: Prioritization of Bikeway Improvements.** Prioritize bikeway components that link existing separated sections of the system, or that are likely to serve the highest concentration of existing or potential cyclists, particularly in those neighborhoods with low vehicle ownership rates, or that are likely to serve destination areas with the highest demand such as schools, shopping areas, recreational and park areas, and employment centers.
- ▶ **Policy MT-4-e: Minimum Bike Lane Widths.** Provide not less than 10 feet of street width (five feet for each travel direction) to implement bike lanes for designated Class II bikeways along roadways. Strive for 14 feet of street width (seven feet for each travel direction) for curbside bike lanes where right-of-way is available.
- ▶ **Policy MT-4-f: Bike Detection Devices.** Include bicycle detection devices when new intersection traffic control signals are installed and strive to retrofit existing traffic control signals to provide bicycle detection and retiming of signal phases to make them more bicycle friendly.
- ▶ **Policy MT-4-g: Advocacy for Bike Accommodation.** Advocate for the accommodation of bike facilities in new or upgraded State Route interchanges and railroad construction projects, and construction of bicycle crossings of freeways and railroads.
- ▶ **Policy MT-4-h: Bicycle Parking Facilities.** Promote the installation of bicycle locking racks and bicycle parking facilities at public buildings, transit facilities, public and private parking lots, and recreational facilities. Establish standards for bicycle parking in the Development Code.
- ▶ **Policy MT-5-a: Sidewalk Development.** Pursue funding and implement standards for development of sidewalks on public streets, with priority given to meeting the needs of persons with physical and vision limitations; providing safe routes to school; completing pedestrian improvements in established neighborhoods with lower vehicle ownership rates; or providing pedestrian access to public transportation routes.
- ▶ **Policy MT-5-b: Sidewalk Requirements.** Assure adequate access for pedestrians and people with disabilities in new residential developments per adopted City policies, consistent with the California Building Code and the Americans with Disabilities Act.
- ▶ **Policy MT-5-c: New Subdivision Design.** Do not approve new single-family residential subdivisions with lots that front and access onto a major roadway, unless the City Traffic Engineer determines that no other feasible alternative means of vehicle access can be provided and that sufficient design measures can be implemented, such as an on-site driveway turnaround, landscaped buffering, or an on-street parking lane to assure a desirable and enduring residential environment.
- ▶ **Policy MT-5-d: Pedestrian Safety.** Minimize vehicular and pedestrian conflicts on both major and non-roadways through implementation of traffic access design and control standards addressing street intersections, median island openings and access driveways to facilitate accessibility while reducing congestion and increasing safety. Increase safety and accessibility for pedestrians with vision disabilities through the installation of Accessible Pedestrian Signals at signalized intersections.
- ▶ **Policy MT-5-e: Traffic Management in Established Neighborhoods.** Establish acceptable design and improvement standards and provide traffic planning assistance to established neighborhoods to identify practical traffic management and calming methods to enhance the pedestrian environment with costs equitably assigned to properties receiving the benefits or generating excessive vehicle traffic.
- ▶ **Policy MT-5-f: Modifications to Street Standards.** Continue to evaluate and adopt modifications to City street standards to achieve overall objectives of providing good access and travel opportunities while calming traffic, promoting pedestrian and other transportation options, and reducing the amount of land devoted to streets.
- ▶ **Policy MT-6-a: Link Residences to Destinations.** Design a pedestrian and bicycle path network that links residential areas with Activity Centers, such as parks and recreational facilities, educational institutions, employment centers, cultural sites, and other focal points of the city environment.

- ▶ **Policy MT-6-c: Link Paths and Trails and Recreational Facilities.** Strive to provide path or trail connections to recreational facilities, including parks and community centers where appropriate, and give priority to pathway improvements within neighborhoods characterized by lower vehicle ownership rates and lower per capita rates of parks and public open space.
- ▶ **Policy MT-6-g: Path and Trail Development.** Require all projects to incorporate planned multi-purpose path and trail development standards and corridor linkages consistent with the General Plan, applicable law and case-by-case determinations as a condition of project approval.
- ▶ **Policy MT-6-i: Path and Trail Design Standards.** Designate and design paths and trails in accordance with design standards established by the City that give consideration to all path and trail users (consistent with design, terrain and habitat limitations) and provide for appropriate widths, surfacing, drainage, design speed, barriers, fences, signage, visibility, intersections, bridges, and street cleaning.
- ▶ **Policy MT-6-j: Variety in Path and Trail Design.** Provide for different levels and types of usable pedestrian and bicycle corridors, including broad, shaded sidewalks; jogging paths; paved and all terrain bicycle paths; through block passageways; and hiking trails. Where a designated multipurpose path route is adjacent to a public right-of-way which accommodates bike lane, allow for flexibility in path design, so that bike lanes may be substituted for the bicycle component of the multipurpose path where it is safe and appropriate to do so.
- ▶ **Policy MT-6-k: Path and Trail Buffers.** Use landscaping with appropriate and adequate physical and visual barriers (e.g., masonry walls, wrought iron, or square-tube fencing) to screen path and trail rights-of ways and separate paths and trails from mining operations, drainage facilities, and similar locations as warranted.
- ▶ **Policy MT-6-l: Environmentally Sensitive Path and Trail Design.** Develop paths and trails with minimum environmental impact by taking the following actions:
 - Surface paths and trails with materials that are conducive to maintenance and safe travel, choosing materials that blend in with the surrounding area;
 - Design paths and trails to follow contour lines where the least amount of grading (fewest cuts and fills) and least disturbance of the surrounding habitat will occur;
 - Beautify path and trail rights-of-way in a manner consistent with intended use, safety, and maintenance;
 - Use landscaping to stabilize slopes, create physical or visual barriers, and provide shaded areas; and
 - Preserve and incorporate native plant species into the landscaping.
- ▶ **Policy MT-6-m: Path and Trail Crossings.** Limit vehicle access, to the extent feasible, where paths or trails are designated parallel and adjacent to roadways, with consideration given to other transportation, land use, and site design priorities and constraints.
- ▶ **Policy MT-6-n: Emergency Vehicle Access along Paths and Trails.** Provide points of emergency vehicle access within the path and trail corridors, via parking areas, service roads, emergency access gates in fencing, and firebreaks.
- ▶ **Policy MT-8-b: Transit Serving Residential and Employment Nodes.** Identify the location of current and future residential and employment concentrations and Activity Centers throughout the transit service area in order to facilitate planning and implementation of optimal transit services for these uses. Work with California State University, Fresno to determine locations within the campus core for bus stops.
- ▶ **Policy MT-8-c: New Development Facilitating Transit.** Continue to review development proposals in transportation corridors to ensure they are designed to facilitate transit. Coordinate all projects that have residential or employment densities suitable for transit services, so they are located along existing or planned transit corridors or that otherwise have the potential for transit orientation to FAX, and consider FAX's comments in decision-making.

City of Fresno CEQA Guidelines for Vehicle Miles Traveled Thresholds

In 2020, City Council adopted the City of Fresno *CEQA Guidelines for VMT Thresholds*. The *CEQA Guidelines for VMT Thresholds* was developed to provide guidance for analyzing transportation impacts of proposed projects to comply with CEQA pursuant to SB 743 as well as to ensure alignment with local policies and regulations established in the General Plan (City of Fresno 2020). This document serves as a detailed guideline for preparing VMT analysis for development projects, transportation projects, and plans consistent with SB 743 requirements.

City of Fresno Active Transportation Plan

The City of Fresno's ATP, adopted in March 2017, provides a comprehensive guide outlining the vision for active transportation in the City. The plan lays out the following goals to improve bicycle access and connectivity in Fresno:

- ▶ Equitably improve the safety and perceived safety of walking and bicycling in Fresno;
- ▶ Increase walking and bicycling trips in Fresno by creating user-friendly facilities;
- ▶ Improve the geographical equity of access to walking and bicycling facilities in Fresno; and
- ▶ Fill key gaps in Fresno's walking and bicycling networks (City of Fresno 2016).

Complete Streets Policy

The City's Complete Streets Policy was adopted by the City Council on October 10, 2019, to guide the implementation of the City's complete streets and multimodal objectives and policies within the Fresno General Plan. The Complete Streets policy aids the planning, design, and construction of transportation facilities that balance safety, access, and mobility for users of all abilities and ages (City of Fresno 2019a). The City has integrated complete streets designs into its policies in compliance with AB 1358.

City of Fresno Public Works Department Policies and Procedures

Policy 210.01, "Traffic Control Policies and Procedures," was issued in June 2019 to govern the preparation and submittal of a temporary traffic control plan (TCP). This policy was enacted to ensure consistent and efficient submittal and review of TCPs and ensure that they are prepared and submitted in accordance with the current edition of the California Manual on Uniform Traffic Control Devices, the City of Fresno Standard Specifications, and City of Fresno Policies (City of Fresno 2019b).

Policy number 210.1, "Conditions for Roadway Closures and Lane Closures," was issued in March 2019 to govern the issuance of Street Work and TCPs to close roadways to through traffic or close travel lanes on roadways within the City of Fresno. This policy was enacted pursuant to Article 2 of Chapter 13 of the Fresno Municipal Code which requires applicants seeking to encroach upon, or work within, a public right-of-way to first obtain a permit from the Director of Public Works and comply with the applicable terms, conditions, and restrictions (City of Fresno 2019c).

City of Fresno Systemic Local Roadway Safety Plan

The City of Fresno adopted the Systemic Local Roadway Safety Plan in September 2020. Kittelson & Associates, Inc., Toole Design Group, and JLB Traffic Engineering, Inc. worked with the City to analyze transportation safety data and identify roadway improvements to reduce collision risk in the city (City of Fresno 2020). The Systemic Local Roadway Safety Plan identifies citywide collision patterns and trends, including risks to bicyclists and pedestrians, and presents engineering safety countermeasures identified to address the systemic collision trends.

4.15.2 Environmental Setting

ROADWAY SYSTEM

The roadway system in the City is made up of freeways, expressways, superarterials, arterials, collectors, local streets, and drives. A description of each is provided below.

Freeway

Freeways are multiple-lane divided (median island separation) roadways on adopted state route alignments servicing through and crosstown traffic, with no access to abutting property and no at-grade intersections. They are under the jurisdiction of the state, and outside the control of the City. In the Plan Area, SR 99, also known as Golden State Highway, is a north-south freeway traversing the Central Valley. SR 99 connects to Interstate 5 near Wheeler Ridge to the south and ends at SR 36 near Red Bluff to the north. In the City of Fresno, SR 99 has six lanes. Additionally, SR 41 is a northeast-southwest freeway that traverses the Plan Area. SR 41 connects the Central Coast on the south end to the San Joaquin Valley and the Sierra Nevada in the north. In the vicinity of the Plan Area, SR 41 has two to four lanes in each direction of travel.

Expressway

Expressways are four- to six-lane divided (median island separation) roadways primarily serving through and crosstown vehicle traffic, with at-grade major street intersections located at approximately one-half mile intervals and no driveways for direct motor vehicle access to abutting property.

Superarterial

Superarterials are four- to six-lane divided (median island separation) roadways with a primary purpose of moving multiple modes of travel traffic to and from major traffic generators and among subregions. A select number of motor vehicle access points to adjacent properties or local streets between the major street intersections may be approved by the City. Access points will be limited to right-turn entrance and exit vehicular movements, as well as select left-turn partial openings in medians from the superarterials to surrounding properties or neighborhoods, limited to one location per half-mile. No left turns are allowed out of local streets or properties.

Arterial

Arterials are four- to six-lane divided (median island separation) roadways with somewhat limited motor vehicle access to abutting properties, and with the primary purpose of moving traffic within and between neighborhoods and to and from freeways and expressways. In addition to major street intersections, appropriately designed and spaced local street intersections may allow left-turn movements to and from the arterial streets.

Collector

Collectors are two- to four-lane undivided (opposing travel lanes generally not separated by a median island) roadways, with the primary function of connecting local streets and arterials and neighborhood traffic generators and providing access to abutting properties. Local street intersections and motor vehicle access points from abutting properties are allowed consistent with the City's engineering standards and accepted traffic engineering practices. Collectors typically have a center two-way left-turn lane.

Local

Local roads are two- to three-lane roadways designed to provide direct access to properties, while discouraging excessive speeds and volumes of motor vehicle travel incompatible with neighborhoods being served through the implementation of multiple, well-connected routes and traffic calming measures. The alignments of future local streets are typically not specified by the General Plan Circulation Diagram, but existing local streets may be depicted for informational purposes. In specific circumstances, local streets are designated where necessary to assure adequate access and implementation of Complete Neighborhoods with well-connected routes for motor vehicle, bicycle and pedestrian travel.

Drive

A drive is a street that in addition to its transportation function provides opportunities for the enjoyment of natural and human-made scenic resources. The aesthetic values of scenic drives may be protected.

Regional access to the Plan Area is generally provided by SR 99 and SR 41. Local access to and within the Plan Area is provided by various arterials and connectors. Relevant roadways in the vicinity of the Plan Area are discussed below:

- ▶ **SR 99** is a six-lane freeway that runs from the northern end of the Plan Area at Church Avenue to the southern end at Central Avenue. It is the main thoroughfare for the Central Valley region and has high volumes of passenger vehicles and truck traffic. The posted speed limit is 65 miles per hour (mph).
- ▶ **SR 41** is a four-lane freeway that runs on the western portion of the Plan Area from Church Avenue to Central Avenue. It connects SR 99, near downtown Fresno, to the Pacific Ocean at Morro Bay. The posted speed limit is 65 mph in the Plan Area.
- ▶ **Church Avenue** is a two- to four-lane, east-west collector. The roadway runs through the northern portion of the Plan Area and has a posted speed limit of 45 mph.
- ▶ **Jensen Avenue** is a two- to six-lane roadway that runs east-west. The roadway is classified as an arterial west of SR 99 and as a super arterial east of SR 99. The speed limit along the roadway ranges from 40 mph to 55 mph within the Plan Area.
- ▶ **Annadale Avenue** is a two-lane, east-west collector in the center of the Plan Area. It has a posted speed limit of 40 mph.
- ▶ **North Avenue** is a four-lane, east-west arterial running through the center of the Plan Area and has an interchange junction with SR 99. It has a speed limit of 45 mph within the Plan Area.
- ▶ **Central Avenue** is a two-lane, east-west arterial on the south end of the Plan Area and has an interchange junction with SR 99. It has a posted speed limit of 45 mph within the Plan Area.
- ▶ **American Avenue** is a two-lane, east-west arterial on the southern border of the Plan Area with an interchange to SR 99. It has a speed limit of 45 mph.
- ▶ **Fig Avenue/Martin Luther King Jr. Boulevard** is a two-lane, north-south collector that runs on the western border of the Plan Area. It has a posted speed limit of 40 mph.
- ▶ **Elm Avenue** is a four-lane arterial that runs north-south on the western portion of the Plan Area. It has a posted speed limit of 45 mph.
- ▶ **Cherry Avenue** is a two-lane, north-south collector that goes through the center of the Plan Area. It has a speed limit of 45 mph within the Plan Area.
- ▶ **East Avenue** is a two-lane, north-south collector that goes through the center of the Plan Area. It has a two-way left-turn lane south of North Avenue. It is truncated by SR 99 at its northern end. It has a speed limit of 45 mph within the Plan Area.
- ▶ **Orange Avenue** is a two-lane, north-south arterial that goes through the center of the Plan Area. It connects Central Avenue and North Avenue near SR 99. It has a two-way left-turn lane between Central and North. It has a speed limit of 45 mph within the Plan Area.
- ▶ **Cedar Avenue** is a two-lane, north-south arterial that has an interchange with SR 99 in the center of the Plan Area. It has a speed limit of 45 mph within the Plan Area.
- ▶ **Maple Avenue** is a four-lane, north-south collector that has two sections, north of SR 99 and south of SR 99. It has a speed limit of 45 mph within the Plan Area.
- ▶ **Chestnut Avenue** is a two-lane, north-south collector on the eastern portion of the Plan Area. It has a speed limit of 45 mph within the Plan Area.
- ▶ **Willow Avenue** is a two-lane, north-south collector in the central portion of the Plan Area. It has a speed limit of 45 mph within the Plan Area.

- ▶ **Peach Avenue** is a two-lane, north-south collector in the eastern portion of the Plan Area. It has a speed limit of 45 mph within the Plan Area.

TRANSIT SYSTEM

Public transportation in the City consists of public buses, express bus service, demand-response paratransit, and passenger rail. Fresno Area Express (FAX) is the principal transit provider in the City operated by the Fresno Department of Transportation. FAX operates 18 routes with a fleet of over 100 buses. Handy Ride is a demand-response service for seniors and persons with disabilities, as required by the Americans with Disabilities Act. FAX is the largest transit provider in the region with over 10 million annual boardings (FCOG 2019: 21).

FAX bus Routes 32 (North Avenue), 38 (Jensen Avenue), and 41 (Maple and North Avenues) are located immediately adjacent to and within the Plan Area. Bus Route 32 service frequency is approximately every 30 minutes between 5:45 a.m. and 11:20 p.m. on weekdays, 6:45 a.m. and 11:20 p.m. on Saturdays, and 6:45 a.m. and 7:30 p.m. on Sundays. Bus Route 38 operates on approximately 15-minute headways from 5:30 a.m. to 6:00 P.M. and at 30-minute headways from 6:00 p.m. to 12:00 a.m. on weekdays and 6:40 a.m. and 7:20 p.m. on weekends, with extended service on Saturday nights until approximately 12:00 a.m. Bus Route 41 runs between approximately 5:40 a.m. and 9:15 p.m. on weekdays and 7:00 a.m. and 7:30 p.m. on the weekends with 30-minute headways.

The Fresno County Rural Transit Agency (FCRTA) and Amtrak also provide services for regional travel outside the Fresno-Clovis Metropolitan Area. FCRTA provides service to 13 rural incorporated cities as well as 28 unincorporated rural communities within Fresno County. The San Joaquin Line is one of Amtrak's passenger rail services with connections between the San Joaquin Valley, Sacramento Valley, San Francisco Bay Area, and Los Angeles. Greyhound provides similar bus service to these regions. BNSF, Union Pacific, and spur rail lines serve industrial uses in the area.

Additionally, a portion of the future California High-Speed Rail (HSR) line runs through the Plan Area. There is a planned HSR stop in Downtown Fresno, just north of the Plan Area.

In addition to services offered by FAX, Fresno County voters passed the Measure C one-half-cent transportation sales tax in November 2006, providing the resources needed to create the Measure C Carpool Incentive program and Measure C Commuter Vanpool Subsidy Program. These programs were created to encourage commuters to share a ride with other commuters rather than drive alone. The program is open to carpool and vanpool participants who rideshare to or from locations throughout Fresno County and who are 18 years old or older. Employers are also able to partner with existing programs to comply with the eTRIP Rule that was adopted by the San Joaquin Valley Air Pollution District to reduce VMT from private vehicles used by employees commuting to and from work. The trip reduction and administrative requirements of this rule apply to each employer in the San Joaquin Valley Air Basin with at least 100 eligible employees.

BICYCLE SYSTEM

The bicycle and pedestrian transportation system in the City of Fresno is composed of bikeways and trails. The City is generally flat, which provides a favorable environment for bicycling and walking as a mode of transportation. The General Plan classifies bicycle facilities into the following four types:

- ▶ **Class I Bikeway (Bike Path):** Bike paths, often referred to as shared-use paths or trails, are off-street facilities that provide exclusive use for non-motorized travel, including bicyclists and pedestrians. Bike paths have minimal cross flow with motorists and are typically located along landscaped corridors.
- ▶ **Class II Bikeway (Bike Lane):** Class II bike lanes are on-street facilities that use striping, stencils, and signage to denote preferential or exclusive use by bicyclists. On-street bike lanes are located adjacent to motor vehicle traffic. Bike lanes are intended to alert drivers about the predictable movements of bicyclists and provide adequate space for comfortable riding. Current City standards require bike lanes on all new collectors and arterials; many existing collectors are already constructed with Class II bike lanes.

- ▶ **Class III Bikeway (Bike Route):** Class III bike routes are on-street pavement markings or signage that connect the bicycle roadway network. Class III bike routes can be utilized to connect bicycle lanes or paths along corridors that do not provide enough space for dedicated lanes on low-speed and low-volume streets. Shoulders are useful but not required on streets with Class III bike routes.
- ▶ **Class IV Bikeways (Separated Bikeways):** Class IV separated bikeways, commonly known as “cycle tracks,” are physically separated bicycle facilities that are distinct from the sidewalk and designed for exclusive use by bicyclists. They are located within the street right-of-way, but provide similar comfort when compared to Class I multi-use paths. The key feature of a separated bikeway is a vertical element that provides further separation from motor vehicle traffic (City of Fresno 2016).

As of 2016, the City’s bicycle system was composed of 38 miles of Class I, 431 miles of Class II, and 22 miles of Class III bicycle facilities (City of Fresno 2016: 61). The Plan Area contains only Class III facilities, and these are on portions of Church Avenue, Jensen Avenue, Elm Avenue, Cherry Avenue, East Avenue, and North Avenue. No other facilities are present in the vicinity of the Plan Area.

PEDESTRIAN SYSTEM

Pedestrian facilities are comprised of crosswalks, sidewalks, pedestrian signals, and off-street paths, which provide safe and convenient routes for pedestrians to access the destinations such as institutions, businesses, public transportation, and recreation facilities.

As of 2016, the City of Fresno pedestrian system consisted of 1,984 miles of sidewalks (City of Fresno 2016). The Plan Area is located in a rural area, thus, there are currently very limited pedestrian facilities in the vicinity of the project site. Sidewalks do exist on portions of East Avenue, North Avenue, Central Avenue, Church Avenue, and Jensen Avenue but are disconnected from one another or are disjointed (TJKM 2023).

4.15.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

State CEQA Guidelines Section 15064.3 was added December 28, 2018, to address the determination of significance for transportation impacts. The guidelines require that, beginning July 1, 2020, CEQA analyses and significance determinations be based on VMT instead of congestion metrics, such as LOS. The change in the focus of transportation analysis is the result of legislation (SB 743) and is intended to shift the emphasis from congestion to, among other things, reducing greenhouse gas emissions, promoting a diversity of land uses, and developing multimodal transportation networks.

The City has developed and adopted VMT guidelines and thresholds (i.e., *CEQA Guidelines for VMT Thresholds*) to meet the State requirements set by SB 743 and address CEQA Guidelines Section 15064.3. Therefore, the VMT analysis herein relies primarily on the City’s VMT guidance and CEQA Guidelines Section 15064.3.

The City’s recommended methodology for conducting VMT assessments for land use plans is to compare the existing VMT per capita and/or VMT per employee for the region with the expected horizon year VMT per capita and/or VMT per employee for the land use plan. If there is a net increase in VMT under horizon year conditions, then the project would result in a significant impact (City of Fresno 2020: 38). The SCSP TIA analyzing potential impacts to the transportation system was prepared by TJKM, which used the FCOG Activity-Based Model (ABM) for travel demand forecasting and VMT analysis. The FCOG ABM simulates the County’s population, based on detailed census data, and models the daily activity patterns of each simulated individual along with resulting travel demand. The Fresno ABM has a base year of 2015 and a forecast year of 2035, and the count data collected from the City’s count database is from 2018.

Additionally, the loaded network volumes from the FCOG ABM include trucks as part of the calculation in the form of passenger car equivalents (PCE) based on truck weight and class to account for the increase in heavy vehicle trips anticipated by the development of predominately industrial uses that would be implemented by the proposed plan. See Appendix D for a detailed description of the SCSP TIA methodology, including the FCOG ABM.

THRESHOLDS OF SIGNIFICANCE

The significance criteria used to evaluate the impacts of the proposed plan on transportation under CEQA are based on Appendix G of the CEQA Guidelines, City of Fresno *CEQA Guidelines for VMT Thresholds*, and CEQA Guidelines Section 15064.3. An impact on the transportation system would be significant if implementation of the proposed plan would:

- ▶ conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities;
- ▶ conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b);
- ▶ substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or
- ▶ result in inadequate emergency access.

PROPOSED SCSP POLICIES AND DEVELOPMENT STANDARDS

The following policies are relevant to transportation:

- ▶ T-1: Establish and enforce truck routes to avoid neighborhoods and consider existing roadway capacities and conditions.
- ▶ T-2: Ensure truck routes are safe for pedestrians and bicyclists.
- ▶ T-3: Limit truck idling times.
- ▶ T-4: Expand bus area service and frequency.
- ▶ T-5: Provide van shuttles, transit and carpool incentives, and bicycle parking for employees.
- ▶ T-6: Help school districts implement a "safe routes to school" program.
- ▶ T-7: Build, repair and maintain roads in good condition.
- ▶ T-8: Consider traffic calming studies.
- ▶ T-9: Install traffic control or traffic safety measures to include bike lanes.
- ▶ T-10: Install street lighting for public safety and visibility.
- ▶ T-11: Install crosswalks and traffic calming measures near schools.
- ▶ T-12: Consider a funding mechanism to pre-fund infrastructure improvements prior to allowing development to occur.
- ▶ T-13: Improve and maintain sidewalks.

In addition, the SCSP includes transportation related development standards that would serve to reduce circulation and safety hazards within the Plan Area. These include locating loading docks, truck entries and drive aisles away from nearby sensitive receptors; verifying safe truck turning movements at entrance and exit driveways; and establishing a truck route plan that includes measures such as signage, pavement markings, and queuing analyses and enforcement to prevent truck queuing, circling, stopping, and parking on public streets.

ISSUES NOT DISCUSSED FURTHER

All the issues identified in the thresholds of significance are addressed in the following analysis.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 4.15-1: Conflict with a Program, Plan, Ordinance, or Policy Addressing the Circulation System, Including Transit, Roadway, Bicycle, and Pedestrian Facilities

The proposed plan is estimated to result in the future development of approximately 12 million square feet (sf) of non-residential (industrial, retail, and office) uses and approximately 91 new residential dwelling units by 2040. While no specific developments are currently proposed, individual projects would be reviewed for consistency with the City's General Plan, ATP, and Municipal Code, and requirements established within those regulatory documents would be implemented, as applicable. Proposed SCSP policies would encourage the construction of bicycle and pedestrian safety improvements and transportation demand management strategies for employees to support the use of alternative modes of transportation. There is no evidence to suggest that the SCSP or future development under the plan would conflict with any applicable program, plan, ordinance, or policy addressing the circulation system. The impact would be **less than significant**.

Implementation of the proposed plan would result in the development of predominantly industrial uses as well as moderate retail, office, and minor residential uses. The City of Fresno's circulation system is guided by the City's General Plan, ATP, and FCOG's RTP as detailed above in the Methodology section.

The City's ATP identifies planning goals aimed at improving pedestrian and bikeway connectivity and continuity throughout the City through design, community resources, and plan support. The ATP details principles for prioritizing projects based on several criteria including proximity to key destinations, population and employee density, level of traffic stress, and most frequent locations of vehicle-bicycle collision. Additionally, the Mobility and Transportation Element of the General Plan identifies various policies to encourage the use and increase the safety of bicycle, pedestrian, and transit facilities. General Plan Policies MT-1-a and MT-1-b call for the implementation of transportation improvements that are consistent with the goals, objectives, and policies of the General Plan and discourage those that are not.

Development under the proposed plan and their associated transportation improvements would be required to comply with regional and local programs, policies, and plans to maintain existing and accommodate planned alternative transportation facilities within the Plan Area. For example, development under the plan would be required to be consistent with General Plan policies that address transit, roadway, bicycle, and pedestrian travel. As detailed in Chapter 2, "Project Description," implementation of the proposed plan would be consistent with other Citywide efforts to enhance the environment for alternative modes of transportation including the Complete Streets Policy, Safe Routes to Schools programs, planned transit routes, participation in transportation demand management programs, and bicycle and pedestrian improvements identified in the ATP. Additionally, individual developments would be required to provide bicycle parking and amenities as detailed in Section 15-2429 of the City Municipal Code. Development associated with the implementation of the proposed plan may increase circulation activity of all types in the Plan Area, including from employment opportunities and residences, thus, increasing the demand for transit, bicycle, and pedestrian facilities. However, as detailed in the Regulatory Setting section, above, the *OPR Technical Advisory* suggests that lead agencies generally should not treat the addition of new transit users as an adverse impact as infill development improves proximity and accessibility to destinations. The proposed plan includes policies which would enhance transit, bicycle, and pedestrian travel in a manner which is consistent with the goals and policies established in the City's General Plan and Active Transportation Plan. Proposed plan policies T-2, T-6, T-7, T-8, T-9, T-11, and T-13 would promote the safe movement of bicyclists and pedestrians, and policies T-4 and T-5 would encourage increased use of transit and decreased use of single occupancy vehicles through expanded bus service and transportation demand management strategies, respectively.

Implementation of the proposed plan would improve the existing bicycle and pedestrian circulation infrastructure in the Plan Area over time by requiring future development to provide multimodal circulation improvements in compliance with General Plan and ATP policies and recommendations. Additionally, individual development projects and transportation improvements would not damage or alter any existing facilities serving alternative modes of

transportation. Therefore, the proposed plan would not conflict with a program, plan, ordinance, or policy addressing bicycle, pedestrian, or transit facilities. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.15-2: Conflict or Be Inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b) Regarding Vehicle Miles Traveled

The proposed plan would substantially increase industrial uses within the Plan Area and some commercial and minor residential development. The industrial and commercial uses would increase employment opportunities, likely improving proximity between new jobs within the Plan Area and surrounding housing by reducing commute distances between them. The SCSP TIA found that under horizon year with project conditions, the proposed plan would result in a VMT per service population of 29.87 as compared to 44.88 VMT per service population under existing conditions. Because the proposed plan would result in a 33 percent decrease in VMT, the proposed plan would not conflict or be inconsistent with CEQA Guidelines Section 15064.3. The impact would be **less than significant**.

As detailed in Chapter 2, "Project Description," implementation of the proposed plan would facilitate opportunities for economic growth and job creation and promote development of underutilized lands within the Plan Area. While total development of the Plan Area would not change substantially from what would occur under the City's General Plan, the proposed plan would alter land uses in portions of the Plan Area, generally resulting in less acreage of heavy industrial uses and more acreage of commercial and residential uses. See Table 3-4 in Section 3, "Project Description," for assumed development under the proposed plan compared to existing conditions.

This analysis is based on the findings of the SCSP TIA prepared by TJKM in August 2023, which evaluates and compares the VMT effects of the proposed plan to the existing VMT per service population and to the 2035 VMT per service population without the project. The SCSP TIA is included as Appendix D and provides additional detailed data, modeling, and information related to the VMT analysis.

The FCOG ABM was used to forecast the change in trip generation and VMT associated with buildout of the Plan Area, and to estimate existing and horizon year average VMT per service population for the Plan Area. The number of dwelling units and employment for the Plan Area were calculated for the horizon year and used to run a population synthesizer to generate land use input files for running the activity-based model. These land use input files were then run through the ABM to develop horizon year (2035) forecasts with the buildout of the Plan Area. Although the planning horizon year for the SCSP is 2040, the Fresno ABM has been calibrated and validated for 2035 and not 2040; therefore, the SCSP TIA used the latest available version of the Fresno ABM. While these horizon years differ, it is reasonable to infer that an additional 5 years of development in the Plan Area (i.e., 2035 to 2040) could further reduce VMT because additional development with the potential to reduce employment commute distances would occur over that period.

Table 4.15-1 presents VMT per service population findings for 2015 existing conditions, 2035 no project conditions, and 2035 with project conditions. Based on the City of Fresno VMT Guidelines, a land use plan would have a significant impact if the VMT per service population of the Plan Area exceeded the same metrics for existing conditions in all of Fresno County.

Table 4.15-1 SCSP VMT Analysis

	VMT per Service Population
2015 Existing Conditions	44.88
2035 No Project	46.44
2035 With Project	29.87

Source: TJKM 2023.

As detailed in Table 4.15-1, the project is anticipated to generate 29.87 VMT per service population, a decrease from both 2015 existing conditions and 2035 no project conditions. Under the 2035 proposed plan scenario, VMT per service population would be approximately 15 VMT per service population lower, or 33 percent lower, than 2015 existing conditions. The decrease in VMT is partially the result of the proposed land use mix within the Plan Area, but is also affected by the fact that the Plan Area would be a major employment center. Although the proposed plan would only increase residential uses by 91 dwelling units, it would create increased employment opportunities through the implementation of industrial and commercial development leading to improved proximity between the jobs in the Plan Area and surrounding housing by shortening driving distance and, therefore, reducing VMT.

Additionally, as described in the discussion of Impact 4.15-1, the proposed plan would be required to be consistent with the General Plan policies that address transit, roadway, bicycle, and pedestrian travel which could help reduce VMT. Furthermore, the proposed plan contains policies that would encourage increased use of alternative modes of transportation (i.e., proposed plan policies T-2, T-4 through T-11, and T-13).

As detailed above, the City of Fresno *CEQA Guidelines for VMT Thresholds* states that a net increase in VMT under horizon year conditions as compared to existing conditions would result in a significant impact for land use plans (City of Fresno 2020: 38). Because implementation of development under the plan would result in reduced VMT per service population than existing conditions or future conditions without the project, the SCSP would neither conflict nor be inconsistent with CEQA Guidelines Section 15064.3. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.15-3: Substantially Increase Hazards Due to a Geometric Design Feature (e.g., Sharp Curves or Dangerous Intersections) or Incompatible Uses (e.g., Farm Equipment)

Although the nature and location of specific development projects under the proposed plan cannot be known, the plan would substantially increase industrial uses in the Plan Area and implement commercial and minor residential development. Thus, the industrial and other uses would substantially increase traffic, including truck traffic, in the Plan Area. Subsequent projects under the plan would be required to comply with all applicable design standards and would be subject to review by City staff to ensure these requirements are met. Individual project contractors would be required to develop and implement a TCP in accordance with policy 210.01 ("Traffic Control Policies and Procedures") of the City of Fresno Public Works Department Policies and Procedures to minimize hazards during construction. Chapter 5 of the SCSP identifies development standards with which individual projects would be required to comply. These include provisions for truck routing, parking, and internal project site signage and wayfinding. Finally, the City is engaged in a truck reroute study for the portion of Fresno subject to AB 617, which includes the Plan Area. The study is designed to address, among other things, truck transportation conflicts, accidents, and residential and school impacts. With implementation of existing requirements, there is no evidence to suggest that implementation of the proposed plan would substantially increase transportation hazards from design features or incompatible uses. While the truck reroute study is not yet complete, it is anticipated that its recommendations will be implemented by the City and would further reduce the potential for such hazards. This impact would be **less than significant**.

Construction

Construction of future developments in the Plan Area would require use of trucks and heavy equipment and generate other vehicle trips from workers traveling to and from work sites. Depending on the scale and location of construction activities and the proximity and number of sites under construction at one time, Plan Area roadways could be disrupted and introduce sources of hazard. However, construction transportation impacts, including hazards, would be localized and temporary, and construction associated with the implementation of proposed plan developments would be required to comply with City standards and regulations, including protocols that address safety and minimize traffic disturbance during construction activities.

Before construction of an individual project, the project contractor would be required to obtain a Street Work Permit to allow any construction work within a public right-of-way. A TCP would be prepared by the contractor in accordance with policy number 210.01 ("Traffic Control Policies and Procedures") of the City of Fresno Public Works Department Policies and Procedures. The TCP would demonstrate appropriate traffic handling during construction activities for all work that could impact the traveling public. Additionally, if off-site construction activities necessitate travel lane closures, each project would be required to follow protocol as described in policy number 210.1 ("Conditions for Roadway Closures and Lane Closures") in the City of Fresno Public Works Department Policies and Procedures. Therefore, implementation of the proposed plan would not result in substantial increases in transportation hazards during construction.

Operations

The City of Fresno has well-established roadway and site design standards that guide the design and construction of transportation facilities to minimize design hazards for all users of the circulation system. City policies require evaluation of safety conditions as part of the project review process. Therefore, individual projects developed under the proposed plan would be subject to City of Fresno review processes which would require that the project design comply with all applicable City and industry roadway/driveway design standards, such as driver sight distance requirements. As needed, improvements to meet safety standards are identified by the City and required as part of project approval.

The Traffic Planning Section of the City's Planning and Development Department provides Conditions of Approval, site plan review, and design guidelines for development projects. Projects developed under plan would be required to meet all applicable regulations within the City Municipal Code, including those in Chapter 13 for off-site roadway, intersection, and sidewalk improvements. On-site design would comply with the circulation and safety standards as detailed in Chapter 15 of the City of Fresno Municipal Code (Section 15-2423). Additionally, roadway improvements would be required to meet design guidelines such as the accessibility requirements of Title 24 (California Building Code), Americans with Disabilities Act standards, California Manual on Uniform Traffic Control Devices, and the Caltrans Roadway Design Manual.

Although individual development projects would be required to comply with the standards and regulations detailed above, the proposed plan could result in increased transportation safety hazards. Project-generated vehicles and trucks, including heavy trucks, would use local roadways to access development sites and regional transportation facilities such as SR 99 and SR 41, railways, or other destinations within and beyond the Plan Area during operation. Substantial vehicle and heavy truck traffic could increase safety hazards for other vehicles, bicycles, and pedestrians, particularly through residential communities including rural residential, low, and medium residential neighborhoods. Currently, many roadways within the Plan Area are relatively narrow, lack pedestrian facilities, and are not suitable for the type of vehicles that would be used to transport goods and equipment to and from the Plan Area.

As described in Impacts 4.15-1 and 4.15-2, consistency with the City's General Plan policies would be required, and policies T-1, T-2, T-7 through 11, and T-13 of the SCSP are intended to preclude transportation hazards. Policies T-1 and T-2 would be implemented by the City's Public Works Department through the South Central Fresno AB 617 Community Truck Reroute Study. Policy outcomes and recommendations that result from the truck reroute study shall be adopted by reference in the SCSP. Additionally, the City Public Works Department and subsequent developments within the SCSP would implement policies T-7 through T-11 and T-13. These policies would be addressed as new land is annexed into the city, new development is proposed within the Plan Area, funding is sought/granted, and ATP and Complete Streets Policy improvements are implemented. Repair and maintenance of roads will occur on a life-cycle basis and as funding is available.

Chapter 5 of the proposed plan also establishes development standards with which each individual project would be required to comply. Following the adoption of the proposed plan, the City's Development Code would be amended to include the following standards related to transportation safety:

- ▶ Unless physically impossible, loading docks and truck entries shall be oriented away from abutting sensitive receptors.

- ▶ To the greatest extent feasible, loading docks, truck entries, and truck drive aisles shall be located away from nearby sensitive receptors. In making feasibility decisions, the City must comply with existing laws and regulations and balance public safety and the site development's potential impacts to nearby sensitive receptors. Therefore, loading docks, truck entries, and drive aisles may be located near sensitive receptors at the discretion of the Planning Director, but any such site design shall include measures designed to minimize overall impacts to nearby sensitive receptors.
- ▶ For any warehouse building larger than 400,000 square feet in size, the building's loading docks shall be located a minimum of 300 feet away, measured from the property line of the sensitive receptor to the nearest dock door which does not exclusively serve electric trucks, using a direct straight-line method.
- ▶ Entry gates into the loading dock/truck court area shall be positioned after a minimum of 140 feet of total available stacking depth inside the property line. The stacking distance shall be increased by 70 feet for every 20 loading docks beyond 50 docks. Queuing, or circling of vehicles, on public streets immediately pre- or post-entry to an industrial commerce facility is strictly prohibited unless queuing occurs in a deceleration lane or right turn lane exclusively serving the facility.
- ▶ Applicants shall obtain approval of all turning templates to verify truck turning movements at entrance and exit driveways and street intersection adjacent to industrial buildings prior to entitlement approval.
- ▶ Prior to issuance of certificate of occupancy, facility operators shall establish and submit for approval a Truck Routing Plan to and from the State Highway System based on the City's latest Truck Route Map.
 - The plan shall describe the operational characteristics of the use of the facility operator, including, but not limited to, hours of operations, types of items to be stored within the building, and proposed truck routing to and from the facility to designated truck routes that avoids passing sensitive receptors, to the greatest extent possible.
 - The plan shall include measures, such as signage and pavement markings, queuing analysis and enforcement, for preventing truck queuing, circling, stopping, and parking on public streets.
 - The facility operator shall be responsible for enforcement of the plan.
 - A revised plan shall be submitted prior to a business license being issued by the City for any new tenant of the property.
 - The Planning Director shall have discretion to determine if changes to the plan are necessary, including any additional measures to alleviate truck routing and parking issues that may arise during the life of the facility.
- ▶ Signs and drive aisle pavement markings shall clearly identify the onsite circulation pattern to minimize unnecessary on-site vehicular travel.
- ▶ Facility operators shall post signs in prominent locations inside and outside of the building indicating that off-site parking for any employee, truck, or other operation related vehicle is strictly prohibited. The City may require facility operators to post signs on residential streets indicating that off-site truck parking is prohibited.
- ▶ Signs shall be installed at all truck exit driveways directing truck drivers to the truck route as indicated in the Truck Routing Plan and State Highway System.
- ▶ Signs shall be installed in public view with contact information for a local designated representative who works for the facility operator and who is designated to receive complaints about excessive dust, fumes, or odors, and truck and parking complaints for the site, as well as contact information for the SJVAPCD's complaint call-line: 1-800-870-1037. Any complaints made to the facility operator's designee shall be answered within 72 hours of receipt.

Implementation of SCSP policies and development standards and compliance with the City's policies, design standards and regulations would reduce the potential for conflict between passenger vehicles, trucks, bicycles, and pedestrians. In the context of these safeguards, there is no evidence to suggest that plan development would result in substantial increases in transportation hazards during operations. The City of Fresno Systemic Local Roadway

Safety Plan identifies 32 Tier I countermeasures applicable to locations where collisions have occurred and in locations with similar characteristics to proactively reduce collision risk (City of Fresno 2020). See Table 8.2, "Summary of the Prioritized Systemic Treatments and Related Information," of the Systemic Local Roadway Safety Plan for details. Although, none of the top 20 high risk corridors and intersections in the city are located within the Plan Area, there were half mile segments and intersections within the Plan Area that scored high for vehicle crash severity. Therefore, subsequent development in the Plan Area would be subject to the improvements established in the Systemic Local Roadway Safety Plan.

In addition, as mentioned above, the City and the SJVAPCD are engaged in a truck reroute study (and companion health impact assessment) for the South Central Fresno AB 617 Community, which includes the Plan Area (see Section 4.3, "Air Quality" for discussion of AB 617 and Chapter 1, "Introduction" of the SCSP for discussion of the Truck Reroute Study). The study is designed to address, among other things, truck transportation conflicts, accidents, and residential and school impacts. The truck reroute study is not yet complete, but it is anticipated that its recommendations will be implemented by the City and would further reduce the potential for transportation conflicts and hazards from incompatible land uses.

Summary

Transportation hazards related to construction would be temporary. The construction contractors for individual projects would be required to develop and implement TCPs to minimize any potential hazards during construction. Individual projects would be required to meet all City design standards and other regulations and would be subject to review by the City's Traffic Operations and Planning Division, Traffic Planning Section. Additionally, the proposed plan includes policies and development standards specific to the Plan Area, the implementation of which would minimize risks of safety hazards related to vehicle and truck circulation. With implementation of existing requirements, there is no evidence to suggest that implementation of the proposed plan would substantially increase transportation-related hazards due to a geometric design feature or incompatible uses. While the truck reroute study is not yet complete, it is anticipated that its recommendations will be implemented by the City and would further reduce the potential for such hazards. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.15-4: Result in Inadequate Emergency Access

Subsequent projects and transportation improvements that would be developed under the proposed plan would be required to meet State and local standards pertaining to emergency access including design and safety regulations provided in the 2022 California Fire Code and City Municipal Code. Additionally, individual projects associated with the proposed plan would be subject to review by City and responsible emergency service staff ensuring all standards are met during construction and operations. There is no evidence to suggest that development under the proposed plan would result in inadequate emergency access. This impact would be **less than significant**.

As discussed in Impact 4.15-3 above, all development under the proposed plan would be required to meet City of Fresno design standards and safety protocols during construction. Individual projects would also be required to comply with the City of Fresno Municipal Code Section 15-2423, "Circulation and Safety," which provides that parking lots shall be "designed so that sanitation, emergency, and other public service vehicles can provide service without backing unreasonable distances or making other dangerous or hazardous turning movements, as determined by the Review Authority" (City of Fresno Municipal Code Section 15-2423). Subsequent projects under the proposed plan would also be required to adhere to standards set forth in the 2022 California Fire Code as adopted by the City of Fresno Section 10-50100, "Adoption of the California Fire Code," of the Municipal Code which establishes minimum widths of 24 feet for fire apparatus roads to allow adequate access. Section 3310.1 of the 2019 California Fire Code identifies minimum requirements to provide required emergency access during construction activities.

With adherence to local and State emergency access and design standards and regulations, implementation of the proposed plan would not adversely affect emergency vehicle access or response times. Therefore, the proposed plan would not result in inadequate emergency access. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

4.16 UTILITIES AND SERVICE SYSTEMS

This section evaluates the availability of existing utility and infrastructure systems (including water, wastewater, stormwater, electricity, natural gas, and telecommunications) to serve future development in the Plan Area and the impact of the proposed plan on these systems. The analysis is based on documents obtained from the City of Fresno and technical reports prepared to address water supply and sewer conveyance adequacy related to implementation of the proposed plan. Please refer to Section 4.6, "Energy," for a discussion of energy demand.

During the public scoping period for the Draft EIR, comments were received that expressed concerns related to financial support for utilities infrastructure, sufficient water supply, and consistency with Fresno Metropolitan Flood Control District (FMFCD) requirements. This section contains a discussion of water supply sufficiency as evaluated in a water supply assessment (WSA) (Appendix E) prepared for the proposed plan. FMFCD requirements are discussed below as they relate to storm water drainage. Financial issues, unless there is a clear and direct link to a physical environmental effect, are beyond the scope of CEQA analysis and are not discussed in this Draft EIR.

4.16.1 Regulatory Setting

FEDERAL

Water

Safe Drinking Water Act

As mandated by the Safe Drinking Water Act (Public Law 93-523), passed in 1974, EPA regulates contaminants of concern to domestic water supply. Such contaminants are defined as those that pose a public health threat or that alter the aesthetic acceptability of the water. These types of contaminants are regulated by the US Environmental Protection Agency (EPA) primary and secondary maximum contaminant levels (MCLs). MCLs and the process for setting these standards are reviewed triennially. Amendments to the Safe Drinking Water Act enacted in 1986 established an accelerated schedule for setting drinking water MCLs. EPA has delegated responsibility for California's drinking water program to the State Water Resources Control Board (SWRCB) Division of Drinking Water. SWRCB Division of Drinking Water is accountable to EPA for program implementation and for adoption of standards and regulations that are at least as stringent as those developed by EPA.

Stormwater

Refer to Section 4.10, "Hydrology and Water Quality," for a discussion of the Clean Water Act (CWA), including CWA Section 401, Water Quality Certification and 402, National Pollutant Discharge Elimination System.

STATE

Water

Safe Drinking Water Quality Regulations

The California Department of Public Health (DPH) establishes "primary" and "secondary" Domestic Water Quality Standards for drinking water supplied by public water systems such as the city. The standards are required by state law to meet or exceed standards adopted by EPA. The concentrations of specified constituents are limited to maximum contaminant levels and are established on a constituent basis for bacteriological contaminants (such as coliform), organic chemicals (such as benzene), inorganic chemicals (such as total dissolved solids), and radioactivity (such as gross alpha particle activity). Primary standards are set at levels necessary to protect public health and may not be exceeded. Secondary standards are based on aesthetic criteria, such as taste and odor, and are composed of (1) recommended limits that may be exceeded but are not recommended to be exceeded; (2) upper limits that may

be exceeded for a limited duration with prior DPH approval; and (3) short term limits that may not be exceeded. Public water systems also must obtain a domestic water supply permit from DPH that must be amended to reflect changes to the water supply system.

Urban Water Management Planning Act

The Urban Water Management Planning Act (California Water Code [CWC] Sections 10610-10610.4) requires urban water suppliers that provide water for municipal purposes to more than 3,000 customers, or more than 3,000 acre-feet per year (afy) of water, to prepare an urban water management plan (UWMP). UWMPs assist water supply agencies in water resource planning given existing and anticipated future demands and must include a water supply and demand assessment comparing total water supply available to the water supplier with the total projected water use over a 20-year period. The Act requires that the plans be updated every five years and submitted to the California Department of Water Resources (DWR). The purpose of the plans is to support long-term resource planning and ensure adequate water supplies are available to meet existing and future water demands. The City's 2020 UWMP is discussed below.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA) became law on January 1, 2015 and applies to all groundwater basins in the state (Water Code Section 10720.3). (The SGMA is composed of three separate bills: SB 1168, SB 1319, and AB 1739. All three were signed into law by the Governor on September 16, 2014.) By enacting SGMA, the legislature intended to provide local agencies with the authority and the technical and financial assistance necessary to sustainably manage groundwater within their jurisdiction (CWC Section 10720.1).

Pursuant to SGMA, any local agency that has water supply, water management, or land use responsibilities within a groundwater basin may elect to be a groundwater sustainability agency (GSA) for that basin (Water Code Section 10723). All GSAs were required to complete and begin implementing a groundwater sustainability plan (GSP) by January 31, 2022. The GSP must outline how the GSA will implement, manage, and measure specific actions for the health and viability of the basin. DWR will evaluate the GSP and provide the GSA with an assessment of the plan and any necessary recommendations within 2 years for initial establishment. The DWR will also review plans as updated by GSAs every 5 years.

Water Supply Assessment

PRC Section 21151.9 requires that a water supply assessment (WSA) be prepared for proposed projects as defined in the statute to ensure that long term water supplies are sufficient to meet the project's demands in normal, single dry, and multiple dry years for a period of 20 years. Preparation of a WSA is required if a proposed action meets the statutory definition of a "water-demand project," which means (CWC Section 20912[a]):

- ▶ a proposed residential development of more than 500 dwelling units;
- ▶ a proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet (sq. ft.) of floor space;
- ▶ a proposed commercial office building employing more than 1,000 persons or having more than 250,000 sq. ft. of floor space;
- ▶ a proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 sq. ft. of floor area;
- ▶ a mixed-use project that includes one or more of the projects specified in the above bullets; or
- ▶ a project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling unit project.

Completion of a WSA requires collection of proposed water supply data and information relevant to the project in question, an evaluation of existing/current use, a projection of anticipated demand sufficient to serve the project for a period of at least 20 years, delineation of proposed water supply sources, and an evaluation of water supply sufficiency under normal, single-dry year and multiple-dry year conditions.

A WSA is required to be prepared by the public water system that will serve the project, unless there is no public water system, in which case the WSA is prepared by the CEQA lead agency. A “public water system” is defined in Section 15155 as a system that provides piped water for human consumption and has at least 3,000 connections.

Stormwater

See Section 4.10, “Hydrology and Water Quality,” for a discussion of the requirements of NPDES permits as they relate to stormwater discharge, which includes design and operational best management practices for drainage facility design.

Wastewater

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) is California’s statutory authority for the protection of water quality. Under the Porter-Cologne Act, the state must adopt water quality plans, policies, and objectives that will provide protection to the state’s waters for the use and enjoyment of the people of California. In California, the SWRCB has authority and responsibility for establishing policy for water quality control issues for the state. Regional authority for planning, permitting, and enforcement is delegated to the nine regional water quality control boards (RWQCBs). The Porter-Cologne Act authorizes the SWRCB and RWQCB to issue NPDES permits containing WDRs, and to enforce these permits. SWRCB and RWQCB regulations implementing the Porter-Cologne Act are in Title 27 of the CCR.

General Waste Discharge Requirements for Sanitary Sewer Systems

The General Waste Discharge Requirements for Sanitary Sewer Systems (SWRCB Order No 2006-0003-DWQ) apply to sanitary sewer systems that are greater than 1 mile long and collect or convey untreated or partially treated wastewater to a publicly owned treatment facility. The goal of Order No. 2006-0003 is to provide a consistent statewide approach for reducing Sanitary Sewer Overflows (SSOs), accidental releases of untreated or partially treated wastewater from sanitary sewer systems, by requiring that:

1. In the event of an SSO, all feasible steps be taken to control the released volume and prevent untreated wastewater from entering storm drains, creeks, etc.
2. If an SSO occurs, it must be reported to the SWRCB using an online reporting system developed by the SWRCB.
3. All publicly owned collection system agencies with more than 1 mile of sewer pipe in the state must develop a Sewer System Management Plan (SSMP), which must be updated every 5 years.

Solid Waste

California’s Integrated Waste Management Act of 1989

The California Integrated Waste Management Act (CIWMA) of 1989 created the California Integrated Waste Management Board, now known as the California Department of Resources Recycling and Recovery (CalRecycle). CalRecycle is the agency designated to oversee, manage, and track California’s 92 million tons of waste generated each year. CalRecycle provides grants and loans to help cities, counties, businesses, and organizations meet the state’s waste reduction, reuse, and recycling goals. CalRecycle promotes a sustainable environment in which these resources are not wasted but can be reused or recycled. In addition to many programs and incentives, CalRecycle promotes the use of new technologies to divert resources away from landfills. CalRecycle is responsible for ensuring that waste management programs are carried out primarily through local enforcement agencies.

The CIWMA is the result of two pieces of legislation: AB 939 and SB 1322. The CIWMA was intended to minimize the amount of solid waste that must be disposed of through transformation and land disposal by requiring all cities and counties to divert 25 percent of all solid waste from landfill facilities by January 1, 1995, and 50 percent by January 1, 2000.

The 50 percent diversion requirement is measured in terms of per capita disposal expressed as pounds per day per resident and per employee. The per capita disposal and goal measurement system uses an actual disposal measurement based on population and disposal rates reported by disposal facilities, and it evaluates program implementation efforts.

Mandatory Recycling Requirements

AB 341 (2011) amended the California Integrated Waste Management Act of 1989 to include a provision declaring that it is the policy goal of the state that not less than 75 percent of solid waste generated be source-reduced, recycled, or composted by the year 2020, and annually thereafter. In addition, AB 341 required CalRecycle to develop strategies to achieve the state's policy goal.

Mandatory Commercial Organics Recycling Requirements

In October 2014, AB 1826 Chesbro (Chapter 727, Statutes of 2014) was signed into law, 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 of five or more units (multifamily dwellings are not required to have a food waste diversion program, however). Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste.

SB 1374, Construction and Demolition Waste Materials Diversion Requirements, mandates 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 CalRecycle to adopt a model construction and demolition ordinance for voluntary implementation by local jurisdictions.

Short-Lived Climate Pollutant Reduction Strategy

In September 2016, SB 1383 (Lara, Chapter 395, Statutes of 2016) was signed into law, establishing methane emissions reduction targets in a statewide effort to reduce emissions of short-lived climate pollutants in various sectors of California's economy. 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 volume of statewide disposal of organic waste from 2014 levels 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. SB 1383 requires that, by January 1, 2022, every jurisdiction provide organic waste collection services to residents and businesses.

Electricity and Natural Gas

California Code of Regulations, Energy Efficiency Standards

Energy consumption in new buildings in California is regulated by the state's Building Energy Efficiency Standards, part of the California Building Standards Code (CALGreen), contained in the CCR, Title 24, Part 2, Chapter 2-53. Title 24 applies to all new construction of both residential and nonresidential buildings, and regulates energy consumed for heating, cooling, ventilation, water heating, and lighting. Updated every 3 years, the 2019 Building Energy Efficiency Standards were most recently approved and adopted by the California Building Standards Commission in 2022 and became effective in January 2023 and have improved efficiency requirements from previous codes.

PG&E Gas Rules

PG&E's Gas Rules 15 and 16 provide policies and procedures for the extension of gas services and distribution mains necessary to furnish permanent services to customers. It outlines responsibilities for installation and extension of gas lines, as well as financial contributions by project applicants.

LOCAL

Water

Fresno General Plan

The following policies are applicable to water supplies and facilities in the Plan Area (City of Fresno 2022).

Public Utilities Element

Objective PU-8: Manage and develop the City's water facilities on a strategic timeline basis that recognizes the long life cycle of the assets and the duration of the resources, to ensure a safe, economical, and reliable water supply for existing customers and planned urban development and economic diversification.

- ▶ **Policy PU-8-a: Forecast Need.** Use available and innovative tools, such as computerized flow modeling to determine system capacity, as necessary to forecast demand on water production and distribution systems by urban development, and to determine appropriate facility needs.
- ▶ **Policy PU-8-b: Potable Water Supply and Cost Recovery.** Prepare for provision of increased potable water capacity (including surface water treatment capacity) in a timely manner to facilitate planned urban development consistent with the General Plan. Accommodate increase in water demand from the existing community with the capital costs and benefits allocated equitably and fairly between existing users and new users, as authorized by law, and recognizing the differences in terms of quantity, quality and reliability of the various types of water in the City's portfolio.
- ▶ **Policy PU-8-c: Conditions of Approval.** Set appropriate conditions of approval for each new development proposal to ensure that the necessary potable water production and supply facilities and water resources are in place prior to occupancy.
- ▶ **Policy PU-8-d: CIP Update.** Continue to evaluate Capital Improvement Programs and update them, as appropriate, to meet the demands of both existing and planned development consistent with the General Plan.
- ▶ **Policy PU-8-e: Repairs.** Continue to evaluate existing water production and distribution systems and plan for necessary repair or enhancement of damaged or antiquated facilities.
- ▶ **Policy PU-8-f: Water Quality.** Continue to evaluate and implement measures determined to be appropriate and consistent with water system policies, including prioritizing the use of groundwater, installing wellhead treatment facilities, constructing above-ground storage and surface water treatment facilities, and enhancing transmission grid mains to promote adequate water quality and quantity.
- ▶ **Policy PU-8-g: Review Project Impact on Supply.** Mitigate the effects of development and capital improvement projects on the long-range water budget to ensure an adequate water supply for current and future uses.

Fresno Urban Water Management Plan

The City's 2020 UWMP was adopted in 2021, as required by the California Urban Water Management Planning Act, which requires all urban water suppliers with more than 3,000 connections or distributing more than 3,000 afy to complete an UWMP every five years. As of the close of the 2020 calendar year, the City had over 139,500 residential, commercial, industrial, and institutional water service connections and produced nearly 122,000 acre-feet (af) of water. As a result, the City prepared and adopted a UWMP and submitted it to DWR, as required.

Wastewater

The following policies are applicable to wastewater services in the Plan Area.

Fresno General Plan

Public Utilities Element

Objective PU-4: Ensure provision of adequate trunk sewer and collector main capacities to serve existing and planned urban development, consistent with the Wastewater Master Plan.

- ▶ **Policy PU-4-a: Plan for Regional Needs.** Coordinate and consult with the City of Clovis, pursuant to the Fresno-Clovis Sewerage System Joint Powers Agreement, so that planning and construction of sewer collection facilities will continue to meet the regional needs of the Metropolitan Area.
- ▶ **Policy PU-4-b: New Trunk Facilities.** Pursue construction of new or replacement sewer trunk facilities or other alternatives consistent with the Wastewater Master Plan to accommodate the uses as envisioned in this General Plan.
- ▶ **Policy PU-4-c: System Extension and Cost Recovery.** Pursue enlargement or extension of the sewage collection system where necessary to serve planned urban development, with the capital costs and benefits allocated equitably and fairly between the existing users and new users.
- ▶ **Policy PU-4-d: Capacity Modeling.** Continue development and utilization of citywide sewer flow monitoring and computerized flow modeling to determine availability of sewer collection system capacity to serve planned urban development.
- ▶ **Policy PU-4-e: Evaluate and Maintain Infrastructure.** Promote the health and safety of the community, and preserve the longevity and sound condition of the sewer collection system through evaluation and maintenance of the sewer infrastructure.
 - Continue assessments of existing infrastructure and facilitate necessary repair to damaged and worn-out pipelines.
 - Continue routine sewer line maintenance and cleaning programs to prevent line blockages caused by root intrusion, grease buildup, and pipe failure.
 - Continue a sewer line replacement program and funding to repair or replace sewer lines damaged or worn beyond useful life.

Objective PU-5: Preserve groundwater quality and ensure that the health and safety of the entire Fresno community is not impaired by use of private, onsite disposal systems.

- ▶ **Policy PU-5-a: Mandatory Septic Conversion.** Continue to evaluate and pursue where determined appropriate the mandatory abatement of existing private wastewater disposal (septic) systems and mandatory connection to the public sewage collection and disposal system.

Parks, Open Space, and School Element

Objective PU-7: Promote reduction in wastewater flows and develop facilities for beneficial reuse of reclaimed water and biosolids for management and distribution of treated wastewater.

- ▶ **Policy POSS-7-b: Reduce Stormwater Leakage.** Reduce storm water infiltration into the sewer collection system, where feasible, through a program of replacing old and deteriorated sewer collection pipeline; eliminating existing stormwater sewer cut-ins to the sanitary sewer system; and avoiding any new sewer cut-ins except when required to protect health and safety.

Stormwater

Fresno General Plan

The following policies are applicable to stormwater in the Plan Area.

Parks, Open Space, and School Element

Objective POSS-3: Ensure that park and recreational facilities make the most efficient use of land; that they are designed and managed to provide for the entire Fresno community; and that they represent positive examples of design and energy conservation.

- ▶ **Policy POSS-3-i: Joint Use with Drainage Facilities.** Continue to seek joint use agreements for use of FMFCD stormwater drainage facilities.

Noise and Safety Element

Objective NS-3: Minimize the risks to property, life, and the environment due to flooding and stormwater runoff hazards.

- ▶ **Policy NS-3-a: Stormwater Drainage and Flood Control Master Plan.** Support the full implementation of the FMFCD Storm Drainage and Flood Control Master Plan, the completion of planned flood control and drainage system facilities, and the continued maintenance of stormwater and flood water retention and conveyance facilities and capacities. Work with the FMFCD to make sure that its Storm Drainage and Flood Control Master Plan is consistent with the General Plan.
- ▶ **Policy NS-3-b: Curb and Gutter Installation.** Coordinate with Fresno Metropolitan Flood Control District (FMFCD) to install curbing, gutters, and other drainage facilities with priority to existing neighborhoods with the greatest deficiencies and consistent with the Storm Drainage and Flood Control Master Plan.
- ▶ **Policy NS-3-c: Dual Use Facilities.** Support multiple uses of flood control and drainage facilities as follows:
 - Use, wherever practical, FMFCD facilities for groundwater management and recharge; and
 - Promote recreational development of ponding basin facilities located within or near residential areas, compatible with the stormwater and groundwater recharge functions.
- ▶ **Policy NS-3-d: Landscaped Buffer.** City will support the development of FMFCD ponding basins including the landscaping and irrigation for the top one third of the side sloped areas consistent with the FMFCD Basin Design Criteria.
- ▶ **Policy NS-3-e: Pollutants.** Work with FMFCD to prevent and reduce the existence of urban stormwater pollutants pursuant to the requirements of the National Pollution Discharge Elimination Systems Act.
- ▶ **Policy NS-3-h: Runoff Controls.** Implement grading regulations and related development policies that protect area residents from flooding caused by urban runoff produced from events that exceed the capacity of the Storm Drainage and Flood Control Master Plan system of facilities. Place all structures and/or flood-proofing in a manner that does not cause floodwaters to be diverted onto adjacent property, increase flood hazards to other property, or otherwise adversely affect other property.
- ▶ **Policy NS-3-i: New Development Must Mitigate Impact.** Require new development to not significantly impact the existing storm drainage and flood control system by imposing conditions of approval as project mitigation, as authorized by law. As part of this process, closely coordinate and consult with the FMFCD to identify appropriate conditions that will result in mitigation acceptable and preferred by FMFCD for each project.

Fresno Municipal Code

Chapter 6, Municipal Services and Utilities, Article 7, Urban Storm Water Quality Management and Discharge Control, of the Fresno Municipal Code establishes provisions regarding stormwater discharges. The purpose of the City's Urban Storm Water Quality Management and Discharge Control Ordinance is to ensure the health, safety, and general welfare of citizens and protect the water quality of watercourses and water bodies in a manner pursuant to and consistent with the CWA (33 U.S.C. Section 1251, et seq.) by reducing pollutants in urban stormwater discharges to the maximum extent practicable and by effectively prohibiting non-stormwater discharges to the storm drain system.

Fresno Metropolitan Flood Control District Stormwater Quality Management Plan

The Storm Water Quality Management Program (SWQMP) was developed pursuant to Order No. R5-2013-0080. The municipal National Pollutant Discharge Elimination System stormwater permit was issued to the Fresno Metropolitan Flood Control District, the cities of Fresno and Clovis, Fresno County, and the California State University at Fresno by the Central Valley Regional Water Quality Control Board (Regional Board) on May 31, 2013. The SWQMP represents the 5-year management strategy for controlling the discharge of pollutants in stormwater and urban runoff from the Fresno-Clovis metropolitan area to the during the third permit term (2013-2018).

The SWQMP includes specific pollution prevention and control practices for Fresno-Clovis urban drainage system planning, design, construction, and maintenance. The Program also includes public education to prevent stormwater pollution; specifies construction, industrial/commercial, municipal, and new development control practices; procedures to prevent and respond to illicit discharges and connections; monitoring to assess stormwater impacts on receiving waters; and program effectiveness assessments to evaluate the effectiveness of best management practices.

Solid Waste

Fresno General Plan

The following policies are applicable to solid waste services in the Plan Area.

Public Utilities Element

Objective PU-9: Provide adequate solid waste facilities and services for the collection, transfer, recycling, and disposal of refuse.

- ▶ **Policy PU-9-a: New Techniques.** Continue to collaborate with affected stakeholders and partners to identify and support programs and new techniques of solid waste disposal, such as recycling, composting, waste to energy technology, and waste separation, to reduce the volume and toxicity of solid wastes that must be sent to landfill facilities.
- ▶ **Policy PU-9-b: Compliance with State Law.** Continue to pursue programs to maintain conformance with the Solid Waste Management Act of 1989 or as otherwise required by law and mandated diversion goals.

Resource Conservation and Resilience Element

Objective RC-11: Strive to reduce the solid waste going to landfills to zero by 2035.

- ▶ **Policy RC-11-a: Waste Reduction Strategies.** Maintain current targets for recycling and reuse of all types of waste material in the city and enhance waste and wastewater management practices to reduce natural resource consumption, including the following measures:
 - Continue to require recyclable material collection and storage areas in all residential development.
 - Establish recycling collection and storage area standards for commercial and industrial facilities to size the recycling areas according to the anticipated types and amounts of recyclable material generated.
 - Provide educational materials to residents on how and what to recycle and how to dispose of hazardous waste.
 - Provide recycling canisters and collection in public areas where trash cans are also provided.
 - Institute a program to evaluate major waste generators and identify recycling opportunities for their facilities and operations.
 - Continue to partner with the California Integrated Waste Management Board on waste diversion and recycling programs and the CalMax (California Materials Exchange) program.
 - Evaluate the feasibility of a residential, restaurant, and institutional food waste segregation and recycling program, to reduce the amount of organic material sent to landfill and minimize the emissions generated by decomposing organic material.
 - Evaluate the feasibility of "carbon footprinting" for the City's wastewater treatment facilities, biomass and composting operations, solid waste collection and recycling programs.
 - Expand yard waste collection to divert compostable waste from landfills.
 - Study the feasibility and cost-benefit analysis of a municipal composting program to collect and compost food and yard waste, including institutional food and yard waste, using the resulting compost matter for City park and median maintenance.
- ▶ **Policy RC-11-b: Zero Waste Strategy.** Create a strategic and operations plan for fulfilling the City Council resolution committing the City to a Zero Waste goal.

4.16.2 Environmental Setting

WATER SUPPLY

As described above, the City's 2020 UWMP includes water demand projections for current water demands within the City and anticipated water demands associated with future development projects and planning areas within the City's General Plan Sphere of Influence through 2045. Future development includes the Plan Area; however, the land uses in the City's General Plan are not the same as those proposed in the SCSP. Thus, the WSA prepared for the SCSP evaluated whether adequate water supplies would be available for the Plan Area, as proposed in the SCSP. The WSA is summarized below (City of Fresno 2023).

Surface Water

The City currently receives potable water supplies from surface and groundwater sources. Surface water is delivered to the City by two separate sources: Fresno Irrigation District (FID) Agreement for Kings River water and US Bureau of Reclamation (Reclamation) Central Valley Project (CVP) Friant Division Contract for San Joaquin River water. Surface water is either treated and delivered to customers or delivered to groundwater recharge basins. Surface water supply is summarized in the following sections (City of Fresno 2023).

Surface Water Supplies through FID Agreement

In May 1976, the City and FID executed an agreement that stipulated that as land is annexed to the City, the City will receive a pro rata share of FID's Kings River entitlement; this agreement was revised, amended, and restated in December 2016. The pro rata share is based on the area annexed to the City, and within FID's boundaries, as compared to the total area of FID's water service area. The 2016 FID Agreement sets the maximum at 29 percent, although the City's service area is anticipated to expand and encompass more than 29 percent of FID's service area between 2025 and 2030. In 2020, the City's percentage of overall FID Kings deliveries was 25.79 percent (City of Fresno 2023).

The agreement stipulates that the allocation amount will be reviewed each year by the two agencies to address new annexations to the City. As the City annexes new areas, the allocation will increase up to the limits stipulated in the 2016 agreement. During normal hydrologic water years, the City estimates it will receive 131,600 af of water from FID in 2045 based on the City's projected future water service area (City of Fresno 2023).

Surface Water Supplies through Reclamation Contract

The City, through an agreement originally executed in January of 1961, secured a surface water supply from the CVP-Friant Division of Reclamation. This agreement for an annual water supply of 60,000 af of Class 1 water was last renewed in 2010 as a Section 9(d) Contract that provides water from the San Joaquin River in perpetuity. The Reclamation CVP-Friant Division facilities generally include the following: Friant Dam (Millerton Reservoir), the Friant Kern Canal, and the Madera Canal. The Friant-Kern Canal is maintained and operated by the Friant Water Authority. The Reclamation water supply is a wholesale supply (City of Fresno 2023).

Class 1 water was intended to be a supply that would be dependable in practically every year, regardless of the type of hydrologic water year. Class 2 water is essentially excess water available as determined by Reclamation and less reliable than Class 1 water. Class 1 water has historically been very reliable until the 2006 San Joaquin River Restoration Settlement and, more recently, by the restrictions on diversions from the Sacramento-San Joaquin Delta (Delta) due to concerns over the declining health of Delta ecosystem. Since 2006, the City has assumed 100 percent of its annual allocation in normal and normal-wet years, and between 0 and 75 percent of its annual allocation in critical, dry, and normal-dry years (City of Fresno 2023).

Groundwater

The City pumps groundwater from a portion of the Kings Subbasin underlying the City. Per the City's 2020 UWMP, the City has over 270 municipal wells and is actively operating approximately 202 of those wells. Groundwater quality is a concern because the groundwater basin has several major contaminant plumes involving organic compounds,

inorganic compounds, solvents, pesticides, and other contaminants. Several City wells are currently being treated or blended to address various contaminants. When the City’s 2014 Water Master Plan was prepared, the total well capacity was approximately 460 million gallons per day (mgd) (City of Fresno 2023).

The Kings Subbasin is managed by the North Kings Groundwater Sustainability Agency (NKGSA). As a high priority basin, the NKGSA was required to complete and file a Groundwater Sustainability Plan (GSP) meeting SGMA requirements by January 2020. The GSP was submitted in January 2020 and was incorporated into the City’s 2020 UWMP, which shows the City’s water supply is sufficient to meet projected demands. The GSP was then revised and resubmitted in 2022 following DWR’s 2-year review and determination. The revised GSP was recommended by DWR staff for approval in March 2023 (City of Fresno 2023).

The City’s 2020 UWMP addresses the sufficiency of the City’s groundwater supplies, in conjunction with the City’s other existing and additional water supplies, to meet the City’s existing and planned future uses. Based on the information provided above and included in the City’s 2020 UWMP and in the NKGSA GSP, the City’s groundwater supply, together with the City’s other existing and additional planned future water supplies, is sufficient to meet the water demands of the SCSP and the City’s existing and planned future uses (City of Fresno 2023).

The City has a number of future capital improvement projects planned to maintain and upgrade existing water supply and distribution facilities. The City completed construction on the 80-mgd Southeast Surface Water Treatment Facility (SESWTF) in 2018, while the City’s Northeast Surface Water Treatment Facility (NESWTF) currently has a 30-mgd capacity and the capability to expand up to 60 mgd. The City is also planning to develop additional groundwater recharge facilities that would optimize use of available surface water supplies in normal and wet years. The timing for the NESWTF expansion and the development of additional groundwater recharge facilities will be examined as part of the City’s future Metro Plan update and determined based on need as the City grows and demands increase. The City also plans to continue expanding its recycled water distribution system to offset potable water demands (City of Fresno 2023).

Table 4.16-1 summarizes the City’s 2020 actual water supply deliveries and projected future water supply available through 2045.

Table 4.16-1 City of Fresno Historical and Projected Water Supplies (in acre-feet/year)

	2020	2025	2030	2035	2040	2045
Groundwater Production	55,028	138,090	143,630	149,100	154,490	159,820
Surface Water	108,739	185,030	191,600	191,600	191,600	191,600
Potable Water Subtotal	163,767	323,120	335,230	340,700	346,090	351,420

Notes: af/yr = acre-feet per year

Groundwater production in 2020 is actual, while the supplies listed for 2025-2045 is available supplies inclusive of banked recharged supplies.

Source: City of Fresno 2023.

Water Supply Reliability

The City’s surface water supply could face constraints during dry years. Water supplied from the FID contract is most susceptible to variable hydrologic conditions; however, the City recently constructed a dedicated 13-mile, 72-inch diameter raw water pipeline to deliver Kings River water to the SESWTF to allow for year-round operations and prevent shutdowns due to FID maintenance. The City also has a contract for 60,000 afy of Class 1 water from Reclamation’s CVP, which is affected by required downstream flows for the San Joaquin River and the imposed restrictions on water diversions from the Delta. These restrictions have resulted in years where the CVP-Friant Division contractors, such as the City, receive zero allocations. The water supply is also restricted by maintenance of infrastructure, which results in termination of water supply during November and/or December. To improve delivery reliability and to protect source water quality, the City constructed a 4.6-mile long raw water pipeline that will allow for the delivery of Reclamation water from the Friant-Kern Canal directly to the NESWTF (City of Fresno 2023).

Groundwater has long been the primary water supply source for the City. The continued use of groundwater is key to the sustainable use of all supplies, including surface water and recycled water. The groundwater supply has declined

over the last 80 years, requiring new deeper wells and the lowering of pumps in existing wells. A constraint to lowering the pumps in existing wells is the limited depth of numerous existing municipal water wells. If the declining groundwater trend is not reversed, it may reduce the City's pumping capacity (City of Fresno 2023).

Another constraint to the use of groundwater is existing contaminant plumes throughout the subbasin. To ensure the continued beneficial use of the groundwater supply, the City will have to remain proactive in pursuing responsible party(ies) to conduct the proper remediation to preserve the groundwater system as a viable and sustainable resource in perpetuity. Despite these concerns, the City does not expect hydrologic conditions to affect groundwater supplies (City of Fresno 2023).

Table 4.16-2 summarizes the projected availability of the City's existing and planned future potable water supplies and the City's projected water demands in normal, single dry and multiple dry years through 2045. This table indicates that the demand within the City's service area is not expected to exceed the City's supplies in any normal, single dry, or multiple dry year between 2025 and 2045 (City of Fresno 2023). The table does list potential surplus during drought years. Local and state regulations moderate conversation in drought years, which drop the demand. In addition, any surplus is unpumped groundwater supplies that needs to remain in the ground for resilience against an ongoing drought (City of Fresno 2023).

Table 4.16-2 City of Fresno Water Demand Versus Water Supply During Hydrologic Normal, Single Dry, and Multiple Dry Years (in acre-feet/year)

Hydrologic Condition	2025	2030	2035	2040	2045
Normal Year(a)					
Available Water Supply	329,030	341,140	346,610	352,000	357,330
Total Water Demand	199,204	212,756	222,310	231,876	241,447
Potential Surplus (Deficit)	129,826	128,384	124,300	120,124	115,883
Percent Shortfall of Demand	-	-	-	-	-
Single Dry Year(b)					
Available Water Supply	189,852	195,392	200,862	206,252	211,582
Total Water Demand	164,092	176,132	184,174	192,228	200,287
Potential Surplus (Deficit)	25,760	19,260	16,688	14,024	11,295
Percent Shortfall of Demand	-	-	-	-	-
Multiple Dry Year 1					
Available Water Supply	273,725	279,265	284,735	290,125	295,455
Total Water Demand	199,204	212,756	222,310	231,876	241,447
Potential Surplus (Deficit)	74,521	66,509	62,425	58,249	54,008
Percent Shortfall of Demand	-	-	-	-	-
Multiple Dry Year 2					
Available Water Supply	274,626	280,166	285,636	291,026	296,356
Total Water Demand	199,204	212,756	222,310	231,876	241,447
Potential Surplus (Deficit)	75,422	67,410	63,326	59,150	54,909
Percent Shortfall of Demand	-	-	-	-	-
Multiple Dry Year 3					
Available Water Supply	217,568	223,108	228,578	233,968	239,298
Total Water Demand	190,267	193,637	197,736	201,753	205,708
Potential Surplus (Deficit)	27,301	29,471	30,842	32,215	33,589
Percent Shortfall of Demand	-	-	-	-	-

Hydrologic Condition	2025	2030	2035	2040	2045
Multiple Dry Year 4					
Available Water Supply	189,852	195,392	200,862	206,252	211,582
Total Water Demand	162,551	165,920	170,020	174,036	177,992
Potential Surplus (Deficit)	27,301	29,471	30,842	32,215	33,589
Percent Shortfall of Demand	-	-	-	-	-
Multiple Dry Year 5					
Available Water Supply	314,840	320,380	325,850	331,240	336,570
Total Water Demand	199,204	212,756	222,310	231,876	241,447
Potential Surplus (Deficit)	115,636	107,624	103,540	99,364	95,123
Percent Shortfall of Demand	-	-	-	-	-

Notes: af/yr = acre-feet per year

Source: City of Fresno 2023.

Emergency Water Supply Conditions

The City's 2020 UWMP includes a water shortage contingency plan (WSCP) to address droughts and catastrophic water supply interruptions due to regional power outage, earthquake, or other disasters. The WSCP defines five water shortage levels and the specific water supply conditions associated with each shortage level. Moving from one stage to the next is based on water supply conditions, including reductions in surface water from Reclamation and FID, reductions in treatment or distribution capacity, decrease in groundwater levels in 30 key wells, or climate or state political conditions that would impact the allotment of water supply (City of Fresno 2023).

Consumption reduction methods outlined in the WSCP include limiting or prohibiting the watering of lawns and other landscape areas, prohibiting the use of potable water for construction and dust control, and prohibiting vehicle washing except at facilities using water recycling equipment. Rate changes and fees may be implemented to penalize excessive water use or violation of water use ordinances. If the City were to implement its WSCP, all City customers, including those within the Plan Area, would be subject to the same water conservation measures and water use restrictions as included in City's WSCP (City of Fresno 2023).

WATER INFRASTRUCTURE

Water Conveyance

Water infrastructure within the City of Fresno is addressed in the Fresno Metropolitan Water Resources Management Plan (Metro Plan). The Metro Plan contains a comprehensive and integrated water supply plan to manage water supplies within the City's sphere of influence, including the Plan Area. The 2014 Metro Plan Update identifies various improvements that would be required to adequately serve a portion of the buildout of the General Plan.

The City is currently updating its Metro Plan, which will recommend programs and projects to improve the City's water supply portfolio and continue providing a safe, reliable, and sustainable water supply. While the outcomes of the Metro Plan update are currently being developed, the City's ongoing and future projects to improve its supply portfolio include:

- ▶ expansion of recycled water distribution system,
- ▶ expansion of groundwater recharge program,
- ▶ expansion of surface water treatment capacity, and
- ▶ beneficial transfers and exchanges.

The water conveyance system associated with the Plan Area and nearby portions of the City is depicted in Figure 3-13 in Chapter 3, "Project Description." As shown in this figure, the existing system generally consists of 10-inch and 12-inch pipelines within the northern portion of the Plan Area and 14-inch pipelines within the southern portion of the Plan Area. Several wells are located within Plan Area (Figure 3-13).

Potable Water Treatment

The City operates three potable water treatment facilities: the Northeast Surface Water Treatment Facility (NESWTF), the SESWTF, and the T3 Surface Water Treatment Facility. The NESWTF can treat up to 24 mgd and the T3 Surface Water Treatment can treat up to 3.2 mgd. The SESWTF is currently permitted to produce up to 54 mgd; however, with the subsequent rerating of the media filters, will be capable of operating at a rated capacity of 80 mgd. The timing for the SESWTF expansion will be examined as part of the Metro Plan update and determined based on need as the City grows and demands increase (City of Fresno 2021).

WASTEWATER

Wastewater Collection System

The City of Fresno owns and maintains the majority of the wastewater collection systems that convey wastewater to the Fresno/Clovis Regional Wastewater Reclamation Facility (RWRF), and all of the wastewater collection system that conveys wastewater to the North Fresno Water Reclamation Facility (NFWRF). Wastewater generated from the Plan Area would be conveyed to and treated at the RWRF.

The wastewater collection system conveys wastewater primarily by gravity to the RWRF located southwest of the City limits. Generally, wastewater flows from the northeast to the southwest. The City also conveys wastewater from Clovis and two unincorporated areas: Pinedale Public Utility District and the Pinedale County Water District. Clovis has purchased capacity in specific pipelines. The City has over 20,000 manholes, 13 permanent and 4 temporary lift stations, nearly 13 miles of force mains, and almost 1,400 miles of gravity sewer pipes (City of Fresno 2006).

The wastewater collection system associated with the Plan Area is depicted in Figure 3-14 in Chapter 3, "Project Description." As shown, pipelines are throughout the Plan Area and a lift station is located near Cherry Avenue and North Avenue. No gravity mains are considered deficient within the Plan Area.

Wastewater Treatment

The RWRF is located southwest of the City in the area generally bounded by Jensen, Cornelia, Central, and Chateau Fresno Avenues. The RWRF is a biological, secondary level treatment plant, which treats approximately 68 mgd of wastewater. The RWRF produces secondary treated water that meets Title 22 California Code of Regulations and may be used to irrigate fields with alfalfa, silage corn, Sudangrass, and other fiber crops not used for human consumption. Approximately 12 to 15 percent of the total of wastewater that is treated at the reclamation facility goes for direct reuse to farmers leasing land within the RWRF boundaries or to neighboring farmers. Up to 5 mgd is also treated to disinfected tertiary recycled water standards as defined by Title 22 of the California Code of Regulations. This recycled water can be used for farming or landscape irrigation. The remaining treated wastewater is conveyed to 1,700 acres of ponds to percolate into the ground (City of Fresno 2023).

The permitted wastewater treatment capacity of the RWRF is currently 91.5 mgd annual monthly average flow, and 101 mgd as a maximum monthly average flow. In 2017, Phase I of a tertiary treatment system was completed at the RWRF. The current design flow for the tertiary treatment system is 5 mgd but can be expanded in two subsequent phases to 15 mgd (Phase II) and ultimately 30 mgd (Phase III). The City of Clovis maintains the rights and capacity to discharge 9.3 mgd to the facility. The City of Fresno maintains the rights to the remaining capacity (City of Fresno 2020).

The following upgrades would be completed to accommodate future development associated with continued implementation of the approved General Plan (City of Fresno 2020):

- ▶ Construct 70 mgd expansion at the RWRF, prior to flows of the RWRF reaching 80 percent of rated capacity, in accordance with the City of Fresno 2006 Wastewater Master Plan.

- ▶ Construct a 25,000 AF/year recycled water facility as an expansion to the RWRF in accordance with the January 2014 City of Fresno Metropolitan Water Resources Management Plan. This improvement is required after the year 2025 and is identified as a required facility as part of the Mitigation Measure UTL-1.2.1 in the City's General Plan EIR.
- ▶ Construct a 0.49 mgd expansion of the NFWRF.
- ▶ Construct 24 mgd wastewater treatment facility within the Southeast Development Area, in accordance with the City of Fresno 2006 Wastewater Master Plan.
- ▶ Additional 9.6 mgd expansion at the RWRF.

STORMWATER

The Fresno Metropolitan Flood Control District (FMFCD) provides stormwater collection and disposal, and flood control to the north-central portion of Fresno County, between the San Joaquin and Kings Rivers, covering 164 adopted or proposed drainage areas. FMFCD's local stormwater drainage system consists of interconnected surface conveyances, storm drains, retention basins, pump stations and outfalls, which discharge to groundwater, irrigation canals, creeks, and the San Joaquin River. The system is designed to retain and infiltrate as much runoff as possible into the underlying groundwater aquifer. Under FMFCD requirements, development proposals must elevate building pads so that finished floor levels are above the anticipated high-water elevation and establish an outlet flow path for the runoff of major storms through the use of street improvements, easements, or other public rights-of-way to consider the flow path and potential flooding resulting from major storms (FMFCD 2017).

ELECTRIC POWER, NATURAL GAS, AND TELECOMMUNICATIONS

Electric Power

Fresno receives its electricity from Pacific Gas and Electric Company (PG&E). PG&E provides electrical service to business and residents throughout the Plan Area via underground and aboveground service lines. PG&E owns and maintains all service and transmission lines in the Plan Area and operates several electrical substations throughout the Plan Area.

Natural Gas

PG&E is the natural gas service provider in the Plan Area. PG&E owns and maintains several natural gas transmission lines in the Plan Area that feed local distribution lines that connect to individual service lines.

Telecommunications

Several providers provide telecommunication services to the Plan Area. AT&T is the largest provider of cellular and fixed telephone services. Telephone lines are located throughout the Plan Area.

SOLID WASTE

Residential solid waste in the City is collected in three bins for green waste, garbage, and recyclables. The City has granted exclusive franchise agreements for the collection of commercial solid waste, recyclables and green waste to two franchises. Allied Waste Services (formally Republic) is responsible for all commercial services north of Ashlan Avenue, north of the Plan Area, and Mid Valley has all commercial locations south of Ashlan, including the Plan Area. Both haulers are responsible for commercial, multifamily, and industrial collections, up to 8 cubic yards, which fall into City of Fresno jurisdiction. The refuse from customers' garbage bins is collected by the City of Fresno Solid Waste Division and is taken to the Cedar Avenue Receiving and Transfer Station (CARTS) facility for sorting and transfer. Once off-loaded at the transfer station, the garbage is then loaded onto large trucks and taken to the American Avenue Landfill. Fresno County operates the American Avenue Disposal Site, which serves as the county's regional landfill (City of Fresno 2020). As of June 2022, the American Avenue Landfill has a maximum permitted capacity of

32,700,000 cubic yards and a remaining capacity of 17,459,683 cubic yards, with an estimated closure date of August 31, 2031. The maximum permitted throughout is 2,200 tons per day (CalRecycle 2023).

One other active disposal site is located in Fresno County. The City of Clovis Landfill (SWIS Number 10-AA-0004) has a maximum permitted capacity of 7,800,000 cubic yards and a remaining capacity of 7,740,000 cubic yards, with an estimated closure date of April 30, 2047. The maximum permitted throughout is 2,000 tons per day (CalRecycle 2023).

Green waste hauled by the residential solid waste operations is delivered to one of two locations: Kochergen/Green Valley Recycling located at 2365 North Avenue and West Coast Waste located at 30777 Golden State Frontage Road. Both of these facilities are within one-quarter mile of one another in southwest Fresno. Commercial green waste and organics delivered to Mid Valley Disposal Elm Avenue Recycling and Transfer Station are then transferred to the Kerman facility and composted with organic compost, which is then used by organic farms in the region. Commercial green waste and organics delivered by Allied Waste are taken to Rice Road Transfer Station, which are then trans-loaded into trucks, which are delivered to Kochergen Farms for composting and land application (City of Fresno 2020).

Recycling collected from residential customers is delivered to both CARTS and Elm Ave. Both facilities have Material Recovery Facilities (MRFs), which sort through the co-mingled recycling stream to sort the materials. Commercial franchises deliver recycling to Elm Avenue only. The City's diversion rate has fluctuated over the last decade from 63 to 74 percent (City of Fresno 2020).

The City of Fresno and Fresno County, as members of the AB 939 MOU 16-jurisdiction committee, hold two household hazardous waste (HHW) drop-off events each year, one in the spring and one in the fall. Additionally, Fresno County provides a door-to-door program that provides household hazardous waste pickup for individuals who, because of special circumstances, cannot participate in the household hazardous waste drop off events held twice a year (City of Fresno 2020). Fresno recently opened an environmental compliance facility to receive free household hazardous waste from the public.

4.16.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

Expansion of New Infrastructure

The potential impacts of the proposed plan related to utilities and service systems infrastructure was evaluated qualitatively. Impacts were assessed by evaluating the projected capacity demand of plan development in the context of current service commitments and capacities of public service providers within the Plan Area.

Water Supply

The analysis of water supply is based on information included in *South Central Specific Plan Water Supply Assessment* (West Yost 2023). The methodology is intended to identify increases in water demand and the capacity of existing and proposed water sources to accommodate that demand. Several standard factors were used to identify future demand and resultant impacts based on the proposed plan elements compared to existing water demand. The water conveyance adequacy analysis is based on information included in *South Central Specific Plan Water and Sewer Hydraulic Analysis Technical Memorandum* (Akel 2022).

Wastewater Treatment

The wastewater analysis is based on information included in *South Central Specific Plan Water and Sewer Hydraulic Analysis Technical Memorandum* (Akel 2022). Future wastewater generation from proposed plan land uses is calculated and compared to the capacity of the City's sewer collection system. This study relied on design criteria established in the City's 2015 Sewer System Master Plan (SSMP) and was used to identify any capacity deficiencies in the City's existing sewer system. Fresno Municipal Code Section 6-303 – Sewer Connection Required, requires properties to connect to the City sewer system when available. As such it is assumed that all future development would connect to the City's sewer system.

Solid Waste Capacity and Compliance

The potential for increased waste generation was based on generation rates established in the General Plan EIR as reported in *Estimated Solid Waste Generation Rates* (CalRecycle 2019).

THRESHOLDS OF SIGNIFICANCE

A utilities and service systems impact would be significant if implementation of the proposed plan would:

- ▶ require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects;
- ▶ have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years;
- ▶ result in a determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity to serve the project's projected demand, in addition to the provider's existing commitments;
- ▶ generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; or
- ▶ fail to comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

PROPOSED SCSP POLICIES AND DEVELOPMENT STANDARDS

The following policies are relevant to utilities and service systems:

- ▶ W-1: Protect groundwater and surface water by regulating sewage disposal facilities and preventing contaminating uses.
- ▶ W-2: Implement a periodic water quality testing program in areas where contamination has been an issue.
- ▶ W-3: Provide supplemental water resources to areas already impacted by groundwater quality and quantity degradation.
- ▶ W-4 Identify funding tools to expand water system access in and near the Plan Area.
- ▶ W-5: Require new development to implement water conservation measures and to contribute towards expanded and upgraded facilities.
- ▶ W-6: Reduce water consumption through education, conservation standards, landscaping standards, retrofit programs, and incentive programs.
- ▶ W-7: Seek funding to expand water facilities to neighbors within the Plan Area.

ISSUES NOT DISCUSSED FURTHER

All the issues identified in the thresholds of significance are addressed in the following analysis.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 4.16-1: Require or Result in the Relocation or Construction of New or Expanded Water, Wastewater Treatment or Storm Water Drainage, Electric Power, Natural Gas, or Telecommunications Facilities, the Construction or Relocation of Which Could Cause Significant Environmental Effects

Implementation of the proposed plan would require relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, and telecommunications facilities. New infrastructure would generally be constructed within existing roadways or would consist of short connections to existing pipelines and would be developed as part of buildout of the proposed plan. The impacts associated with such infrastructure connections would be typical of such construction and would result in are generally assessed as part of the proposed development under the SCSP (e.g., construction-related air, noise, GHG, and transportation effects), within the context of this EIR, and there is no evidence to suggest that such construction would result in additional significant environmental effects. This impact would be **less than significant**.

The Plan Area consists of a variety of land use types, including industrial, commercial, public, neighborhood mixed-use, rural- and medium-density residential, and agricultural. Substantial new development is anticipated in the Plan Area, including new industrial, business park, commercial, and residential uses that would require extension of utilities infrastructure.

- ▶ **Water:** The increase in water demand would require the installation of new 16-inch transmission grid mains and approximately six new wells within the Plan Area. These improvements are depicted in Figure 3-13 in Chapter 3, "Project Description."
- ▶ **Sewer:** A network of sewer collection infrastructure would be installed throughout the Plan Area to serve future development. The SCSP wastewater collection system would include installation of new transmission grid mains, and upsizing of conveyance pipelines located along North Avenue between Cedar Avenue and Parkway Drive. New pipelines are depicted in Figure 3-14 in Chapter 3, "Project Description."
- ▶ **Stormwater:** Storm drainage facilities within the Plan Area are planned, implemented, operated, and maintained by the FMFCD. Specific upgrades may include new streets and gutters, storm drain inlets, storm drain pipelines, detention and retention basins, pump stations, and outfall facilities that collect and drain runoff from developed land areas. Future development would be planned in accordance with requirements set forth under the SWQMP.
- ▶ **Electric Power, Natural Gas, and Telecommunication Facilities:** Expanded electric power, natural gas, and telecommunications facilities would be necessary to support new development under the SCSP, as described in Chapter 3, "Project Description."

A discussion of relevant operational and construction impacts of SCSP development, which includes supporting utility infrastructure, is provided within each respective section of this EIR. In some cases, the direct and indirect impacts are potentially significant and warrant mitigation measures, while in other cases there are significant and unavoidable impacts. The future infrastructure would fall within the range of environmental impacts disclosed in this EIR, and would be subject to relevant mitigation measures included in this EIR. Construction and operation of utility infrastructure in the Plan Area would be typical of such facilities, and there is no evidence to suggest that it would result in any additional significant effects not evaluated herein. Thus, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.16-2: Have Insufficient Water Supplies Available to Serve the Project and Reasonably Foreseeable Future Development During Normal, Dry, and Multiple Dry Years

As discussed in the Water Supply Assessment (Appendix E) prepared for the proposed plan, the City’s 2020 UWMP relied upon the City’s General Plan to project future water supply and demand and indicates that there would be surplus water during normal, dry, and multiple dry years through 2045. Future development of the proposed plan would demand less water than the currently approved General Plan land uses within the Plan Area. As such, there would be a greater surplus of water supply for the City during normal, dry, and multiple-dry years through 2045 with implementation of the proposed plan compared with the existing approved land uses considered in the 2020 UWMP. Thus, this impact would be **less than significant**.

The land uses associated with the City’s General Plan informed the water demand forecasted in the City’s 2020 UWMP for the plan area. The SCSP proposes a different mix of land uses than the City’s General Plan within the plan area (i.e., South Industrial Area as presented in the City’s General Plan). As shown in Table 4.16-3, the land uses proposed for the SCSP would reduce water demand relative to those of the General Plan.

Table 4.16-3 Projected Average Day Water Demand for the Proposed Plan versus General Plan

Land Use Classifications	Water Use Factor (gpd/ac)	General Plan		Proposed Plan	
		Acreage	Estimated Water Demand (mgd)	Acreage	Estimated Water Demand (mgd)
Residential					
Single-Family Residential	2,800	30	0.08	270	0.76
Neighborhood Mixed Use	2,900	0.25	0.00	0.25	0.00
Non-Residential					
Business Park	2,800	144	0.40	653	1.83
General Commercial	2,500	10	0.02	47	0.12
Regional Business Park	2,000	351	0.70	334	0.67
Heavy Industrial	3,900	3,486	13.59	2,650	10.33
Light Industrial	1,900	685	1.30	715	1.36
Open Space - Ponding Basin	1,300	158	0.20	158	0.20
Open Space - Neighborhood Park	3,500	2	0.01	2	0.01
Public	1,900	42	0.08	78	0.15
Rail	-	32	-	32	-
Total	-	4,940 acres	16.40 mgd 18,400 af/yr	4,940 acres	15.43 mgd 17,300 af/yr

Source: City of Fresno 2023.

Notes: ac = acre; af = acre-feet; gpd = gallon per day; mgd = million gallons per day; yr = year

As discussed above under “Water Supply,” in Section 4.16.2, “Environmental Setting,” the 2020 UWMP indicates that surplus water supply is projected for the City’s water service area, including the plan area, in normal, dry, and multiple dry years through 2045. Water demand included in the 2020 UWMP includes demand that would be generated by the currently approved land uses in the Plan Area, as provided in the City’s General Plan. As indicated in Table 4.16-3, the proposed plan would result in less water demand than the currently approved land uses (17,300 af/yr versus 18,400 af/yr) (City of Fresno 2023). As a result, there would be a greater surplus of water supply during normal, dry, and multiple-dry years through 2045 with implementation of the proposed plan compared with the existing approved land uses considered in the 2020 UWMP. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.16-3: Result in a Determination by the Wastewater Treatment Provider That Serves or May Serve the Project That It Has Inadequate Capacity to Serve the Project's Projected Demand, in Addition to the Provider's Existing Commitments

Wastewater generation from development anticipated under the proposed plan would be approximately 11.6 mgd average annual flows (AAF), 13.4 mgd peak day dry weather flows, and 15.1 mgd for peak month wet weather flows. The RWRF, which has a remaining capacity of 23.5 mgd, would be able to accommodate these wastewater flow rates in addition to existing commitments. Furthermore, wastewater flows from the Plan Area would be less than those estimated for the currently approved land uses under the General Plan, which would contribute 12.8 mgd for AAF, 14.7 mgd for peak day dry weather flows, and 16.6 mgd for peak month wet weather flows. Thus, this impact would be **less than significant**.

The permitted wastewater treatment capacity of the RWRF is currently 91.5 mgd as an annual monthly average flow and 101 mgd as a maximum monthly average flow. Given that the RWRF currently treats approximately 68 mgd, there is a remaining treatment capacity of 23.5 mgd. Increased wastewater flows attributed to the future development associated with the proposed plan were assessed in a technical memorandum prepared for the City. The technical memorandum considered sewer system capacity based on design criteria established in the City's SSMP, and attributed to the proposed land uses within the proposed plan. Based on this evaluation, wastewater flows were estimated to be 11.6 mgd AAF, 13.4 mgd peak day dry weather flows, and 15.1 mgd for peak month wet weather flows (Akel 2022). These flow rates would be less than the remaining capacity at the RWRF, which as noted above is 23.5 mgd. Furthermore, wastewater flows from the Plan Area would be less under the proposed plan than under the currently approved land uses, which would contribute 12.8 mgd for AAF, 14.7 mgd for peak day dry weather flows, and 16.6 mgd for peak month wet weather flows. As described in Section 4.16.2, "Environmental Setting," above, the General Plan EIR assumes that several upgrades would be completed to accommodate future development associated with continued implementation of the approved General Plan. These upgrades include expansion of the RWRF, construction of a recycled water facility at the RWRF, expansion of the NFWRF, and construction of a wastewater treatment facility within the Southeast Development Area.

Therefore, because adequate treatment capacity is available at the RWRF for wastewater flows associated with the proposed plan, and upgrades to the overall wastewater treatment system in the City are planned to accommodate General Plan buildout, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 4.16-4: 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; or Fail to Comply with Federal, State, and Local Management and Reduction Statutes and Regulations Related to Solid Waste

Implementation of the proposed plan would allow for development of industrial, commercial office, retail, and residential uses, which would generate solid waste. Development related to the proposed plan would implement programs to reduce landfill contributions, consistent with CIWMA, AB 341, SB 1374, AB 1826, and SB 1383. While General Plan Policy RC-11-b requires the City to develop a strategic and operations plan for fulfilling the City Council resolution committing the City to a Zero Waste goal, it is not clear if zero waste goals will be met. Without attainment of zero waste goals, development under the proposed plan may generate waste in excess of capacity at the American Avenue Landfill, which is planned for closure in 2031. This impact would be **potentially significant**.

Implementation of the proposed plan would allow for development of industrial, commercial office, retail, and residential uses. Based on generation rates assumed in the City's General Plan EIR, as compiled by CalRecycle, the annual municipal solid waste generation by new development in the Plan Area would be approximately 36.5 tons per day, which equates to approximately 13,330 tons per year (Table 4.16-4). Commercial/industrial waste generally weighs 450 pounds per cubic yard (EPA 2023). Therefore, the plan would contribute approximately 59,200 cubic yards of waste per year.

Table 4.16-4 Solid Waste Generation Anticipated under the Proposed Plan

Land Use	Assumed Development under the Proposed Plan	Solid Waste Generation Rate	Solid Waste Generation
Residential	91 units	10 lbs/unit/day	910 lbs/day
Commercial/Office/Public Facility	1,445,466 sq ft	6 lbs/1,000 sq ft/day	8,670 lbs/day
Industrial	10,576,278 sq ft	6 lbs/1,000 sq ft/day	63,460 lbs/day
Total Waste Generated at Buildout			73,040 lbs/day (36.5 tons/day)

Notes: lbs = pounds; sq ft = square feet

Source: CalRecycle 2019.

As discussed in Section 4.16.2, "Environmental Setting," above, the American Avenue Landfill has a maximum permitted capacity of 32,700,000 cubic yards and a remaining capacity of 17,459,683 cubic yards, with an estimated closure date of August 31, 2031. The City of Clovis Landfill is anticipated to close in 2047. Under existing conditions, solid waste continues to be disposed of at American Avenue Landfill, and with the remaining capacity and lifespan at the landfills identified above, solid waste disposal at American Avenue Landfill would not be available through buildout of the proposed plan (i.e., 2040). The City of Clovis Landfill would not provide a longer-term solution for waste disposal, as it expected to close in 2047. However, the City is implementing diversion programs and the Fresno City Council passed a resolution that commits the City to the goal of a Zero Waste goal by 2025 (City of Fresno 2020). On-going programs would continue to reduce landfill contributions, consistent with CIWMA, AB 341, SB 1374, AB 1826, and SB 1383. While General Plan Policy RC-11-b requires the City to develop a strategic and operations plan for fulfilling the City Council resolution committing the City to a Zero Waste goal, it is not clear when zero waste goals will be met. Without attainment of zero waste goals, development under the proposed plan may generate waste in excess of capacity at the American Avenue Landfill, which is planned for closure in 2031. Thus, this impact would be **potentially significant**.

Mitigation Measures

Mitigation Measure 4.16-4: Verify Landfill Capacity on a Project-by-Project Basis and Restrict Development Accordingly

Consistent with the Fresno General Plan, the City shall evaluate additional landfill locations at the time individual projects are submitted within the Plan Area and shall not approve development that could contribute to solid waste to a landfill that is at capacity until additional capacity is identified.

Significance after Mitigation

As discussed above, the City continues to implement waste reduction activities to reduce landfill contributions, consistent with CIWMA, AB 341, SB 1374, AB 1826, and SB 1383. Although, American Avenue Landfill is planned for closure in 2031, at which time it would no longer accommodate solid waste disposal from the Plan Area, consistent with the Fresno General Plan, the City will need to increase disposal capacity. Implementation of Mitigation Measure 4.16-4 would require the City to identify additional available landfill capacity for future development before approval of individual development projects. In addition, the policies in the General Plan are designed to reduce the potential effect associated with solid waste disposal include those associated with the proposed plan. Furthermore, all future development under the proposed plan would be required to comply with State and local requirements for reduction of solid waste going to landfills. Therefore, implementation of mitigation measure 4.16-4 and compliance with existing regulations and policies, the impact would be reduced to a **less-than-significant** level.

5 CUMULATIVE IMPACTS

5.1 CEQA REQUIREMENTS

Section 15130(a) of the State CEQA Guidelines requires a discussion of the cumulative impacts of a project when the project's incremental effect is cumulatively considerable. Cumulatively considerable, as defined in State CEQA Guidelines 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." The State CEQA Guidelines Section 15355 defines a cumulative impact as two or more individual effects that, when considered together, are considerable or that compound or increase other environmental impacts. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

5.2 CUMULATIVE IMPACT APPROACH

State CEQA Guidelines Section 15130 identifies two basic methods for establishing the cumulative environment in which a project is considered: the use of a list of past, present, and probable future projects or the use of development projections from an adopted general plan, other regional planning document, or a certified EIR for such a planning document. This cumulative analysis uses the "plan" approach to identify the cumulative setting. The cumulative analysis considers the development anticipated to occur in accordance with the Fresno General Plan, encompassing the Plan Area and beyond.

In the case of the SCSP, the Plan Area has been modified from its natural conditions by human activity, primarily urban development, actual and planned. Heavy industrial, open space, vacant land, and light industrial are the predominant existing land uses in the Plan Area, with smaller areas of commercial and residential development (see Table 3-1 in Chapter 3, "Project Description"). Agriculture makes up most of the open space area with the remainder consisting of canals and ponding basins for surface water runoff detention and groundwater recharge. The remainder of the Plan Area is composed of residential, commercial, and public facilities land uses. South Central Fresno is an area that has long been planned for growth. Beginning as early as 1918, the City of Fresno has recognized the Plan Area's economic importance and from 1956 onward has planned for industrial development through the Fresno General Plan.

The analysis also considers planning efforts that address regional environmental issues, such as water quality improvement programs, and potential effects associated with climate change. These plans, programs, and effects are discussed in relevant resource discussions below.

5.3 CUMULATIVE SETTING

5.3.1 Geographic Scope

The geographic area that could be affected by the proposed plan and is appropriate for a cumulative impact analysis varies depending on the environmental resource topic, as presented in Table 5-1.

Table 5-1 Geographic Scope of Cumulative Impacts

Resource Topic	Geographic Area
Aesthetics	Local (Plan Area and surrounding public viewpoints)
Agriculture and Forestry Resources	Fresno County
Air Quality	San Joaquin Valley Air Basin
Biological Resources	Fresno County/Central Valley Region of California
Cultural and Tribal Cultural Resources	Local (individual project sites within the Plan Area where ground-disturbing activities would occur and where new structures would be developed), with regional implications
Energy	Pacific Gas and Electric Company service area
Geology, Soils, and Mineral Resources	Local (individual project sites within the Plan Area where ground-disturbing activities would occur and where new structures would be developed)
Greenhouse Gas Emissions and Climate Change	Global
Hazards and Hazardous Materials	Local (individual project sites within the Plan Area where ground-disturbing activities would occur and where new structures would be developed)
Hydrology and Water Quality	City of Fresno, Fresno County, San Joaquin Valley Basin
Land Use and Planning	Local (individual project sites within the Plan Area where ground-disturbing activities would occur and where new structures would be developed)
Noise	Local (immediate vicinity of the Plan Area where proposed plan-generated noise could be heard concurrently with noise from other sources)
Population and Housing	City of Fresno, Fresno County
Public Services and Recreation	Regional and local service areas
Transportation and Circulation	Regional and local roadways and freeways where the project could contribute traffic that could alter traffic conditions
Utilities and Service Systems	Local service areas

Source: Compiled by Ascent Environmental in 2023.

5.3.2 Regional Planning Environment

The *Fresno General Plan*, adopted by the City Council on December 18, 2014 and most recently amended on October 13, 2022, establishes the land use pattern and goals for development and growth in the City of Fresno. Additionally, the City has nine community plan areas, nine specific plan areas, and two neighborhood plan areas that have been planned for urban development. These plans were relied upon in preparing the cumulative impact analysis. The documents are available for review online at <https://www.fresno.gov/planning/general-plan-development-code/> and at the City of Fresno at 2600 Fresno Street, Fresno, CA 93721.

5.4 ANALYSIS OF CUMULATIVE IMPACTS

The following sections contain a discussion of the cumulative effects anticipated from implementation of the proposed plan, together with related projects and planned development in the City of Fresno, for each of the 16 environmental issue areas evaluated in this Draft EIR. The analysis conforms with Section 15130(b) of the State CEQA Guidelines, which specifies that the "discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact."

When considered in relation to other reasonably foreseeable projects, cumulative impacts to some resources would be significant and more severe than those caused by the proposed plan alone.

For purposes of this EIR, the proposed plan would result in a significant cumulative effect if:

- ▶ the cumulative effects of related projects (past, current, and probable future projects) are not significant and the incremental impact of implementing the proposed plan is substantial enough, when added to the cumulative effects of related projects, to result in a new cumulatively significant impact; or
- ▶ the cumulative effects of related projects (past, current, and probable future projects) are already significant and implementation of the proposed plan makes a considerable contribution to the effect. The standards used herein to determine a considerable contribution are that either the impact must be substantial or must exceed an established threshold of significance.

Significance criteria, unless otherwise specified, are the same for cumulative impacts and proposed plan impacts for each environmental topic area. This cumulative analysis assumes that all mitigation measures identified in Chapter 4 to mitigate impacts of the proposed plan are adopted. The analysis herein analyzes whether, after adoption of mitigation, the residual impacts of the proposed plan would cause a cumulatively significant impact or would contribute considerably to existing/anticipated (without the proposed plan) cumulatively significant effects.

5.4.1 Aesthetics

Aesthetic and visual resources impacts are project-specific and highly localized. Aesthetic impacts of projects visible from the same areas where the proposed plan would be visible were evaluated to determine whether there would be significant cumulative aesthetic impacts. The geographic extent for considering cumulative impacts on aesthetics includes all projects within the same viewshed (i.e., area visible from viewer's location) of the proposed plan, which is a conservative estimate of the likely maximum distance from which the proposed plan would be visible, particularly considering the flat terrain of the Plan Area that does not afford elevated viewpoints with very expansive views.

The Plan Area is predominantly industrial, with undeveloped agricultural areas bounding the Plan Area to the south. Future cumulative development would include new residential, commercial, and industrial development consistent with the General Plan or the applicable General Plans of each of the surrounding municipalities. Future development would be subject to the design review processes of the individual jurisdiction, and the applicable land use plans contain policies and implementing actions to preserve visual character, land use compatibility, and views in those jurisdictions. Cumulative development within the City would be required to comply with applicable City General Plan policies and programs and adhere to development and design standards in the Municipal Code that address aesthetics, including lighting and glare, the alteration of scenic resources and natural features, the alteration of views of scenic resources and natural features. However, consistent with the findings of the General Plan EIR, continued buildout of the General Plan and nonagricultural development in the surrounding communities identified by the geographic scope would continue to significantly change the visual character of the area and the amount of nighttime illumination, even with adherence to General Plan policies and project-specific design review. For these reasons, cumulative impacts to aesthetics or nighttime lighting and daytime glare would be significant.

As discussed in Section 4.1, "Aesthetics," there are no designated scenic vistas or state-designated scenic highways in the Plan Area or the City. The proposed plan and cumulative development would be subject to specific regulations and guidelines related to building heights, setbacks, undergrounding of utilities, landscaping, signage, and permitted land uses. However, the proposed plan would result in increases of densities and intensification primarily of industrial and commercial land uses within the Plan Area, which would result in substantial changes in the existing visual character. The proposed plan's contribution to the conversion of rural and agricultural uses to urban uses would be significant and, combined with cumulative development, would result in a substantial alteration of the existing visual character of the area, for which there is no available mitigation. Therefore, the proposed plan's contribution to cumulative visual character or quality impacts would be **cumulatively considerable**. This impact would be **significant and unavoidable**.

Additionally, the proposed plan would add new sources of light and glare associated with new buildings and facilities, and such lighting could contribute to indirect lighting/glare on adjacent land uses that could adversely affect daytime or nighttime views and result in additional skyglow. Implementation of Mitigation Measures 4.1-1 and 4.1-2, however, would reduce this impact to a less-than-significant level and the proposed plan's contribution to cumulative light and glare impacts would not be considerable. Cumulative impacts related to light and glare would be **less than significant**.

5.4.2 Agriculture and Forestry Resources

The cumulative context for agriculture and forestry impacts is Fresno County. There are no forestry resources located within the geographic scope. Therefore, there would be no cumulative impacts to forestry resources.

As described in Section 4.2, "Agriculture and Forestry Resources," Fresno County has approximately 1.88 million acres of farmland and is considered one of the most diverse and productive farming areas in the world. Cumulative development in the cities of Fresno, Clovis, and Sanger, as well as the unincorporated area of Fresno County and Madera County, has and would continue to convert grazing and other agricultural uses to non-agricultural uses, as well as conflict with existing agricultural zoning and Williamson Act contracts. The regional conversion of Important Farmland by urban development and regional conflicts with Williamson Act contracts are significant cumulative impacts.

The proposed plan would result in the conversion of approximately 982 acres of Prime Farmland and Farmland of Statewide Importance, as well as the conversion of approximately 153 acres of lands enrolled in Williamson Act contracts to non-agriculture uses. This is a considerable contribution to the significant cumulative impact associated with overall Farmland conversion in the region and regional conflicts with Williamson Act contracts. To reduce potential cumulative impacts on agriculture uses, the approved General Plan includes Objective RC-9 and Policies RC-9-a through RC-9-c, which would reduce cumulative impacts to agricultural resources. In addition, for the proposed plan, implementation of Mitigation Measure 4.2-1 would require future development to mitigate the loss of Important Farmland on a project-by-project basis before construction or ground-disturbing activities, to address the conversion of farmland to non-farmland uses. There is no feasible mitigation that would reduce conflicts with Williamson Act contracts to a less-than-significant level. However, even with incorporation of the approved General Plan mitigation and project-specific mitigation, cumulative impacts related to conversion of agricultural land and conflicts with Williamson Act contracts would remain significant. Therefore, the proposed plan's contribution to cumulative impacts related to farmland conversion and conflicts with Williamson Act contracts would be **cumulatively considerable**. These impacts would be **significant and unavoidable**.

5.4.3 Air Quality

The geographic scope of the cumulative impact analysis for air quality is the San Joaquin Valley Air Basin (SJVAB). Each project in the SJVAB is required to comply with San Joaquin Valley Air Pollution Control District (SJVAPCD) rules and regulations and is subject to independent review.

CONSTRUCTION EMISSIONS

The SJVAB is currently designated as a nonattainment area for the federal ozone standard and fine particulate matter with aerodynamic diameter of 2.5 micrometers or less (PM_{2.5}) standard and as a nonattainment area for the state ozone, respirable particulate matter with aerodynamic diameter of 10 micrometers or less (PM₁₀), and PM_{2.5} standard. Thus, the SJVAB has not met the federal and state standards for these air pollutants. Construction activities in the region would add particulate matter and ozone emissions into the SJVAB that may conflict with attainment efforts. Cumulative development, while required to mitigate for adverse air quality impacts, will contribute to regional emissions, resulting in a significant adverse cumulative impact.

As described in Section 4.3, "Air Quality," and shown in Table 4.3-5, annual and daily emissions of reactive organic gases (ROG), oxides of nitrogen (NO_x), carbon monoxide (CO), sulfur oxides (SO_x), PM₁₀, and PM_{2.5} would not exceed

SJVAPCD's annual mass emissions threshold of significance or daily screening criteria for most of the duration of plan implementation. This level of emissions would not conflict with long-term regional air quality planning in the SJVAB, would not result in a cumulative contribution to air pollution, and would not conflict with SJVAPCD's relevant air quality plans. However, under a worst-case construction period, daily mass emissions would exceed SJVAPCD's daily mass emissions screening criteria, which could result in an exceedance of an ambient air quality standard (AAQS), but SJVAPCD's annual emissions thresholds would not be exceeded. Nevertheless, given the programmatic nature of this analysis, and the current nonattainment status of the SJVAB for ozone, PM₁₀, and PM_{2.5}, this analysis conservatively concludes that the proposed plan could contribute construction emissions that would interfere with the attainment status for these pollutants. Therefore, construction of future development implemented under the proposed plan could conflict with long-term regional air quality planning tied to attainment of the National AAQS (NAAQS) and California AAQS (CAAQS). As such, the proposed plan's contribution of criteria air pollutants and ozone precursors could result in high concentrations of air pollution that could result in an adverse health outcome. Implementation of Mitigation Measures 4.3-1a through 4.3-1m would reduce the proposed plan's emissions to a less-than-significant level. However, because of the scale and extent of construction activities that would occur, as well as the uncertainty of specific construction activities and timing, construction activities could overlap, resulting in emissions that would interfere with the attainment status for these pollutants. Therefore, the proposed plan's contribution to cumulative construction emission impacts would be **cumulatively considerable**. Because no additional mitigation is available beyond what is identified in this EIR, the cumulative impact would be **significant and unavoidable**.

LONG-TERM OPERATIONAL EMISSIONS

Ozone impacts are the result of cumulative emissions from numerous sources in the region and transport from outside the region. Cumulative development will add urban development on primarily undeveloped land in the region, resulting in substantial residential, commercial, office, and industrial development. All of this regional development will increase emissions that contribute to ozone impacts. Ozone is formed in chemical reactions involving NO_x, ROG, and sunlight. All but the largest individual sources emit NO_x and ROG in amounts too small to have a measurable effect on ambient ozone concentrations by themselves. However, when all sources throughout the region are combined, they can result in ambient concentrations of ozone that exceed the NAAQS and CAAQS, resulting in a significant adverse cumulative impact.

As described in Section 4.3, "Air Quality," and shown in Table 4.3-6, emissions of ROG, NO_x, CO, PM₁₀, and PM_{2.5} would exceed SJVAPCD's annual CEQA mass emissions thresholds as well as its daily screening criteria for all pollutants except SO_x. Future development under the proposed plan would be subject to SJVAPCD's Rule 9510 for NO_x and PM₁₀ resulting in 33.3 and 50 percent reductions in these pollutants, respectively. Notwithstanding, because the thresholds would be exceeded, the contribution of criteria air pollutants by development in the Plan Area would conflict with SJVAPCD's long-term regional air quality planning; interfere with the SJVAB's capacity to attain the NAAQS and CAAQS for ozone, PM₁₀, and PM_{2.5}; and result in potential adverse health outcomes from exposure to air pollution. Mitigation Measures 4.3-1a through 4.3-1l would reduce the proposed plan's on-site emissions, and 4.3-1m would further reduce the proposed plan's emissions to a less-than-significant level through the contractual agreement between future project applicants and the air district in the form of a Voluntary Emissions Reduction Agreement. Nevertheless, in consideration of the cumulative nature of air pollution (i.e., regional attainment status determined by the combined emissions of past, present, and future projects), it cannot be assured that Mitigation Measures 4.3-1a through 4.3-1m would not cumulatively combine to create a significant impact. Therefore, the proposed plan's contribution to the nonattainment status of the SJVAB with respect to the CAAQS and NAAQS would be **cumulatively considerable**. Because no additional mitigation is available beyond what is identified in this EIR, the cumulative impact would be **significant and unavoidable**.

TOXIC AIR CONTAMINANTS

Toxic air contaminants (TACs), which are examined under Impact 4.3-3 in Section 4.3, "Air Quality," are also pollutants of localized concern. Diesel particulate matter emissions are the primary TAC of concern regarding the construction

and operation of new urban land uses and infrastructure. The health risk-based significance criteria used to evaluate TACs under Impact 4.3-3 are also inherently cumulative. This impact examines whether implementing the project would result in the exposure of sensitive receptors to TAC emissions that would result in cancer risk of 20 in 1 million or a hazard index greater than 1.0. Thus, the analysis focuses on the incremental increase in health risk from project-related sources of TAC emissions. Although Mitigation Measures 4.3-3a through 4.3-3d would reduce TACs generated from development of the proposed plan, its contribution is significant because of the scale of development; the uncertainty in the number, type, and location of TAC sources; and the level of associated health risk exposure that would result at any one location. It cannot be determined with certainty that future TAC concentrations would not expose any receptors to levels that exceed 20 in 1 million when combined with other projects. Consequently, the proposed plan's contribution to cumulative TACs impacts would be **cumulatively considerable**. Because no additional mitigation is available beyond what is identified in this EIR, the cumulative impact would be **significant and unavoidable**.

ODORS

The creation of objectionable odors affecting a substantial number of people, which is examined under Impact 4.3-4 in Section 4.3, "Air Quality," is also an impact of localized concern. Construction and operation of development under the proposed plan would not result in the development of new odor sources atypical of developed urban areas and odor-generating construction activity would be temporary. Any new odor sources would be subject to future environmental review, and to SJVACPD's Rule 4102 ("Nuisance"), which prohibits the discharge of air contaminants or other materials that would cause detriment, nuisance, or annoyance to any number of people. Implementation of the proposed plan would generate odors from construction activities which would be temporary and operational activities would generate odors from a variety of potential land uses. Because no specific projects or sites have been identified for such future uses, however, the degree of impact with respect to potential odors associated with future projects and their effects on adjacent receptors is uncertain. Due to the rapid dissipation of the odor with distance, the proposed plan would not contribute to cumulative odor impacts and, therefore, the cumulative impact would be **less than significant**.

5.4.4 Biological Resources

Generally, the geographic extent of cumulative impacts on biological resources consists of Fresno County and the Central Valley region of California that supports similar biological resource values and functions to those of the project area.

Sensitive habitats for biological resources in the Plan Area and in the region have been modified, removed, and fragmented over time as land has been developed and converted to agricultural, urban, and residential uses. Historic development in the region has resulted in substantial loss of sensitive habitats, much of which was likely not permitted or mitigated, including riparian habitat, which has been dramatically reduced from its historical extent in the region. This represents an existing significant cumulative impact. Future cumulative development in the region could continue to result in losses of sensitive habitats and sensitive species. Although individual projects would be required to mitigate for significant impacts on a project-by-project basis, they may result in residual impacts that combine with the existing adverse condition to create a significant cumulative impact related to special-status species and sensitive habitats.

Much of the Plan Area is farmland or rural residential lots with large, uneven, and underutilized/underdeveloped parcels. The Plan Area also contains substantial urban and developed land in the north and east, with increasing vacant lots and agricultural land in the central, south, and west. Irrigation ditches are located throughout the Plan Area near these active agricultural lands. Implementation of the proposed plan could result in adverse effects on special-status plants, special-status wildlife, riparian habitat (also considered a sensitive natural community), and waters of the United States and state. Mitigation Measures 4.4-1a through 4.4-1e, 4.4-2, and 4.4-3 would avoid or minimize adverse effects on these resources and would reduce impacts to a less-than-significant level. Additionally, individual development projects would be subject to future, project-level CEQA analysis, which would further identify project-specific impacts and mitigation measures to protect biological resources.

Because the proposed plan would either have no impact or a very limited impact on biological resources after mitigation, it would not contribute to cumulative impacts to biological resources and, therefore, the cumulative impact would be **less than significant**.

5.4.5 Cultural and Tribal Cultural Resources

The cumulative context for the cultural resources analysis considers a broad regional system of which the resources are a part. The cumulative context for historical resources is Fresno and the San Joaquin Valley where common patterns of historic-era settlement have occurred over roughly the past two centuries. The cumulative context for archaeological resources, human remains, and tribal cultural resources is the former territory of the Northern Valley Yokuts. Yokuts primarily occupied the lands along the San Joaquin River, starting in the north at the Calaveras River and extending southward to the upper San Joaquin River, and from the crest of the Coast (Diablo) Range in the east to the Sierra Nevada foothills in the west.

Because all significant cultural resources are unique and nonrenewable members of finite classes, meaning there are a limited number of significant cultural resources, all adverse effects erode a dwindling resource base. The loss of any one archaeological site could affect the scientific value of others in a region because these resources are best understood in the context of the entirety of the cultural system of which they are a part. The cultural system is represented archaeologically by the total inventory of all sites and other cultural remains in the region. As a result, a meaningful approach to preserving and managing cultural resources must focus on the likely distribution of cultural resources, rather than on a single project or parcel boundary.

The historic lands of the Northern Valley Yokuts people have been affected by development since the arrival of the first Spanish settlers in the late 1770s. Agricultural development beginning in the mid-1850s was soon followed by railroad and commercial development and the establishment of Fresno County by 1856. Development of the Northern Valley Yokuts lands continued with residential growth which increased after World War I and then greatly intensified after World War II. These activities have resulted in an existing significant adverse effect on archaeological resources, tribal cultural resources, and human remains. Similarly, continual development in Fresno and the San Joaquin Valley has resulted in the demolition of the area's historical resources related to its early development. Cumulative development continues to contribute to the disturbance of cultural resources.

Future development in the Plan Area could result in the loss or modification of buildings or structures that have not yet been evaluated for historical significance. Therefore, the cumulative loss of historic resources within the Plan Area is considered significant. Also, the proposed plan, in combination with other development in the region, could contribute to ongoing substantial adverse changes in the significance of unique archaeological resources, human remains, and tribal cultural resources resulting from urban development and conversion of natural lands. Cumulative development could result in potentially significant archaeological resources, human remains, and tribal cultural resources impacts.

Proper planning and appropriate mitigation can help to capture and preserve knowledge of such resources and can provide opportunities for increasing our understanding of the past environmental conditions and cultures by recording data about sites discovered and preserving artifacts found. Federal, state, and local laws are also in place that protect these resources in most instances. Even so, it is not always feasible to protect these resources, particularly when preservation in place would make projects infeasible, and for this reason the cumulative effects of past and present projects in the San Joaquin Valley could result in a potentially significant cumulative impact on cultural resources. Compliance with California Health and Safety Code Section 7050.5 and Public Resources Code Section 5097, as well as CEQA Section 21080.3.2 and Section 21084.3(a) and the City's continuing notifications to the local tribes of all projects, would ensure that treatment and disposition of the cultural and tribal cultural resources, including human remains occurs in a manner consistent with the California Native American Heritage Commission guidance. Thus, the proposed plan's contribution to cumulative impacts to human remains would not be cumulatively considerable, and this cumulative impact would be **less than significant**. With implementation of Mitigation Measures 4.5-2a, 4.5-2b, and 4.5-2c, adverse effects on currently known archeological resources and potentially newly discovered archeological resources would be avoided or mitigated. With implementation of these measures, the

proposed plan would not contribute to a cumulative loss of archaeological resources, and this cumulative impact would be **less than significant**. Regarding historic resources, implementation of Mitigation Measure 4.5-1 would require a historic structure report and evaluation of resources prior to ground-disturbing activities and would require all report recommendations be implemented to offset the SCSP's contribution. However, it is possible that a historic building would need to be demolished or altered in such a way that it would no longer convey its historic significance. Therefore, the proposed plan's potential contribution to cumulative historic resource impacts would be **cumulatively considerable**. Because no additional mitigation is available beyond what is identified in this EIR, the cumulative impact would be **significant and unavoidable**.

5.4.6 Energy

The geographic area considered for cumulative impacts related to energy use includes the Pacific Gas and Electric (PG&E) service area. PG&E employs various programs and mechanisms to support provision of gas and electricity services to new development; to recoup costs of new infrastructure, connection fees are typically charged through standard billings for services.

Cumulative development would receive electricity and natural gas service provided by PG&E. These projects would also consume energy related to transportation and construction. These projects would be required to implement energy-efficiency measures in accordance with Title 24 to reduce energy demand. Given the large amount of development identified in the region, it is possible that even with implementation of Title 24 measures, inefficient and wasteful energy consumption could occur. Given that cumulative development would be required to adhere to Title 24 measures and General Plan policies, cumulative development would not contribute to potential cumulative impacts associated with the potential inefficient, wasteful, and unnecessary consumption of energy within other parts of the PG&E service area. As described in Impact 4.6-1, in Section 4.6, "Energy," according to Appendix F of the State CEQA Guidelines, the means to achieve the goal of conserving energy include decreasing overall per capita energy consumption, decreasing reliance on natural gas and oil, and increasing reliance on renewable energy sources. As described in Impact 4.6-1, the proposed plan would not result in wasteful or inefficient use of energy. Therefore, the proposed plan would not contribute to cumulative impacts related to energy use, and the cumulative impact would be **less than significant**.

As described in Impact 4.6-2, in Section 4.6, "Energy," the proposed plan would result in a reduction in vehicle miles traveled (VMT) per service population relative to existing conditions and 2040 no project conditions. Additionally, the proposed plan would meet the mandatory electric vehicle (EV) charging requirements of the CALGreen Code and, therefore, promote the use of EVs. Implementing the proposed plan would also result in new development that would, at minimum, comply with 2022 California Energy Code Standards, and with the progressively more stringent requirements of future Energy Code standards. However, the proposed plan does not include any policies that address building zero net energy (ZNE) for future land uses. Therefore, the proposed plan would conflict with the energy-related measures of the City's Greenhouse Gas Reduction Plan, which requires that commercial projects achieve ZNE electricity. While the City cannot guarantee future industrial businesses would source their natural gas from renewable resources due to limitations regarding enforceability and availability of renewable natural gas to power heavy industrial processes, which could comprise the majority of the proposed plan, implementation of Mitigation Measures 4.3-1b, 4.3-1c, 4.3-1g, 4.3-1h, 4.3-1i, 4.3-1j, 4.3-1k, and 4.3-1l, 4.6-1a, 4.6-1b, 4.6-1c, and 4.6-1d would be sufficient to reduce this impact to a less-than-significant level if otherwise not prescribed. Therefore, the proposed plan would not contribute to cumulative impacts related to a conflict with the City's GHGRP and the cumulative impact would be **less than significant**.

5.4.7 Geology, Soils, and Mineral Resources

SEISMIC AND GEOLOGIC HAZARDS

The geographic context for cumulative impacts related to seismic and geologic hazards include the Plan Area and the City of Fresno.

Seismic hazards affecting cumulative projects are expected to be moderate due to the low to moderate historic ground shaking in the region, and the distance to known active faults. As described in Section 4.7, "Geology, Soils, and Mineral Resources," Fresno, like much of California, is within a seismically active region, which could be susceptible to strong seismic ground shaking. Surface fault rupture, landslides, lateral spreading, subsidence, collapse, and expansive soils, however, are not likely to occur in the region because of the distance to active faults. The County has not been specifically evaluated for the potential for liquefaction. Impacts related to seismic and geologic hazards would not be cumulatively considerable because the geographic context is generally site-specific, rather than cumulative in nature. Notwithstanding, development in Fresno and the greater region has been regulated by the California Building Code (CBC) and local building codes, which ensure that structures are designed and engineered to site-specific conditions. Each site where present and reasonably foreseeable projects would occur has unique geologic considerations that would also be subject to uniform site development and construction standards consistent with the CBC and local building codes. Accordingly, cumulative impacts would be less than significant.

As discussed in Section 4.7, a site-specific geotechnical report would be prepared for individual projects that would be implemented under the proposed plan. Future development under the proposed plan would incorporate the design and engineering recommendations contained in the site-specific geotechnical report, which would account for the unique geotechnical factors affecting individual project sites and conform to the requirements of the CBC and local building code requirements. Therefore, the proposed plan would not contribute to cumulative impacts related to seismic and geologic hazards; the impact would be **less than significant**.

EROSION AND LOSS OF TOPSOIL

As described in Section 4.7, "Geology, Soils, and Mineral Resources," the Plan Area is not within an area of steep slopes or within a generalized erosion hazard area. However, development in the Plan Area involving substantial ground disturbance and earth-moving activities or changes to drainage patterns would have potential to result in soil erosion or the loss of topsoil.

Cumulative projects would likely involve ground-disturbing construction activities, which may contribute to erosion and loss of topsoil throughout the Plan Area. Under the National Pollutant Discharge Elimination System (NPDES) permit program, projects that disturb more than 1 acre of land are required to prepare a storm water pollution prevention plan (SWPPP) and implement associated best management practices (BMPs) that are specifically designed to reduce construction-related erosion. The SWPPP and BMPs would be submitted to the Central Valley Regional Water Quality Control Board in compliance with the statewide *National Pollutant Discharge Elimination System General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* (Construction General Permit) (Order 2009-009-DWQ as amended by Order 2012-0006-DWQ). In addition, construction activities would be subject to SJVAPCD rules regarding dust control, which would reduce the potential for erosion and sedimentation. Once operational, the potential for erosion would be reduced because areas of bare ground would be landscaped or hardscaped and projects would be required to incorporate post-construction stormwater management strategies to reduce the potential for erosion from new development and redevelopment. Therefore, the contribution to cumulative erosion impacts from present and reasonably foreseeable projects would be negligible.

In combination with cumulative development, development under the proposed plan would not exacerbate the potential for erosion and loss of topsoil within the Plan Area. Impacts related to erosion and loss of topsoil would be negligible because the development under the proposed plan would be subject to the NPDES permit program and SJVAPCD requirements described above. The proposed plan would not involve operational activities with potential to result in erosion or loss of topsoil. Therefore, implementation of the proposed plan would not contribute to cumulative impacts related to erosion and loss of topsoil; the cumulative impact would be **less than significant**.

PALEONTOLOGICAL RESOURCES

As described in Section 4.7, "Geology, Soils, and Mineral Resources," geologic deposits that underlie the Plan Area may be considered to have a high paleontological sensitivity. Construction of development projects within the Plan Area could require ground disturbance within previously undisturbed soils and in areas of high sensitivity for paleontological resources.

Prior to the adoption of regulations pertaining to the protection of paleontological resources (e.g., California Public Resources Code sections 5097.5 and 30244), past development within the Plan Area has contributed to the loss of important paleontological resources. Cumulative development continues to contribute to the disturbance and loss of paleontological resources. This represents an existing significant cumulative impact.

Development under the proposed plan would increase the potential for destruction of paleontological resources within the Plan Area. However, development under the proposed plan would be required to comply with Mitigation 4.7-5, which specifies procedures to protect paleontological resources. Under Mitigation Measure 4.7-5, any paleontological resources of significance that are recovered during construction activities would be provided to an institution or person who is capable of providing long-term preservation to allow future scientific study. Other future development would be required to implement similar measures in compliance with California Public Resources Code Sections 5097.5 and 30244 and other local regulations governing the protection of paleontological resources. Therefore, implementation of the proposed plan would not contribute to cumulative impacts related to paleontological resources; the cumulative impact would be **less than significant**.

5.4.8 Greenhouse Gas Emissions and Climate Change

The discussion of greenhouse gas (GHG) emissions associated with the project and related infrastructure for Impacts 4.8-1 and 4.8-2 in Section 4.8, "Greenhouse Gas Emissions and Climate Change," is inherently a cumulative impact analysis. GHG emissions from one project cannot, on their own, result in changes in climatic conditions; therefore, the emissions from one project must be considered in the context of their contribution to cumulative global emissions. The analysis of Impacts 4.8-1 and 4.8-2 concluded that the proposed plan would result in GHG emissions during both construction and operation of plan development implemented over the planning period. It would result in a less-than-significant VMT impact (i.e., 33 percent below a 2015 baseline), which would align with the California Air Resources Board's (CARB) direction in Appendix D of the 2022 Scoping Plan to reduce VMT statewide. However, the proposed plan would allow for natural gas usage for commercial, residential, and industrial land uses and does not provide a standard for future land uses to meet the Tier 2 voluntary requirements of the CALGreen Code. Therefore, the proposed plan would not align with CARB's direction to decarbonize buildings or electrify the mobile source sector. For these reasons, the proposed plan would not be consistent with the 2022 Scoping Plan and would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment or conflict with state GHG reduction goals. Implementation of Mitigation Measures 4.3-1b, 4.3-1c, 4.3-1g, 4.3-1h, 4.3-1i, 4.3-1l, 4.3-1m, 4.6-2a, 4.6-2b, 4.6-2c, 4.6-2d, 4.8-1a, and 4.8-1b would reduce the proposed plan's operational GHG emissions; however, the City cannot guarantee future industrial businesses would source their natural gas from renewable resources due to limitations regarding enforceability. Given that heavy industrial uses comprise the majority of the Plan Area and would generate substantial emissions during operation, the proposed plan's contribution to cumulative GHG impacts would be **cumulatively considerable**. Because no additional mitigation is available beyond what is identified in this EIR, the cumulative impact would be **significant and unavoidable**.

5.4.9 Hazards and Hazardous Materials

The geographic area considered for cumulative impacts related to hazards and hazardous materials is the Plan Area. As described in Section 4.9, "Hazards and Hazardous Materials," the proposed plan would result in no impact related to airport hazards or wildland fires. Therefore, it would not contribute to any cumulative impacts related to these topics.

Hazardous materials impacts associated with the past or current uses of a project site usually occur on a project-by-project basis and are site-specific rather than regional in nature. Any hazardous materials uncovered during

construction activities would be managed consistent with applicable federal, state, and local laws to limit exposure and clean up the contamination. In addition, the use, storage, transport, and disposal of hazardous materials would be managed in accordance with applicable federal and state requirements to limit risk of exposure. Cumulative development in the vicinity of the proposed plan would create similar hazardous material effects during standard construction activities. Current and reasonably foreseeable projects would also be required to comply with measures that would minimize and/or avoid exposure of hazardous materials to people or the environment (similar to Mitigation Measures 4.9-1a through 4.9-1i) recommended for the proposed plan). Therefore, there would be no cumulative impact associated with hazardous materials use, storage, transport, or accidental spills.

Implementation of the proposed plan would not impair an adopted emergency response plan or emergency evacuation plan; however, construction activities associated with future development within the Plan Area would involve truck traffic and temporary land/shoulder closures in work zones that could result in temporary land closures on certain roads, increased traffic, and other roadway conditions that could interfere with or slow down emergency vehicle access and services. Implementation of Mitigation Measure 4.9-4 would reduce potential impacts to emergency access such that they would not be cumulatively considerable. Current and reasonably foreseeable projects would also be required to comply with measures that would minimize and/or avoid impacts related to emergency access.

Therefore, the proposed plan would not contribute to cumulative impacts related to hazards and hazardous materials. The cumulative impact would be **less than significant**.

5.4.10 Hydrology and Water Quality

Cumulative impacts on hydrology and water quality need to be considered in the context of the San Joaquin Valley Basin. Previous, on-going, and future development in the City of Fresno and Fresno County have contributed to additional demands on groundwater resources and available water supply, surface and groundwater water quality impacts, and regional increases in peak drainage flows from increased impervious surfaces associated with development.

SURFACE WATER AND GROUNDWATER QUALITY

As identified in Impact 4.10-1 in Section 4.10, "Hydrology and Water Quality," construction and operational activities associated with future development under the proposed plan could degrade the quality of stormwater flows and potentially degrade downstream water quality. Development under the proposed plan would be required to comply with applicable requirements related to water quality, including on-site stormwater detention/retention and materials handling, during construction and operation. Compliance with these regulations would reduce the potential for construction and operation of development associated with the proposed plan to violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. Similarly, cumulative development projects would be required to comply with state and local water quality laws and regulations implemented to protect surface water and groundwater resources, including the Fresno Metropolitan Flood Control District's (FMFCD) Storm Water Quality Management Plan, NPDES permit, General Plan policies, and Fresno Municipal Code requirements. Therefore, the proposed plan would not contribute to cumulative water quality impacts and the cumulative impact would be **less than significant**.

GROUNDWATER RECHARGE

The City overlays the Kings Subbasin, a high-priority and critically overdrafted basin managed by North Kings Groundwater Sustainability Agency (NKGSA). A groundwater sustainability plan (GSP) for the Kings Subbasin was adopted in 2023 and contains projects and management actions that would bring the subbasin into sustainability by 2040. Future development in the Plan Area would not impede implementation of projects or management actions included in the NKGSA GSP. Additionally, land uses included in the proposed plan would demand less water supply, including groundwater, than the land uses assumed in the 2014 General Plan, which was used to develop assumptions included within the NKGSA GSP. In addition, as described above, future development within the Plan

Area would be required to comply with FMFCD's Storm Water Quality Management Plan, NPDES permit, General Plan policies, and Fresno Municipal Code requirements, which would provide for infiltration of stormwater and reduce the potential for Plan Area development to adversely affect groundwater resources. Cumulative development projects would also be required to comply with these state and local water quality laws and regulations to protect groundwater resources. Therefore, the proposed plan would not contribute to cumulative groundwater depletion and the cumulative impact would be **less than significant**.

DRAINAGE AND SURFACE RUNOFF

Implementation of development under the proposed plan would increase impervious surfaces in the Plan Area, which could subsequently increase stormwater runoff volumes and velocities, exceed capacity of existing drainageways, and create downstream flooding. The protective General Plan policies and Municipal Separate Storm Sewer System Permit for Fresno County would require any future development in the Plan Area as well as cumulative development projects to implement stormwater management measures to reduce stormwater runoff such that peak runoff flow rates are reduced; stormwater runoff is infiltrated, evapotranspired, and/or captured and used on-site to reduce site runoff for smaller storm events into municipal systems; and increases in volumetric runoff would be retained to prevent increased downstream flooding. Additionally, the SCSP storm drain system would be designed to accommodate buildout conditions, so that new development would not generate runoff that could exceed the capacity of the system. With implementation of these measures, the proposed plan would not contribute to cumulative drainage impacts and the cumulative impact would be **less than significant**.

FLOOD HAZARD

The Plan Area contains flood hazard and dam inundation areas. However, compliance with the Fresno Flood Plain Ordinance, General Plan policies, and existing safety regulations would be required for the implementation of development under the proposed plan, resulting in low-risk release of pollutants due to inundation. Cumulative development projects would also be required to comply with these state and local laws and regulations. Therefore, the proposed plan would not contribute to cumulative flood hazards and the cumulative impact would be **less than significant**.

5.4.11 Land Use and Planning

The cumulative context for land use and planning is the Plan Area and portions of the City of Fresno and unincorporated Fresno County adjacent to the Plan Area. Impacts related to consistency with land use plans or policies would generally be localized and would not generally combine to result in cumulative impacts. The thresholds of significance for land use impacts consider whether a project would physically divide an established community or conflict with any applicable land use plan or policy adopted for the purpose of reducing or avoiding environmental impacts. Such conflicts are inherently site specific and are addressed by individual projects.

As discussed in Impact 4.11-1 in Section 4.11, "Land Use and Planning," development under the proposed plan would not physically divide an established community. Approximately 5 percent of the Plan Area is occupied by residential uses, and the residences are located primarily in pockets of development along the outer edges of the area. The locations and extent of residences in the Plan Area would not change substantially under the proposed plan. No major roadways or any other development that could divide a community is proposed under the plan. In addition, the network of bicycle paths and trails and the network of sidewalks would be expanded under the plan, providing greater connectivity throughout the Plan Area. Additionally, the General Plan EIR concluded that continued implementation of the approved General Plan would ensure there is not an existing cumulative impact related to division of established communities. Therefore, the proposed plan would not contribute to cumulative division of an established community and the cumulative impact would be **less than significant**.

As discussed in Impact 4.11-2, with the approval of the General Plan amendment, the SCSP would be consistent with the *Fresno General Plan*. Also, the proposed plan includes policies, development regulations, and use regulations to

reduce potential impacts on sensitive uses located adjacent to industrial areas. Further, the SCSP would not conflict with a habitat conservation plan or natural community conservation plan. Therefore, the proposed plan would not contribute to cumulative conflicts with land use plans and policies and the cumulative impact would be **less than significant**.

5.4.12 Noise

The geographic scope of the cumulative noise analysis is limited by the range of potential noise impacts. Noise impacts tend to be localized; therefore, noise impacts for traffic and stationary noise sources are limited to approximately 500 feet from the source.

CONSTRUCTION NOISE

Noise dissipates rapidly from its source; however, cumulative impacts from construction-generated noise could result if construction activities of other planned projects were to take place in close enough proximity to proposed plan-generated construction such that noise effects would combine to result in substantial increases in noise at the same sensitive receptors. With regards to cumulative construction noise, and noise in general, the addition of two similar noise levels results in a 3-decibel (dB) increase, which is considered perceptible by most people. And, when a louder noise level is combined with a lower noise level, a less than 3-dB increase would occur (i.e., 65 dB plus 60 dB equals 66 dB). Thus, for a perceptible increase in cumulative construction noise to occur, similar noise levels from two different construction sites would need to combine at the same sensitive receptor to result in a cumulative increase in noise.

Because details of individual development projects adjacent to the Plan Area are currently unknown, it is not possible to quantify future cumulative construction noise impacts that could occur if multiple developments were to be constructed simultaneously, which could constitute a significant cumulative noise impact. The proposed plan's construction noise could combine with other nearby anticipated development such that a considerable cumulative increase in noise would occur. Development of the proposed plan would occur over the next 15 or more years (buildout by 2040) and would result in various levels of construction throughout the Plan Area. Implementation of Mitigation Measure 4.12-1a would provide substantial reductions in daytime and nighttime construction noise levels; however, construction noise could nonetheless temporarily reach high levels and disrupt sensitive receptors, depending on their proximity throughout buildout of the proposed plan. Consequently, while the construction activities would follow various noise mitigation measures and ordinances, the proposed plan's contribution to cumulative construction noise impacts would be **cumulatively considerable**. Because no additional mitigation is available beyond what is identified in this EIR, the cumulative impact would be **significant and unavoidable**.

VIBRATION

Cumulative impacts from construction-generated vibration could result if other future planned construction activities were to take place very close to other construction activities and cumulatively combine with construction vibration from the proposed plan. Operational vibration sources include operations on the Union Pacific Railroad (UPRR) and BNSF tracks. However, impacts would be isolated to new receptors constructed close to these existing sources. In addition, depending on the specific land use at industrial sites, operational activities could result in vibration sources such as from heavy-duty trucks traveling on truck routes or from new stationary equipment.

Vibration associated with construction and operational activities is of primary concern within proximity (e.g., 550 feet) of sensitive land uses. At increasing distances from the source, vibration levels dissipate rapidly and have less potential to cause disturbance to people or damage to structures. In addition, vibration generated from construction is typically associated with pile-driving activities that only occur during discrete phases of construction and for intermittent and brief periods at a time. For these reasons, even with additional large development projects and plans anticipated for future development, vibration impacts would remain local and would not combine with vibration source from other construction activities even if construction activities at other future development were to occur simultaneously with proposed plan construction activities. Further, project-generated vibration levels would be

reduced to the extent feasible with implementation of Mitigation Measure 4.12-2a, which limits vibration activities to less sensitive times of the day and requires the use of quieter alternatives to impact pile driving. Therefore, because vibration levels generated by cumulative development projects would be limited to the vicinity of construction activities for those projects, and because vibration impacts of development proposed under the proposed plan would be minimized to the extent feasible, cumulative construction-generated vibration impacts would be **less than significant**.

Operation of future projects could result in truck-generated vibration impacts on existing sensitive receptors and—though unlikely—future sensitive uses could be developed within the small areas of land in the proposed Business Park and Residential land use designations adjacent to existing railroad tracks. Implementation of Mitigation Measure 4.12-2b through 4.12-2d would reduce operational vibration impacts to the extent feasible and require future development to be designed and located in a manner that minimizes vibration exposure to existing and new sensitive receptors. However, given that the details of future developments under the plan and potential truck routes are yet unknown, it is possible that such uses, even with mitigation, could disrupt sensitive receptors. Therefore, the proposed plan's contribution to cumulative operational vibration noise impacts would be **cumulatively considerable**. Because no additional mitigation is available beyond what is identified in this EIR, the cumulative impact would be **significant and unavoidable**.

OPERATIONAL NOISE (STATIONARY AND TRANSPORTATION)

Cumulative noise levels could be affected by additional buildout of surrounding land uses and increases in vehicular traffic on affected roadways.

Regarding stationary noise increases, the proposed plan would result in land use development that typically includes stationary noise sources such as noise from mechanical equipment, such as heating, ventilation, and air conditioning (HVAC) units; backup emergency generators; vehicular and human activity; parking lots; loading docks; and delivery activities at commercial/industrial land uses. As discussed in Impact 4.12-3 in Section 4.12, "Noise," the proposed plan is designed to buffer residentially designated areas with less intensive land uses (e.g., Business Park) such that new industrial uses would not be located within distances that could expose existing sensitive receptors to excessive stationary noise levels. However, exact types of development, locations, building footprints, and building orientations are yet unknown; therefore, it is possible that new stationary noise sources could result in excessive noise levels at sensitive receptors and exceed applicable City of Fresno standards. Implementation of Mitigation Measures 4.12-3a through 4.12-3e would reduce noise exposure from existing and new stationary sources; however, the impact would remain significant and unavoidable and could combine with other off-site stationary sources to result in considerable increases in noise. Thus, the proposed plan's contribution to cumulative operational noise impacts from stationary sources would be **cumulatively considerable**. Because no additional mitigation is available beyond what is identified in this EIR, the cumulative impact would be **significant and unavoidable**.

In addition, traffic generated by future planned development in the region would result in additional traffic-related noise on surrounding roadways. Development of the Plan Area could result in new and expanded roadways to serve future development as well as increases in long-term traffic and associated noise increases on existing affected roadways. Existing and future development within and near the Plan Area could be exposed to substantial increases in traffic noise levels that exceed City residential noise standards of 65 A-weighted decibels (dBA) day-night average noise level Community Equivalent Noise Level (dBA L_{dn} /CNEL). Future development could result in the construction of sensitive uses (e.g., houses, schools, churches, hospitals) near existing or future roads that generate substantial traffic noise. In addition, new development of sensitive uses could occur near the existing UPRR and BNSF tracks, exposing these new receptors to noise levels that exceed applicable noise standards. Implementation of Mitigation Measures 4.12-2b, 4.12-3a, and 4.12-3b would reduce noise exposure from transportation sources; however, the proposed plan could nonetheless result in exceedance of the 65 dBA L_{dn} /CNEL transportation noise standard for sensitive uses on many roads. Further, combined with traffic from other development in the area, additional increases in transportation noise could occur. Thus, the proposed plan's contribution to cumulative traffic volumes in the area would result in additional substantial increases in noise as well as additional noise sources within the vicinity. The proposed plan's contribution would be **cumulatively considerable**. Because no additional mitigation is available beyond what is identified in this EIR, the impact would be **significant and unavoidable**.

5.4.13 Population and Housing

For population and housing, the cumulative setting includes the City of Fresno, including the Plan Area, and Fresno County. Currently, the Plan Area consists of a population of approximately 1,130 residents (City of Fresno 2024). The General Plan does not project any new housing in the Plan Area; therefore, no population growth is expected for the Plan Area. However, the City is projected to add an estimated 176,000 to 216,000 new residents between 2022 to 2040 (City of Fresno 2024). As described in Section 4.13, "Population and Housing," development of the proposed plan would generate 313 new residents by 2040, which represents 0.14 to 0.17 percent of the City's forecasted growth.

Cumulative development would result in the continued development of Fresno and surrounding areas, including residential, commercial, and industrial development. The general plans and other planning documents prepared by the jurisdictions within Fresno County would be required to develop land use plans that comply with state law and that would accommodate the existing and forecasted population. Consistent with state law, these planning documents would be required to provide adequate housing to accommodate forecasted numbers of people within the jurisdiction, and displaced development, if any, would be replaced primarily within the jurisdiction. Further, new development would be required to address potential environmental impacts as part of individual project review. As such, cumulative development would not induce substantial unplanned population growth, either directly or indirectly. Because cumulative projects would comply with applicable land use plans to provide adequate development within a jurisdiction, cumulative impacts would be less than significant.

As described in Section 4.13, "Population and Housing," the proposed plan would not induce substantial unplanned population growth, either directly (i.e., by proposed new unplanned homes) or indirectly (i.e., by the extension of roads or other infrastructure), or displace substantial numbers of people or housing. The proposed plan has the potential to generate future development of approximately 12,021,744 square feet (sf) of non-residential uses and 91 new residential dwelling units, resulting in a minimal population increase of approximately 313 new residents by 2040. Consistent with the General Plan, the purpose of the proposed plan is to create jobs for the City. The City is projected to add nearly 70,000 employees between 2022 and 2040 (City of Fresno 2024). Therefore, implementation of the proposed plan will create jobs for the City's projected growth in population and employment. Consistent with the General Plan, the proposed plan would promote a better balance of jobs and housing within the City. The additional growth of industrial, office, and retail and the small number of assumed residential units is consistent with citywide planning efforts. Thus, the proposed plan would not contribute to a cumulative impact related to population and housing and the cumulative impact would be **less than significant**.

5.4.14 Public Services and Recreation

As described in Section 4.14, "Public Services and Recreation," the proposed plan would result in no impact related to new or physically altered school facilities or the increased use of parks and recreational facilities. Therefore, it would not contribute to any cumulative impacts related to these facilities.

FIRE PROTECTION

The geographic scope for the analysis of cumulative impacts related to fire protection facilities includes the Fresno Fire Department (FFD) service area. FFD conducts a regular budgeting process where future facility and staffing needs are identified and addressed. All cumulative projects within the FFD service area would be required to comply with the Municipal Code, General Plan policies and actions, and applicable specific plan policies that address fire protection services, including payment of public safety impact fees to provide funding for adequate fire equipment, vehicles, and facilities to meet the needs of Fresno residents and employees. Because past and present development will comply with all ordinances and policies, and there are mechanisms in place to ensure provision of adequate service, there would be no significant cumulative condition with respect to fire protection services. Therefore, cumulative impacts would be less than significant.

As discussed under Impact 4.14-1, in Section 4.14, "Public Services and Recreation," implementation of the proposed plan may increase demand for fire protection services that could require new or expanded facilities. Expansion of an existing fire station or construction of a new facility would involve minor land clearing, grading, installation of utilities, and building construction, generally on a modest-sized lot (approximately 2.5 acres). Construction activities and duration would be typical of such facilities and would be required to comply with applicable City policies and regulatory requirements to reduce adverse environmental effects. For these reasons, there is no evidence to suggest that such construction would result in unmitigable, adverse effects on the environment. As noted above, new development in the Plan Area would be required to comply with the policies and actions in the General Plan and Specific Plan as well as the Municipal Code, specifically impact fire facilities fees, to ensure that fire protection services are adequate as future development is proposed. Therefore, the proposed plan would not contribute to a cumulative impact related to fire protection and emergency response facilities and services and the cumulative impact would be **less than significant**.

POLICE PROTECTION

The geographic context for the analysis of cumulative impacts related to police protection facilities includes the Fresno Police Department (FPD) service area. All cumulative projects within the FPD service area would be required to comply with City ordinances and the General Plan and applicable specific plan policies and actions that address police protection services, including payment of police facilities impact fees to provide funding for adequate police equipment, vehicles, and facilities to meet the needs of Fresno residents and employees. Therefore, cumulative impacts would be less than significant.

As discussed under Impact 4.14-2, in Section 4.14, "Public Services and Recreation," development of the proposed plan would result in an increased demand for law enforcement services. A new centralized police headquarters and communications center building, two new police substations, and a new 911 emergency operations dispatch center are proposed in the City, but it is not clear if these would be sufficient to meet the demand for law enforcement services associated with the proposed plan. If new or physically altered police facilities are required to adequately serve development within the Plan Area, expansion of an existing police station or construction of a new facility could involve minor land clearing, grading, installation of utilities, and building construction, generally on a modest-sized parcel. Construction activities and duration would be typical of such facilities and would be required to comply with applicable City policies and regulatory requirements to reduce adverse environmental effects. For these reasons, there is no evidence to suggest that such construction would result in unmitigable, adverse effects on the environment. As noted above, new development in the Plan Area would be required to comply with the policies and actions in the General Plan and Specific Plan as well as the Municipal Code, specifically police facilities fees, to ensure that police protection services are adequate as future development is proposed. Therefore, the proposed plan would not contribute to a cumulative impact related to police protection facilities and services and the cumulative impact would be **less than significant**.

5.4.15 Transportation and Circulation

The geographic scope of analysis for cumulative impacts related to VMT includes Fresno County, the City of Fresno, and the Plan Area. This cumulative VMT analysis does not rely on a list of specific pending, reasonably foreseeable development proposals in the vicinity of the Plan Area; rather, it relies on planned transportation improvement projects as well as projected demographic growth built into the Fresno Activity Based Travel Demand Model (Fresno ABM). The geographic scope for the analysis of the impacts related to a program, plan, ordinance, or policy addressing the circulation system, substantially increasing hazards due to geometric features or incompatible uses, and inadequate emergency access, would be different than the geographic scope for the VMT analysis, and would include past, present, and reasonably foreseeable future projects that would have the potential to affect the same transit, roadway, bicycle, and pedestrian facilities surrounding the Plan Area and the interconnected circulation system of Fresno County.

TRANSIT SERVICE AND FACILITIES, BICYCLE FACILITIES, AND PEDESTRIAN FACILITIES

Combined with other cumulative development in the area, the demand for transit service and facilities, bicycle facilities, and pedestrian facilities is anticipated to increase. As described under Impact 4.15-1 in Section 4.15, "Transportation and Circulation," implementation of the proposed plan would be consistent with City General Plan and Active Transportation Plan policies as well as Municipal Code requirements applicable to transit, bicycle, and pedestrian facilities and services. Additionally, proposed SCSP policies would encourage the implementation of pedestrian safety improvements and transportation demand management strategies for employees to support the use of alternative modes of transportation. Therefore, the proposed plan would not contribute to a cumulative impact related to transit service and facilities, bicycle facilities, and pedestrian facilities and the cumulative impact would be **less than significant**.

VEHICLE MILES TRAVELED

The travel demand model used to analyze the proposed plan reflects the changes to future growth patterns assumed as part of the proposed plan. The discussion of VMT impacts associated with the proposed plan in Impact 4.15-2 addresses VMT generated by the proposed plan based on an efficiency threshold that is aligned with long-term goals and relevant plans. As detailed in the Governor's Office of Planning and Research Technical Advisory, "A project that falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact. Accordingly, a finding of a less-than-significant project impact would imply a less than significant cumulative impact, and vice versa (OPR 2018: 6)." Therefore, the VMT impacts identified in Section 4.15, are inherently cumulative. As shown in Table 4.15-1, the SCSP Transportation Impact Analysis found that VMT would be reduced under 2035 with project conditions as compared to both 2035 no project and 2015 existing conditions due to the proposed plan's creation of employment opportunities. The proposed plan would result in a VMT per service population of 29.87 as compared to 44.88 VMT per service population under existing conditions, which is a 33 percent decrease in VMT. Therefore, the proposed plan would not contribute to a cumulative impact related to VMT and the cumulative impact would be **less than significant**.

TRANSPORTATION HAZARDS

In general, transportation hazards are site-specific and not cumulative in nature. As detailed in Section 4.15, "Transportation and Circulation," the proposed plan's industrial and other uses, which would be developed incrementally over time, would substantially increase traffic, including truck traffic, in the Plan Area. All transportation related infrastructure improvements constructed under the proposed plan would be subject to and designed in accordance with all applicable design standards and would be reviewed by City staff before implementation. Additionally, Chapter 5 of the SCSP identifies development standards with which individual projects would be required to comply. These include provisions for truck routing, parking, and internal project site signage and wayfinding. Therefore, compliance with these standards would ensure that development associated with the proposed plan would not result in transportation hazards or incompatible uses. Additionally, individual project contractors would be required to develop and implement a traffic control plan in accordance with policy 210.01 ("Traffic Control Policies and Procedures") of the City of Fresno Public Works Department Policies and Procedures to minimize hazards during construction. Other nearby projects within the public right-of-way would also be required to comply with the City's construction standards, thus, minimizing the potential for cumulative transportation-related hazards. Therefore, the proposed plan would not contribute to a cumulative impact related to transportation hazards and the cumulative impact would be **less than significant**.

EMERGENCY ACCESS

In general, emergency access impacts are site-specific and not cumulative in nature. As detailed in Section 4.15, "Transportation and Circulation," subsequent projects and transportation improvements that would be developed under the proposed plan incrementally over time would be required to meet State and local standards pertaining to

emergency access, including design and safety regulations provided in the 2022 California Fire Code and City Municipal Code and subject to review by emergency service agencies. Other nearby projects would also be required to comply with the applicable fire apparatus access standards, thus, minimizing the potential for cumulative impacts to emergency access. Therefore, the proposed plan would not contribute to a cumulative impact related to emergency access and the cumulative impact would be **less than significant**.

5.4.16 Utilities and Service Systems

For utilities and service systems, the cumulative context includes the service areas of the various service providers. Past and present development in the geographic context has resulted in an increase in demand for water, wastewater treatment, stormwater capacity, landfill capacity, and energy facilities to adequately serve development. The respective service providers have responded to these increasing demands by constructing new infrastructure. In addition, each utility type has a management plan in place that addresses future projected demands for planned development. These management plans are routinely updated to account for new development. Construction of individual infrastructure projects has likely resulted in discrete impacts in various issue areas, such as aesthetics, air quality, biological resources, etc. Therefore, there could be a cumulatively significant impact from construction of past and present infrastructure projects. Future development could contribute to this cumulative impact.

UTILITY INFRASTRUCTURE

Future development in Fresno would increase the demand for new and expanded utility infrastructure, the relocation or construction of which could cause significant environmental effects. As described under Impact 4.16-1 in Section 4.16, "Utilities and Service Systems," implementation of the proposed plan would require relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, and telecommunications facilities. New infrastructure would generally be constructed within existing roadways or would consist of short connections to existing pipelines, and impacts associated with construction of new or extended utility infrastructure are analyzed throughout this EIR. The project's anticipated demands would be within the capacity of the existing utility infrastructure. Similarly, cumulative development would be required to demonstrate an adequate capacity of utilities and services before project approval. Cumulative development would be required to contribute fair share funding to fund necessary expansion of utility infrastructure and conduct appropriate CEQA analyses to evaluate potential environmental impacts of utility relocation, construction, or expansion. Because of these requirements and the proposed plan's small percent of the remaining capacity of the existing utility infrastructure, the proposed plan would not contribute to a cumulative impact related to utility infrastructure and, therefore, the cumulative impact would be **less than significant**.

WATER SUPPLY

The geographic scope for the cumulative water supply analysis is the City of Fresno, including the Plan Area, and the groundwater basins from which the Plan Area derives water. Population growth and local regulation of associated development within the City prevent the occurrence of existing cumulative utilities and service system impacts by implementing the *Fresno General Plan* that includes a policy framework that ensures adequate capacity exists to support proposed development.

Cumulative development in the Plan Area and beyond would result in increased demand for water supply. The City's 2020 Urban Water Master Plan (UWMP) includes water demand projections for current water demands within the City and anticipated water demands associated with future development projects and planning areas within the City's General Plan Sphere of Influence through 2045 (City of Fresno 2021). As described in Section 4.16, "Utilities and Service Systems," and shown in Table 4.16-2, water demand within the City's service area is not expected to exceed the City's supplies in any normal, single dry, or multiple dry year between 2025 and 2045 (City of Fresno 2023).

Future development considered in the 2020 UWMP includes the Plan Area; however, the land uses in the City's General Plan are not the same as those proposed in the SCSP. Thus, a water supply assessment was prepared for the

SCSP to evaluate whether adequate water supplies would be available for the Plan Area (City of Fresno 2023). As described under Impact 4.16-2 in Section 4.16, "Utilities and Service Systems," future development of the proposed plan would demand less water than the currently approved General Plan land uses within the Plan Area (17,300 acre-feet per year [af/yr] versus 18,400 af/yr). As such, there would be a greater surplus of water supply for the City during normal, dry, and multiple-dry years through 2045 with implementation of the proposed plan compared with the existing approved land uses considered in the 2020 UWMP. Therefore, the proposed plan would not contribute to a cumulative impact related to water supply and the cumulative impact would be **less than significant**.

WASTEWATER TREATMENT

The geographic area that is considered for cumulative impacts on wastewater treatment services consists of the Fresno/Clovis Regional Wastewater Reclamation Facility (RWRF) service area boundary. The permitted wastewater treatment capacity of the RWRF is currently 91.5 million gallons per day (mgd) annual monthly average flow, and 101 mgd as a maximum monthly average flow (City of Fresno 2020). Given that the RWRF currently treats approximately 68 mgd, there is a remaining treatment capacity of 23.5 mgd.

Cumulative projects that would contribute demand for wastewater treatment at the RWRF include development projects within the service area boundary. As described in Section 4.16.2, "Environmental Setting," the General Plan EIR assumes that several upgrades to the RWRF would be completed to accommodate future development associated with continued implementation of the approved General Plan. These upgrades include expansion of the RWRF, construction of a recycled water facility at the RWRF, expansion of the North Fresno WRF, and construction of a wastewater treatment facility within the Southeast Development Area.

Wastewater generation from development anticipated under the proposed plan would be approximately 11.6 mgd average annual flows, 13.4 mgd peak day dry weather flows, and 15.1 mgd for peak month wet weather flows. The RWRF, which has a remaining capacity of 23.5 mgd, would be able to accommodate these wastewater flow rates in addition to existing commitments. Therefore, because adequate treatment capacity is available at the RWRF for wastewater flows associated with the proposed plan, and upgrades to the overall wastewater treatment system in the City are planned to accommodate General Plan buildout, the proposed plan would not contribute to a cumulative impact related to wastewater treatment and the cumulative impact would be **less than significant**.

SOLID WASTE

The cumulative setting for solid waste services consists of the American Avenue Landfill and City of Clovis Landfill service areas, which includes Fresno County. As discussed in Section 4.16.2, "Environmental Setting," the American Avenue Landfill has a maximum permitted capacity of 32,700,000 cubic yards and a remaining capacity of 29,358,535 cubic yards, with an estimated closure date of August 31, 2031. The City of Clovis Landfill is anticipated to close in 2047. Future development in Fresno County would further increase the amount of waste processed and disposed of at these landfills. Although the capacity of the landfills are anticipated to serve existing and future development within the County, cumulative development could reduce the life of the landfills, which would require expansion of these facilities. Because cumulative development would contribute to the need to expand the landfills or solid waste would need to be transported elsewhere, cumulative demand for solid waste services would be a potentially significant cumulative impact.

Individual cumulative development projects would be required to comply with state and local statutes and regulations related to solid waste. Additionally, the City is implementing diversion programs and the Fresno City Council passed a resolution that commits the City to the goal of a Zero Waste goal by 2025 (City of Fresno 2020). On-going programs would continue to reduce landfill contributions, consistent with the California Integrated Waste Management Act, Assembly Bill (AB) 341, Senate Bill (SB) 1374, AB 1826, and SB 1383. While General Plan Policy RC-11-b requires the City to develop a strategic and operations plan for fulfilling the City Council resolution committing the City to a Zero Waste goal, it is not clear when zero waste goals will be met. Without attainment of zero waste goals, development under the proposed plan may generate waste in excess of capacity at the American Avenue Landfill, which is planned for closure in 2031. Implementation of Mitigation Measure 4.16-4 would require the City to identify

additional available landfill capacity for future development before approval of individual development projects. Thus, the proposed plan would not contribute to a cumulative impact related to solid waste disposal and the cumulative impact would be **less than significant**.

6 ALTERNATIVES

6.1 INTRODUCTION

The California Code of Regulations (CCR) Section 15126.6(a) (State CEQA Guidelines) requires EIRs to describe "... a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather, it must consider a range of potentially feasible alternatives that will avoid or substantially lessen the significant adverse impacts of a project, and foster informed decision making and public participation. An EIR is not required to consider alternatives that are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason." This section of the State CEQA Guidelines also provides guidance regarding what the alternatives analysis should consider. Subsection (b) further states the purpose of the alternatives analysis is as follows:

Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code [PRC] Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

The State CEQA Guidelines require that the EIR include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative must be discussed, but in less detail than the significant effects of the project as proposed (CCR Section 15126.6[d]).

The State CEQA Guidelines further require that the "no project" alternative be considered (CCR Section 15126.6[e]). The purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving a proposed project with the impacts of not approving the proposed project. If the no project alternative is the environmentally superior alternative, CEQA requires that the EIR "...shall also identify an environmentally superior alternative among the other alternatives." (CCR Section 15126[e][2]).

In defining "feasibility" (e.g., "... feasibly attain most of the basic objectives of the project ..."), CCR Section 15126.6(f) (1) states, in part:

Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives.

In addition, PRC, Section 210181(a)(3) provides factors for the decision maker to consider in determining whether an alternative is feasible. For example, it states "Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR."

In determining what alternatives should be considered in the EIR, it is important to consider the objectives of the project, the project's significant effects, and unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in Section 15126.6(a). Although, as noted above, EIRs must contain a discussion of "potentially feasible" alternatives, the ultimate determination as to whether an alternative is

feasible or infeasible is made by the lead agency's decision-making body, here the City Council. (See PRC Sections 21081.5, 21081[a] [3].)

6.2 CONSIDERATIONS FOR SELECTION OF ALTERNATIVES

6.2.1 Attainment of Project Objectives

As described above, one factor that must be considered in selection of alternatives is the ability of a specific alternative to attain most of the basic objectives of the project (CCR Section 15126.6[a]). Chapter 3, "Project Description," identifies the project objectives, which are also described below.

The overarching vision of the South Central Specific Plan (SCSP) is to improve the City's overall economic competitiveness, support employment opportunities for residents, and maintain and improve community livability. The objectives that would help realize this vision are as follows:

- ▶ **Stimulate economic development.** Promote inclusive and sustainable economic growth and attract development that focuses on emerging markets and new technologies.
- ▶ **Provide diverse employment.** Create diverse employment opportunities, including an accessible and resilient employment zone.
- ▶ **Minimize environmental and neighborhood impacts.** Consider project-specific environmental effects (e.g., truck traffic, air emissions, noise and vibration) on existing and potential future sensitive receptors and impose measures to minimize such impacts.
- ▶ **Preserve existing operations:** Preserve the viability of existing industrial and manufacturing operations in the Plan Area.
- ▶ **Protect against incompatible uses.** Protect existing and future development from adverse impacts associated with incompatible uses.
- ▶ **Implement infrastructure improvement:** Improve Plan Area infrastructure (e.g., transportation, sewer, water) to expand the supply of "shovel-ready" sites.
- ▶ **Be a good neighbor.** Participate in "good neighbor" policies to provide residents with clear and transparent access to information regarding community development and assist in addressing disputes and concerns.
- ▶ **State Routes 99 and 41 as Gateways.** Transform State Routes 99 and 41 as gateways into the City. Utilize landscaping and architectural design to improve the visual quality when entering the Plan Area.

6.2.2 Environmental Impacts of the South Central Specific Plan

The proposed plan would result in development of a variety of land use types, primarily industrial and commercial/business park. Sections 4.1 through 4.16 of this Draft EIR address the environmental impacts of implementation of the proposed plan. Consistent with State CEQA Guidelines Section 15126.6, potentially feasible alternatives were developed with consideration of avoiding or lessening the significant, and potentially significant, adverse impacts of the plan, as identified in Chapter 4 of this Draft EIR and summarized below. If an environmental issue area analyzed in this Draft EIR is not addressed below, it is because no significant impacts were identified for that issue area. In summary, the significant impacts of the proposed plan are:

- ▶ **Aesthetics:** Implementation of the proposed plan would result in increases of densities and intensification primarily of industrial and commercial land uses within the Plan Area, which would result in substantial changes in the existing visual character. No feasible mitigation measures are available to mitigate the impact to a less-than-significant level; therefore, the impact of the proposed plan and its considerable contribution to the cumulative impact on the existing visual character would be **significant and unavoidable**. The proposed plan would introduce

new sources of light and glare associated with new buildings and facilities. Although residential development is relatively sparse in the Plan Area and the SCSP assumes relatively little new residential development that could be affected by additional light and glare, such lighting could nonetheless contribute to indirect lighting/glare on adjacent land uses that could adversely affect daytime or nighttime views and result in additional skyglow, resulting in a significant impact. After mitigation, light/glare impacts would be **less than significant**.

- ▶ **Agriculture and Forestry Resources:** Implementation of the proposed plan would result in conversion of Prime Farmland and Farmland of Statewide Importance to non-agricultural uses. This impact would be significant. Mitigation measures are included in the EIR to require compensatory farmland to be preserved. However, the mitigation measure would not replace the farmland that is converted; therefore, this proposed plan and cumulative impact would be **significant and unavoidable**. Additionally, implementation of the proposed plan is likely to result in conversion of existing Farmlands that are enrolled in Williamson Act contracts to non-agriculture uses. Because future development could result in conflict with a Williamson Act contract and no feasible mitigation is available, the impact of the proposed plan and its considerable contribution to the cumulative impact would be **significant and unavoidable**.
- ▶ **Air Quality:** The proposed plan, which comprises many future development projects, would generate construction and operational emissions of criteria air pollutants and ozone precursors exceeding the San Joaquin Valley Air Pollution Control District's (SJVAPCD) thresholds of significance. In addition, implementation of the proposed plan would result in significant impacts related to exposure of sensitive receptors to toxic air contaminants (TACs) and resultant cancer risk. After mitigation, air quality impacts would be **less than significant**, except for TAC impacts. The impact of the proposed plan and its considerable contribution to the cumulative impact would be **significant and unavoidable**.
- ▶ **Biological Resources:** Future development under the proposed plan may include ground disturbance, vegetation removal, and overall conversion of land cover, which would have potentially adverse effects on biological resources. This would include potentially significant impacts related to the disturbance, injury, or mortality of several special-status plant and wildlife species, if present; reduced reproductive productivity of these species; and contribution to loss of species habitat. Development under the proposed plan could also result in potentially significant impacts related the degradation or loss of riparian habitat (e.g., reduction of vegetation cover, trampling, alteration of root structure), if it is present on a particular project site; and the loss of state or federally protected wetland habitat, which includes seasonal wetlands. After implementation of mitigation measures, impacts to biological resources would be **less than significant**.
- ▶ **Cultural and Tribal Cultural Resources:** Because the Plan Area could contain unrecorded historic sites, implementation of the proposed plan could result in a significant impact related to historic resources if such a resource exists and damage to or destruction of the resource occurred. After implementation of mitigation measures, the impact of the proposed plan and its considerable contribution to the cumulative impact would remain **significant and unavoidable**. Additionally, ground-disturbing activities could result in discovery or damage of yet undiscovered archaeological resources and previously unknown human remains, which would result in potentially significant impacts. After implementation of mitigation measures, impacts to these resources would be **less than significant**.
- ▶ **Energy:** The proposed plan would reduce vehicle miles traveled (VMT) per service population relative to existing conditions and 2040 no project conditions, meet the mandatory electric vehicle (EV) charging requirements of the CALGreen Code and promote the use of EVs, and result in new development that would comply with 2022 California Energy Code Standards and with the progressively more stringent requirements of future Energy Code standards. However, because the proposed plan does not include any policies that address building zero net energy (ZNE) for future land uses, the proposed plan would conflict with the energy-related measures of the City's Greenhouse Gas Reduction Plan (GHGRP), which requires that commercial projects achieve ZNE electricity. After implementation of mitigation measures, this impact would be **less than significant**.
- ▶ **Geology, Soils, and Mineral Resources:** Construction of future development under the proposed plan could require ground disturbance within previously undisturbed soils and in areas of high sensitivity for paleontological

resources. Such development has the potential to destroy a unique paleontological resource or site or unique geologic feature, which would be a potentially significant impact. After mitigation, impacts to paleontological resources would be **less than significant**.

- ▶ **Greenhouse Gas Emissions and Climate Change:** The proposed plan would result in greenhouse gas (GHG) emissions during both construction and operation of plan development. Because neither the City nor SJVAPCD have recommended thresholds for determining the significance of GHG emissions, consistency with the 2022 Scoping Plan is used to determine whether implementing the proposed plan would result in a cumulatively considerable contribution to climate change. The proposed plan would not align with the Transportation Electrification and Building Decarbonization Priority Areas included in the 2022 Scoping Plan. Therefore, the proposed plan would generate GHG emissions that may have a significant impact on the environment, would conflict with state GHG reduction goals, and would cumulatively contribute to global climate change. After implementation of mitigation measures, the greenhouse gas emissions impact of the proposed plan and its considerable contribution to the cumulative impact would remain **significant and unavoidable**.
- ▶ **Hazards and Hazardous Materials:** Construction and operation of development under the proposed plan would result in potentially significant impacts related to the routine transport, use, and disposal of hazardous materials and reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment; potential for hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school; potential to 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, create a significant hazard to the public or the environment; and potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. After implementation of mitigation measures, impacts related to hazards and hazardous materials would be **less than significant**.
- ▶ **Hydrology and Water Quality:** Future development under the proposed plan could degrade the quality of stormwater flows and potential downgrade downstream surface water quality, and result in an increase of impervious surface and runoff. In addition, the Plan Area contains flood hazard and dam inundation areas. Development under the proposed plan would be required to comply with applicable requirements related to water quality, groundwater, flood hazards. With compliance with existing regulations and applicable plans such as the Basin Plan, hydrology and water quality impacts would be **less than significant**.
- ▶ **Land Use and Planning:** Development under the proposed plan would not physically divide an established community. Implementing the proposed plan would require a general plan amendment to allow for the proposed land use changes, as some of the proposed land uses differ from the general plan. With the approval of the amendment, the SCSP would be consistent with the City of Fresno General Plan and would not conflict with any other plans or policies. Therefore, land use impacts would be **less than significant**.
- ▶ **Noise:** Future construction activities could result in a substantial (i.e., 5 dB) temporary or periodic increase in noise during daytime or nighttime hours at existing and future sensitive land uses. Depending on the specific location of future land development and specific land uses located close to high-volume roads, exterior and interior noise limits could be exceeded at existing and future sensitive land uses. In addition, operation of future projects could result in truck-generated vibration impacts on sensitive receptors and—though unlikely—sensitive uses could be developed within the small areas of land in the proposed Business Park and Residential land use designations adjacent to existing railroad tracks, operational vibration impacts would be significant. After implementation of mitigation measures, the noise impact of the proposed plan and its considerable contribution to the cumulative impact would remain **significant and unavoidable**.
- ▶ **Population and Housing:** Implementation of the proposed plan would create jobs for the City's projected growth in population and employment. The proposed plan would not induce substantial unplanned population growth, either directly (i.e., by proposed new unplanned homes) or indirectly (i.e., by the extension of roads or other infrastructure) or displace substantial numbers of people or housing. Therefore, population and housing impacts would be **less than significant**.

- ▶ **Public Service and Recreation:** Under the proposed plan, development would be intensified within the Plan Area and may increase demand for fire protection services and law enforcement services that could require new or expanded facilities. Construction activities and duration would be typical of such facilities and would be required to comply with applicable City policies and regulatory requirements to reduce adverse environmental effects. For these reasons, there is no evidence to suggest that such construction would result in unmitigable, adverse effects on the environment. The projected future development of the proposed plan would include an estimated 91 new residential dwelling units by 2040, which is anticipated to support approximately 279 new residents at buildout. The projected number of residents in the Plan Area would be relatively small and dispersed and would not require the construction or expansion of school or recreations facilities. Therefore, public services and recreation impacts would be **less than significant**.
- ▶ **Transportation and Circulation:** The proposed SCSP policies would encourage the construction of bicycle and pedestrian safety improvements and transportation demand management strategies for employees to support the use of alternative modes of transportation. There is no evidence to suggest that the SCSP or future development under the plan would conflict with any applicable program, plan, ordinance, or policy addressing the circulation system. The SCSP TIA found that under horizon year with project conditions, the proposed plan would result in a VMT per service population of 29.87 as compared to 44.88 VMT per service population under existing conditions. Because the proposed plan would result in a 33 percent decrease in VMT, the proposed plan would not conflict or be inconsistent with CEQA Guidelines Section 15064.3. Although the nature and location of specific development projects under the proposed plan cannot be known, the plan would substantially increase industrial uses in the Plan Area and implement commercial and minor residential development. Thus, the industrial and other uses would substantially increase traffic, including truck traffic, in the Plan Area. Subsequent projects under the plan would be required to comply with all applicable design standards and would be subject to review by City staff to ensure these requirements are met. In addition, with adherence to local and State emergency access and design standards and regulations, implementation of the proposed plan would not adversely affect emergency vehicle access or response times. Therefore, the proposed plan would not result in inadequate emergency access. With compliance with existing regulations and applicable plans transportation and circulation impacts would be **less than significant**.
- ▶ **Utilities and Service Systems:** Implementation of the proposed plan would require relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, and telecommunications facilities. New infrastructure would generally be constructed within existing roadways or would consist of short connections to existing pipelines and would be developed as part of buildout of the proposed plan. The impacts associated with such infrastructure connections would be typical of such construction and would result in are generally assessed as part of the proposed development under the SCSP (e.g., construction-related air, noise, GHG, and transportation effects), within the context of this EIR, and there is no evidence to suggest that such construction would result in additional significant environmental effects. Future development of the proposed plan would demand less water than the currently approved General Plan land uses within the Plan Area. As such, there would be a greater surplus of water supply for the City during normal, dry, and multiple-dry years through 2045 with implementation of the proposed plan compared with the existing approved land uses considered in the 2020 UWMP. In addition, Implementation of the proposed plan would allow for development of industrial, commercial office, retail, and residential uses, which would generate solid waste. Without attainment of zero waste goals, development under the proposed plan may generate waste in excess of capacity at the American Avenue Landfill, which is planned for closure in 2031. After implementation of mitigation measures, impacts related to utilities and service systems would be **less than significant**.

6.3 ALTERNATIVE CONSIDERED BUT NOT EVALUATED FURTHER

6.3.1 Off-Site Alternative

Off-site alternatives generally involve moving a project to another location. As a land use plan and not a defined project, an off-site alternative to the SCSP is infeasible. Implementation of the SCSP cannot occur within an area completely outside the existing Plan Area. Further, one of the primary project objectives is to create diverse employment opportunities, including an accessible and resilient employment zone, that take advantage of the Plan Area's central location in California and the San Joaquin Valley as well as its proximity to Fresno's downtown, railway lines, and State Routes 99 and 41. Other project objectives include preserving the viability of existing industrial and manufacturing operations in the Plan Area and transforming State Routes 99 and 41 as gateways into the City. Finding a suitable alternative site with a comparable geographic footprint, which also maintains similar access to existing highways, roadways, utilities, services, and population centers, is not feasible. Furthermore, South Central Fresno is an area that has long been planned for growth. Beginning as early as 1918, the City of Fresno recognized the Plan Area's economic importance and from 1956 onward has planned for industrial development through the Fresno General Plan. Proximity to downtown Fresno is critical to support the proposed employment-generating uses and preservation of existing industrial and manufacturing operations. For these reasons, the off-site alternative is infeasible and dismissed from further evaluation.

6.4 ALTERNATIVES SELECTED FOR DETAILED ANALYSIS

The following discussion summarizes the alternatives evaluated and then includes a detailed description of each alternative followed by a discussion that compares each of the proposed plan's significant impacts to the relative impact that would likely result from the alternative. Because these alternative discussions are comparative, they do not necessarily identify significance conclusions (such as "significant" or "less than significant"); rather, they identify the level of impact relative to the proposed plan's significant impact. These comparisons use the following conclusions:

- ▶ **"Avoids"** is used when an alternative avoids the proposed plan's significant impact by reducing the effect below the threshold of significance.
- ▶ **"Less"** is used when an alternative reduces the proposed plan's significant impact, but not below the threshold of significance.
- ▶ **"Similar"** is used when the alternative's impact is approximately the same as the proposed plan's impact.
- ▶ **"Greater"** is used when the alternative increases the severity of the proposed plan's significant impact, or results in a new significant impact that would not occur as a result of proposed plan implementation.

The following alternatives are evaluated in this Draft EIR:

- ▶ **No Project/General Plan Land Use Alternative.** This alternative assumes that the SCSP would not be approved and that buildout of the planned land uses in the adopted General Plan occurs. The total level/acreage of development for this alternative would be the same as the SCSP, but the mix of land uses would be different. No residential uses are included in this alternative.
- ▶ **Farmland Conservation Alternative.** This alternative would reduce the proposed plan's significant impact related to conversion of farmland by conserving specific parcels of farmland within the Plan Area. No future development would be permitted on farmland designated for conservation. This would reduce the total amount of development allowed in the Plan Area by about 18 percent compared with the SCSP and would include a similar mix of land uses, including some residential.
- ▶ **Reduced Plan Area Alternative.** This alternative would reduce the Plan Area acreage and not provide for development within the sphere of influence outside the existing City boundary. The acreage of the Plan Area would be reduced by approximately 2,343 acres, for a total of 3,224 acres, instead of 5,567 acres as compared to

the proposed plan, resulting in a commensurate reduction in development capacity. This would reduce the total amount of development allowed in the Plan Area by about 42 percent compared with the SCSP and would include a similar mix of land uses, including some residential.

In addition to the CEQA alternatives, the alternatives section includes analysis of two project options put forward by various community members and businesses. The following options are provided to compare the impacts from these options to the project for purposes of full disclosure:

- ▶ **Community Plan Alternative.** This alternative reflects the community's desire to increase quality of life in the Plan Area by decreasing land use intensity. This alternative would include more residential units (739 units compared with 91 units under the SCSP) and would decrease land use intensity surrounding sensitive uses. Additionally, this alternative would increase the amount of office and retail, while reducing the amount of industrial land use.
- ▶ **Business Plan Alternative.** This alternative reflects the business community's desire to maximize economic growth in the Plan Area by designating industrial as the primary land use. No residential uses are included in this alternative.

Further details on the alternatives and an evaluation of their environmental effects relative to the SCSP are provided below.

ALTERNATIVES DEVELOPMENT PROCESS

As described in Chapter 3, "Project Description," a community outreach and engagement process was conducted for the SCSP in 2020 to produce a vision and guiding principles centered around balancing the needs of industrial users, ensuring a diverse employment base, and minimizing impacts on the environment and neighborhoods. The outcome of the engagement process was development of three alternative land use maps: one reflecting a plan focused on residential and community-serving development (Community Alternative), a second focused almost exclusively on industrial development (Business Alternative), and a third that represents a blending of the Community and Business alternatives (Blended Alternative and the proposed plan). As described above, however, these options were not developed for purposes of CEQA, that is, to reduce the potential for significant environmental effects. Therefore, they are identified as "options" rather than "alternatives" for purposes of this analysis.

During preparation of this Draft EIR, the No Project Alternative was defined and included to comply with CEQA requirements, and the Farmland Conservation Alternative and Reduced Plan Area Alternative were developed to address the significant impacts identified for the SCSP as proposed.

DEVELOPMENT DENSITY

As in Chapter 3, "Project Description," Economic Planning Systems, Inc. (EPS) was retained by the City to conduct a market analysis of demand for non-residential development in the plan area by 2040 to help inform the development assumptions to be used in the specific plan and alternatives. Growth projections were calculated using development assumptions and floor area ratios outlined in the General Plan for various land use types (see Table 3-5 in Chapter 3, "Project Description").

Table 6-1 shows potential development anticipated to be generated within the Plan Area for the proposed plan and alternatives by 2040. As shown in Table 6-1, the proposed plan and alternatives would primarily generate growth for retail, office, industrial, and (for some alternatives) residential units. Other land uses would be permitted in accordance with the General Plan land use designations, including, for example, mixed use, open space, and public facilities; however, these are not shown in Table 6-1 because they are not the focus of the SCSP. While the total development estimated under the proposed plan and alternatives would be the same (12,021,744 square feet), the mix of land uses would be different, as shown in Table 6-1 and in the figures in this chapter. For all alternatives except the No Project/General Plan Land Use Alternative, the City would be required to amend the General Plan to allow for the proposed land use changes.

Table 6-1 Development Projections for the Proposed Plan, Alternatives, and Options (2022-2040)

Land Use	No Project/ General Plan Land Use Alternative (sq. ft.)	Proposed Plan (sq. ft.)	Farmland Conservation Alternative	Reduced Plan Alternative	Community Plan Option (sq. ft.)	Business Plan Option (sq. ft.)
Retail	340,492	866,676	710,674	502,672	3,871,826	277,375
Office	578,790	578,790	474,608	335,698	4,008,553	578,790
Industrial	11,102,462	10,576,278	8,672,548	6,134,241	4,141,365	11,165,579
Total Non-Residential	12,021,744	12,021,744	9,857,830	6,972,612	12,021,744	12,021,744
Residential Units	0	91 units	75 units	53 units	739 units	0

Source: Prepared by Ascent Environmental in 2024.

Table 6-2 shows the residential and job growth anticipated to occur within the Plan Area with implementation of the proposed plan and alternatives.

Table 6-2 Anticipated Population and Job Growth for the Proposed Plan and Alternatives (2022-2040)

Land Use	No Project/General Plan Land Use Alternative	Proposed Plan	Farmland Conservation Alternative	Reduced Plan Alternative	Community Plan Option	Business Plan Option
Total Residential Growth	0	313 persons	258 persons	182 persons	2,262 persons	0
Food (Restaurants)	18 employees	183 employees	33 employees	106 employees	2,650 employees	19 employees
Industrial	11,102 employees	10,576 employees	8,673 employees	6,134 employees	4,141 employees	11,166 employees
Office	1,929 employees	1,928 employees	1,582 employees	1,118 employees	13,010 employees	1,929 employees
Retail	670 employees	1,624 employees	1,421 employees	942 employees	6,154 employees	543 employees
Total Job Growth	13,702 employees	14,311 employees	11,709 employees	8,300 employees	25,955 employees	13,657 employees

Source: Prepared by Ascent Environmental in 2024.

6.4.1 No Project/General Plan Land Use Alternative

Under CEQA, the No Project Alternative must consider the effects of forgoing the project altogether. The purpose of analyzing the No Project Alternative is to allow decision makers to compare the impacts of the proposed project versus no project. The No Project Alternative can consist of either a “no development” alternative, under which no development occurs in the project area, or an alternative under which development is assumed to occur consistent with the presiding development plan and according to existing land use designations, or both.

The Plan Area has already been slated for growth per the approved Fresno General Plan. As such, this Draft EIR analyzes a no project alternative that assumes development consistent with the land use designations in the existing General Plan. Figure 6-1 shows the planned land uses under the No Project/General Plan Land Use Alternative. Table 6-3 presents a side-by-side comparison of the projected buildout (to 2040) for the General Plan versus the proposed plan.

Table 6-3 Development Projections for the No Project/General Plan Land Use Alternative and Proposed Plan (2022-2040)

Land Use	Proposed Plan (sq. ft.)	No Project/General Plan Land Use Alternative (sq. ft.)	Difference (sq. ft.)
Retail	866,676	340,492	-526,184
Office	578,790	578,790	0
Industrial	10,576,278	11,102,462	526,184
Total Non-Residential	12,021,744	12,021,744	0
Residential Units	91 units	0	-91 units

Source: Prepared by Ascent Environmental in 2024.

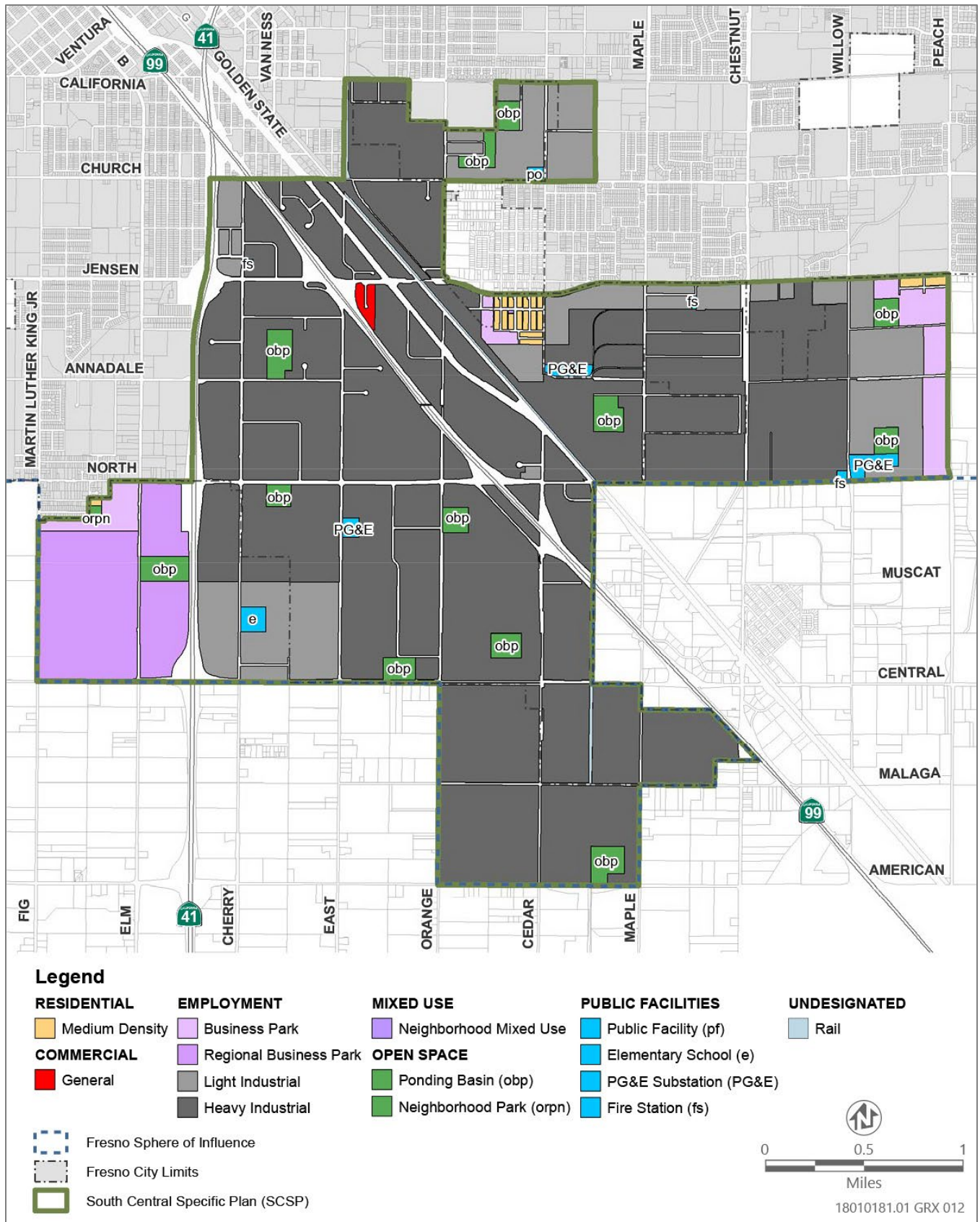
The No Project/General Plan Land Use Alternative differs from the proposed plan with respect to the types of urban land uses identified. The General Plan does not include residential land uses in the Plan Area. Further, the General Plan designates a majority of the Plan Area for industrial uses, whereas the proposed plan would reallocate 526,184 square feet of proposed industrial land use to retail. The General Plan includes less than half of the amount of retail than would be developed under the proposed plan. Notwithstanding these differences, the total development under the General Plan and the proposed plan would be the same (12,021,744 square feet).

Table 6-4 shows the residential and job growth anticipated to occur within the Plan Area with implementation of the General Plan versus the proposed plan. This alternative would generate no residential growth and less job growth than the proposed plan (4 percent less [609/14,311]).

Table 6-4 Anticipated Population and Job Growth for the No Project/General Plan Land Use Alternative and Proposed Plan (2022-2040)

Land Use	Proposed Plan	No Project/General Plan Land Use Alternative	Difference
Total Residential Growth	313 persons	0	-313 persons
Food (Restaurants)	183 employees	18 employees	-165 employees
Industrial	10,576 employees	11,102 employees	526 employees
Office	1,928 employees	1,929 employees	1 employees
Retail	1,624 employees	670 employees	-954 employees
Total Job Growth	14,311 employees	13,702 employees	-609 employees

Source: Prepared by Ascent Environmental in 2024.



Source: Image produced and provided by the city of Fresno, Adapted by Ascent Environmental in 2023.

Figure 6-1 No Project/General Plan Land Use Alternative: Planned Land Use

COMPARISON OF NO PROJECT/GENERAL PLAN LAND USE ALTERNATIVE AND PROPOSED PLAN IMPACTS

The General Plan designates the entire Plan Area for future development. Therefore, because the No Project/General Plan Land Use Alternative includes the same amount of land identified for development, it would require a similar amount of construction and would result in a similar amount of conversion of undeveloped land to urban use, compared with the proposed plan. The following discussion focuses on the potential for this alternative to reduce the proposed plan's significant impacts.

Aesthetics

Implementation of the No Project/General Plan Land Use Alternative would result in development of urban land uses within the same footprint as the proposed plan. The primary difference between the No Project/General Plan Land Use Alternative and the proposed plan is the types of land uses. Unlike the proposed plan, the No Project/General Plan Land Use Alternative does not specifically include residential land uses—the land use designations are nonresidential. Regarding the proposed plan's significant impacts related to visual character and light and glare, this alternative would result in similar impacts due to the same footprint being developed with similar land uses and a large number of new light sources. For these reasons, the impacts to aesthetics would be **similar** between the proposed plan and this alternative, and this alternative would not eliminate the proposed plan's significant and unavoidable impact related to visual character.

Agriculture and Forestry Resources

As described in Section 4.2, "Agriculture and Forestry Resources," the Plan Area includes approximately 992 acres of Prime Farmland and Farmland of Statewide Importance as well as approximately 153 acres (located outside the existing City limits but within the City's sphere of influence) under Williamson Act contracts. Because the total amount of future development (5,567 acres) and the Plan Area footprint would remain unchanged between the No Project/General Plan Land Use Alternative and the proposed plan, this alternative would result in a similar amount of conversion of Important Farmland and farmland under Williamson Act contracts compared to the proposed plan, which are considered significant impacts. The impacts to agricultural resources would be **similar** between the proposed plan and this alternative, and this alternative would not eliminate the proposed plan's significant and unavoidable impacts related to the conversion of farmland and conflicts with Williamson Act contracts.

Air Quality

Implementing the No Project/General Plan Land Use Alternative would result in a similar level of development within the same footprint as the proposed plan. Therefore, construction-related air pollutant emissions would be similar. However, due to the different mix of urban land uses (less residential, less retail, more industrial), operational emissions would be greater due to the greater amount of industrial development compared to the proposed plan. The overall impact related to air quality would be **greater**.

Biological Resources

Under the No Project/General Plan Land Use Alternative, the same amount of land would be developed with urban uses within the Plan Area as the proposed plan. Therefore, this alternative would have similar impacts compared to the proposed plan related to the disturbance, injury, or mortality of several special-status plant and wildlife species, if present; reduced reproductive productivity of these species; and contribution to loss of species habitat. Development under this alternative could also result in the degradation or loss of riparian habitat (e.g., reduction of vegetation cover, trampling, alteration of root structure), if it is present on a particular project site; and the loss of state or federally protected wetland habitat, which includes seasonal wetlands. The No Project/General Plan Land Use Alternative would generally result in similar impacts and would require similar mitigation measures compared to the proposed plan. Overall, impacts to biological resources would be **similar**.

Cultural and Tribal Cultural Resources

The No Project/General Plan Land Use Alternative would result in development of the Plan Area, which could contain unrecorded historic sites. Thus, implementation of the No Project/General Plan Land Use Alternative could result in a significant impact related to historic resources if such a resource exists and damage to or destruction of the resource occurred. This impact would be **similar** to the proposed plan's impact, and this alternative would not eliminate the proposed plan's significant and unavoidable impacts to cultural resources.

Energy

Unlike the proposed plan, this alternative would not reduce VMT per service population relative to existing conditions and 2040 no project conditions (see discussion under "Transportation and Circulation," below). This alternative would result in a similar level of development compared with the proposed plan; however, because less industrial land uses would be developed, energy demands would be less than those of the proposed plan. Similar to the proposed plan, it is assumed that this alternative would meet the mandatory EV charging requirements of the CALGreen Code and comply with 2022 California Energy Code Standards; however, also similar to the proposed plan, this alternative may conflict with the energy-related measures of the City's GHGRP, which requires that commercial projects achieve ZNE electricity. This impact would be **similar** to the proposed plan's impact, and this alternative would not eliminate the proposed plan's significant and unavoidable impact related to energy.

Geology, Soils, and Mineral Resources

Implementation of this alternative would involve grading and other ground-disturbing activities similar to the proposed plan and on the same footprint. Therefore, this alternative would have similar impacts associated with seismic ground-shaking, soil erosion, geological hazards, expansive soils, and paleontological resources. The same mitigation measures required for the proposed plan would also be required for this alternative. Overall, impacts to geology, soils, and mineral resources would be **similar**.

Greenhouse Gas Emissions and Climate Change

Operational emissions of GHG generally correlate to the size and intensity of a project and the associated energy consumed and VMT. Implementation of the proposed plan would generate a considerable amount of GHG. Implementation of mitigation measures identified in the EIR would substantially reduce on-site emissions; however, emissions levels would still be high (there is no City or SJVAPCD significance threshold). This alternative would result in a similar level of overall development as the proposed plan; however, operational GHG emissions would be greater than those of the proposed plan due to the greater amount of industrial development. Even assuming the same mitigation measures apply, the overall GHG emissions associated with operation of this alternative would likely be substantial. For these reasons, the GHG impact associated with the No Project/General Plan Land Use Alternative would be **greater** compared to the impact resulting from the proposed plan.

Hazards and Hazardous Materials

Implementation of this alternative would involve the routine transport, use, and disposal of hazardous materials; potential for hazardous emissions or handling of hazardous materials within 0.25 mile of an existing or proposed school; potential to be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5; and potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The No Project/General Plan Land Use Alternative would generally result in similar impacts and would require similar mitigation measures compared to the proposed plan. Overall, impacts related to hazards and hazardous materials would be **similar**.

Hydrology and Water Quality

The No Project/General Plan Land Use Alternative would have the same development footprint as the proposed plan, and construction associated with this alternative would require compliance with the same water quality regulations as the proposed plan. In addition, although there are differences between the land use types identified for this alternative compared to the proposed plan, the overall level of development would be similar, and this alternative

would also be required to comply with the same construction and operational regulations as the proposed plan. Overall, impacts related to hydrology and water quality would be **similar**.

Land Use and Planning

Implementation of the No Project/General Plan Land Use Alternative would result in development of urban land uses within the same footprint as the proposed plan. Similar to the proposed plan, the No Project/General Plan Land Use Alternative would not divide an established community, nor would it conflict with plans adopted for the purpose of avoiding or mitigating a significant effect (including the City of Fresno General Plan and the City of Fresno Zoning Ordinance). No new residential land uses are proposed. Additionally, no major roadways or other development that could divide a community is proposed. Finally, implementation of the No Project/General Plan Land Use Alternative would not require a general plan amendment. No significant impacts related to land use and planning were identified for the proposed plan; therefore, this alternative would not reduce or avoid any significant impacts related to land use and planning associated with the proposed plan. Impacts would be **similar** between the proposed plan and this alternative.

Noise

Implementing the No Project/General Plan Land Use Alternative would result in a similar level of development within the same footprint as the proposed plan. Therefore, construction-related noise would be similar. Even though this alternative would include a different mix of urban land uses (less residential, less retail, more industrial), operational noise and traffic noise would also be similar to the proposed plan due to the development of over 12 million sq. ft. of nonresidential development, which is the same amount of development under this alternative and the proposed plan. Overall, noise impacts would be **similar**.

Population and Housing

The No Project/General Plan Land Use Alternative would not add as many jobs as the proposed plan and would not add any residences. Therefore, although the No Project/General Plan Land Use Alternative would result in substantial employment growth (although not as much as the proposed plan), it would result in no direct population growth associated with adding new residences to the area. Further, similar to the proposed plan, implementation of this alternative is not likely to displace substantial numbers of existing housing or people. No significant impacts related to population and housing were identified for the proposed plan; therefore, this alternative would not reduce or avoid any significant impacts related to population and housing associated with the proposed plan. Overall, impacts associated with the No Project/General Plan Land Use Alternative would be **similar** to those of the proposed plan.

Public Services and Recreation

The proposed plan would result in less-than-significant impacts related to public services and recreation. There is nothing peculiar about the land uses or overall development identified in the No Project/General Plan Land Use Alternative that differs from the proposed plan in a way that would change the potential impact to fire or police services. Overall, impacts related to public services and recreation would be **similar**.

Transportation and Circulation

Implementation of the No Project/General Plan Land Use Alternative would result in the development of less residential, less retail, and more industrial land uses compared with the proposed plan, all of which would generate vehicle trips. Regarding VMT, Table 4.15-1 in Section 4.15, "Transportation and Circulation," indicates that the No Project/General Plan Land Use Alternative (which is shown in the table as "2035 no project" conditions) would generate 46.44 VMT per service population, which is an increase of 1.56 VMT or 3.5 percent from 2015 existing conditions (44.88 VMT) (TJKM 2023a). By comparison, the proposed plan is anticipated to generate 29.87 VMT per service population, a decrease from both 2015 existing conditions and 2035 no project conditions (TJKM 2023a). The decrease in VMT under the proposed plan is partially the result of the proposed land use mix within the Plan Area, but is also affected by the fact that the Plan Area would be a major employment center. Although the proposed plan would only increase residential uses by 91 dwelling units, it would create increased employment opportunities through the implementation of industrial and commercial development leading to improved proximity between the jobs in the Plan Area and surrounding housing by shortening driving distance and, therefore, reducing VMT. No

residential units would be included in this alternative; thus, it would not provide the same benefit of placing housing closer to jobs. Resulting VMT could be higher under this alternative compared to the proposed plan.

Similar to the proposed plan, there is no evidence to suggest that this alternative would conflict with any applicable program, plan, ordinance, or policy addressing the circulation system; substantially increase transportation hazards from design features or incompatible uses; or result in inadequate emergency access.

Overall, the impact related to transportation and circulation would be **greater** than the impact associated with the proposed plan and would likely result in a new significant impact related to VMT.

Utilities and Service Systems

Because of the slightly different mix of urban land uses (less residential, less retail, more industrial), implementation of the No Project/General Plan Land Use Alternative would result in greater demands for water and wastewater treatment, and a slightly reduced demand for solid waste disposal compared with the proposed plan.

As shown in Table 4.16-3 in Section 4.16, "Utilities and Service Systems," implementation of the currently approved General Plan land uses within the Plan Area would result in greater water demand than the proposed plan (18,400 acre-feet/year [af/yr] versus 17,300 af/yr). The water supply assessment (WSA) prepared for the SCSP indicates that the water demand within the City's service area is not expected to exceed the City's supplies in any normal, single dry, or multiple dry year between 2025 and 2045 (City of Fresno 2023). Therefore, the City has sufficient water supplies to meet the water demands of either the No Project/General Plan Land Use Alternative or the proposed plan. With implementation of the proposed plan, however, there would be a greater surplus of water supply for the City during normal, dry, and multiple-dry years through 2045 compared with the existing approved land uses in the General Plan.

Wastewater generation from development anticipated under the proposed plan would be approximately 11.6 million gallons per day (mgd) average annual flows (AAF), 13.4 mgd peak day dry weather flows, and 15.1 mgd for peak month wet weather flows. Under the No Project/General Plan Land Use Alternative, wastewater flows from the Plan Area would be 12.8 mgd AAF, 14.7 mgd for peak day dry weather flows, and 16.6 mgd for peak month wet weather flows, which would be greater than those estimated for the proposed plan (Akel Engineering Group 2022). The Fresno/Clovis Regional Wastewater Reclamation Facility (RWRF), which has a remaining capacity of 23.5 mgd, would be able to accommodate the wastewater flow rates of either the No Project/General Plan Land Use Alternative or the proposed plan.

Under the proposed plan, annual municipal solid waste generation by new development in the Plan Area would be approximately 36.5 tons per day (Table 4.16-4). By comparison, the No Project/General Plan Land Use Alternative would generate approximately 32.7 tons per day given the different mix of land uses. Similar to the proposed plan, attainment of the City's zero waste goals is uncertain and development may generate waste in excess of capacity at the American Avenue Landfill, which is planned for closure in 2031. Mitigation would be required to reduce this impact to a less-than-significant level.

Due to the greater demands for water and wastewater treatment, overall impacts related to utilities and service systems would be **greater** under the No Project/General Plan Land Use Alternative compared to those resulting from the proposed plan.

6.4.2 Farmland Conservation Alternative

Section 4.2, "Agriculture and Forestry Resources," identifies significant impacts related to the loss of Important Farmland and potential conflicts with farmland under Williamson Act contracts. These significance determinations relate to the potential conversion of approximately 992 acres of Prime Farmland and Farmland of Statewide Importance as well as potential conflicts with approximately 153 acres (located outside the existing City limits but within the City's sphere of influence) under Williamson Act contracts. The Farmland Conservation Alternative addresses these issues.

The Farmland Conservation Alternative would reduce the proposed plan’s significant impacts related to agricultural resources by conserving specific parcels of farmland within the Plan Area. This alternative would conserve a total of approximately 992 acres of Important Farmland that would not be conserved under the proposed plan (Figure 6-2). No future development would be permitted on farmland designated for conservation. The land identified for conservation was considered to balance highest value agricultural land, while providing a functional land use plan, and also maintaining contiguous agricultural parcels. It is important to note that although development would not be allowed in the land identified for conservation, ground disturbing activity consistent with agricultural uses would still be permitted.

This alternative would reduce the total amount of development allowed in the Plan Area by approximately 18 percent, compared with the proposed plan (4,575 acres vs. 5,567 acres), and would include a similar mix of land uses, including residential (Table 6-5).

Table 6-5 Development Projections for the Farmland Conservation Alternative and Proposed Plan (2022-2040)

Land Use	Proposed Plan (sq. ft.)	Farmland Conservation Alternative (sq. ft.) ¹	Difference (sq. ft.)
Retail	866,676	710,674	156,002
Office	578,790	474,608	104,182
Industrial	10,576,278	8,672,548	1,903,730
Total Non-Residential	12,021,744	9,857,830	2,163,914
Residential Units	91 units	75 units	16 units

¹ Estimates for the Farmland Conservation Alternative were generated using the assumption that the same mix of land uses included in the proposed plan would be developed on a smaller footprint (5,567-992=4,575). Thus, it is conservatively assumed that the Farmland Conservation Alternative would result in 18 percent less development (in all land use categories) compared to the proposed plan.

Source: Prepared by Ascent Environmental in 2024.

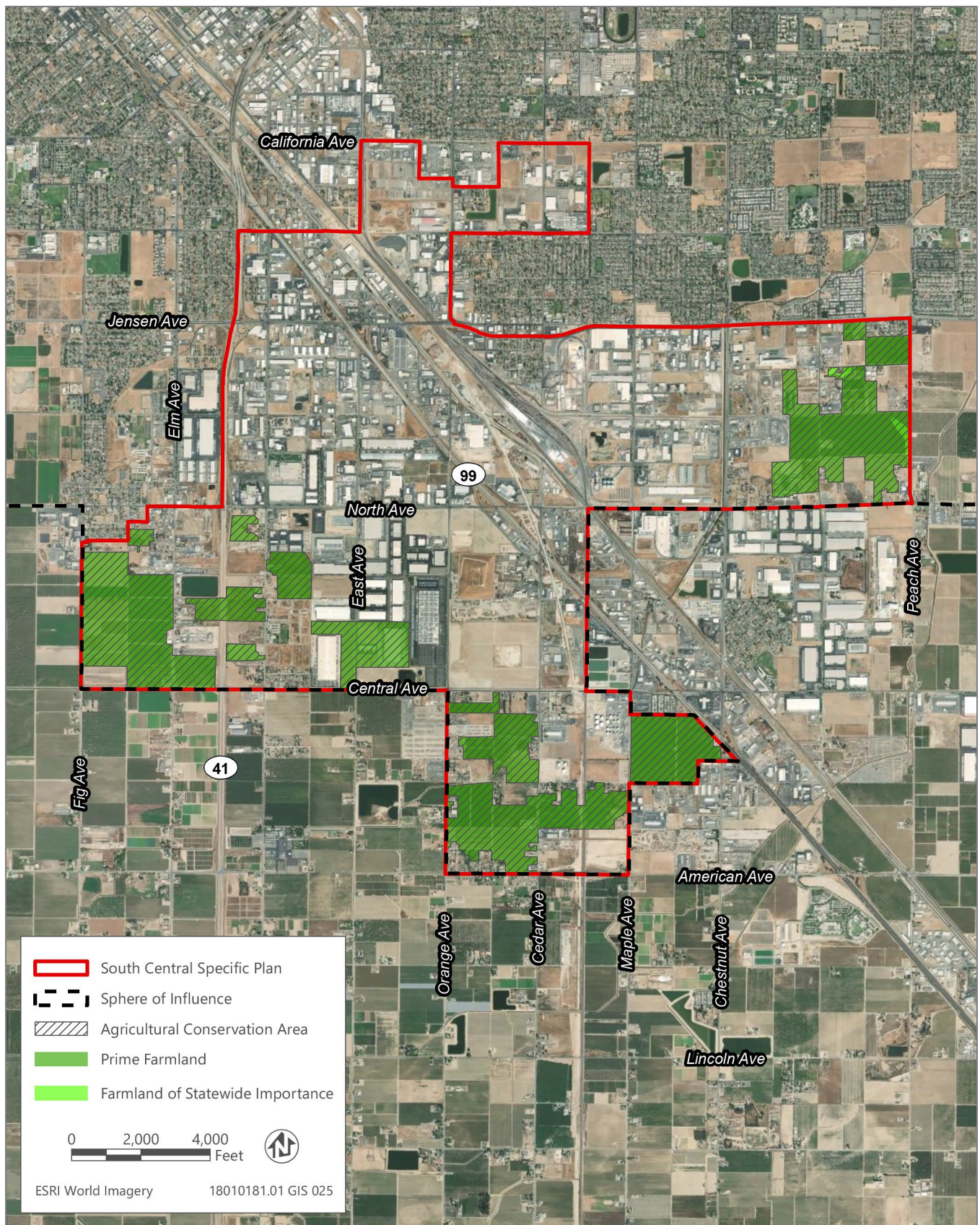
Table 6-6 shows the residential and job growth anticipated to occur within the Plan Area with implementation of the Farmland Conservation Alternative versus the proposed plan. This alternative would generate less residential growth (18 percent less [55/313]) and job growth (18 percent less [2,602/14,311]) than the proposed plan. The use regulations, permit requirements, and development standards for this alternative would be the same as the proposed plan.

Table 6-6 Anticipated Population and Job Growth for the Farmland Conservation Alternative and Proposed Plan (2022-2040)

Land Use	Proposed Plan	Farmland Conservation Alternative ¹	Difference
Total Residential Growth	313 persons	258 persons	55 persons
Food (Restaurants)	183 employees	33 employees	150 employees
Industrial	10,576 employees	8,673 employees	1,903 employees
Office	1,928 employees	1,582 employees	346 employees
Retail	1,624 employees	1,421 employees	203 employees
Total Job Growth	14,311 employees	11,709 employees	2,602 employees

¹ Estimates for the Farmland Conservation Alternative were generated using the same growth assumptions used for the proposed plan. Thus, it is conservatively assumed that the Farmland Conservation Alternative would result in 18 percent less population and job growth compared to the proposed plan.

Source: Prepared by Ascent Environmental in 2024.



Source: 2018 Fresno County data downloaded from the CA Department of Conservation in 2020; adapted by Ascent in 2023.

Figure 6-2 Farmland Conservation Alternative

COMPARISON OF FARMLAND CONSERVATION ALTERNATIVE AND PROPOSED PLAN IMPACTS

The Farmland Conservation Alternative includes approximately 992 acres that would remain in agricultural use, whereas the proposed plan would develop the entire Plan Area and would not designate any land for conservation. Therefore, because the Farmland Conservation Alternative includes less land identified for development, it would require less construction and would result in less conversion of undeveloped land to urban use. The Farmland Conservation Alternative would result in an 18-percent reduction in the amount of development compared to the proposed plan. The following discussion focuses on the potential for this alternative to reduce the proposed plan's significant impacts.

Aesthetics

Although the overall level of development would be less than under the proposed plan, the density of new development would be similar under the Farmland Conservation Alternative, resulting in a visual character that, although generally be consistent with the urbanized portions of the Plan Area. Would still be substantially altered. This alternative would provide 992 acres of preserved farmland, which would reduce impacts related to the change in the character of the site (because less of the site would be developed); however, it would not substantially reduce the aesthetic impacts of development. Areas of abrupt transition from preserved farmland/open space land to developed land would still occur under this alternative. In addition, although the reduced level of potential development would result in a reduced level of night lighting, the extent of night lighting would still be considerable and would not avoid the proposed plan's significant impact related to light and glare (although mitigation is available to reduce this impact to a less-than-significant level). However, less development under the alternative would result in moderately less light pollution than would occur under the proposed plan. Overall, impacts on aesthetics would be **less** than under the proposed plan.

Agriculture and Forestry Resources

The Farmland Conservation Alternative would conserve specific parcels of Important Farmland within the Plan Area, totaling approximately 992 acres, that would not be conserved under the proposed plan. Of this conserved farmland, approximately 153 acres are under Williamson Act contracts and, thus, no conflicts with this land would occur under this alternative. No future development would be permitted on farmland designated for conservation. Because Important Farmland would be conserved and no conflicts with lands under Williamson Act contracts would occur, the impacts of the Farmland Conservation Alternative **avoids** the impact compared to those resulting from the proposed plan. Further, this alternative would eliminate the proposed plan's significant and unavoidable impacts related to the conversion of farmland and conflicts with Williamson Act contracts.

Air Quality

Implementing the Farmland Conservation Alternative would result in a smaller development footprint and therefore substantially less development than would occur under the proposed plan. Construction- and operation-related air pollutant emissions would be considerably reduced. While agricultural operations also generate emissions of concern (e.g., dust, diesel, agricultural chemicals), the locations, quantities, and effects of such emissions in the areas assumed to be conserved under this alternative are unknown, so the net effect of displacement of agricultural by industrial uses is also unknown and therefore speculative. However, the development-related emissions associated with the Farmland Conservation Alternative would still be substantial for both construction and operation. Regarding exposure to TACs, the Farmland Conservation Alternative would result in less industrial development to which existing residents would be exposed, and both the proposed plan and Farmland Conservation Alternative would include few, if any, new residential units. Therefore, compared to the proposed plan, it would expose fewer sensitive receptors to substantial sources of TACs. The overall impact related to air quality would be **less**.

Biological Resources

Implementation of the proposed plan would result in significant, but mitigable, impacts related to the permanent loss of habitat for special-status-species and other sensitive habitat. Implementation of the Farmland Conservation

Alternative would result in fewer acres of developed land and the preservation of approximately 992 acres of farmland, which would result in benefits to special status species and their habitats. Implementation of this alternative would also involve less construction than the proposed plan (because of the smaller development footprint) and would therefore result in less likelihood that special-status species could be affected during construction. Mitigation measures required for this alternative would be similar to those required for the proposed plan. Overall, the biological resource-related impacts of the Farmland Conservation Alternative would be **less** compared to those resulting from the proposed plan.

Cultural and Tribal Cultural Resources

Implementation of the Farmland Conservation Alternative would result in fewer acres of developed land, and, therefore, there would be a minor reduction in the potential to damage unrecorded historic sites, but given the large amount of land that would still be developed under this alternative, the reduction would be inconsequential. Overall, the impacts of the Farmland Conservation Alternative would be **similar** to those under the proposed plan, and this alternative would not eliminate the proposed plan's significant and unavoidable impacts to cultural resources.

Energy

As discussed under "Transportation and Circulation," below, VMT from cars and light trucks could be higher under this alternative compared to the proposed plan because employment centers in the preserved agricultural areas would be smaller, potentially increasing commute distances for workers living farther from the region, but because this alternative would include less industrial development, truck traffic would be reduced. Because to its reduced area, this alternative would have lower energy demands compared with those of the proposed plan. Similar to the proposed plan, it is assumed that this alternative would meet the mandatory EV charging requirements of the CALGreen Code and comply with 2022 California Energy Code Standards; however, also similar to the proposed plan, this alternative may conflict with the energy-related measures of the City's GHGRP, which requires that commercial projects achieve ZNE electricity. Although VMT may be somewhat higher and energy demands would be less under this alternative, the energy-related impact would be **less** compared to that of the proposed plan; however, implementing this alternative would not avoid the proposed plan's significant and unavoidable impact related to energy that would occur under the proposed plan.

Geology, Soils, and Mineral Resources

Implementation of the Farmland Conservation Alternative would involve similar grading and other ground-disturbing activities as the proposed plan, but over a smaller footprint. Therefore, this alternative would have impacts that are similar in nature but reduced in magnitude in the following areas: seismic ground-shaking, soil erosion, geological hazards, expansive soils, and paleontological resources. The same mitigation measures required for the proposed plan would also be required for this alternative. Overall, the impacts of the Farmland Conservation Alternative would be **less** compared to those resulting from the proposed plan.

Greenhouse Gas Emissions and Climate Change

Operational emissions of GHGs generally correlate to the size and intensity of a project and the associated energy consumed and VMT. Implementation of the proposed plan would generate a considerable amount of GHG emissions. Implementation of mitigation measures identified in the EIR would substantially reduce on-site emissions; however, emission levels would still be high (there is no City or SJVAPCD significance threshold). Implementing the Farmland Conservation Alternative would result in less overall development than would occur under the proposed plan. With implementation of the same mitigation measures identified for the proposed plan, the overall GHG emissions associated with operation of this alternative would likely still be substantial, although not as substantial as under the proposed plan. For these reasons, the GHG impact associated with the Farmland Conservation Alternative would be **less** compared to the impact resulting from the proposed plan.

Hazards and Hazardous Materials

Although a smaller amount of land would be developed under the Farmland Conservation Alternative, implementation of the alternative would still involve the routine transport, use, and disposal of hazardous materials;

potential for hazardous emissions or handling of hazardous materials within 0.25 mile of an existing or proposed school; potential to be located on a site included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5; and potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Implementing the Farmland Conservation Alternative would generally result in impacts that are smaller in nature to those of the proposed project but over a small area. Mitigation measures similar to those identified for the proposed plan would still be required. Overall, impacts related to hazards and hazardous materials would be **less** than those of the proposed plan.

Hydrology and Water Quality

Although the Farmland Conservation Alternative would have a smaller overall development footprint and overall less development compared to the proposed plan, the development types would be similar, and construction and operation of this alternative would require compliance with the same water quality regulations required for the proposed plan. In addition, while agricultural operations also consume water and result in potential water quality impacts through erosion and use of agricultural chemicals, the variability, intensity, and locations of agricultural operations in the areas assumed to be conserved under this alternative are unknown, so the net water supply and quality effects of displacement of agricultural by industrial uses—which are also yet undefined—cannot be known and are therefore speculative. Overall, because levels of industrial development would be substantially reduced under the Farmland Conservation Alternative, impacts related to hydrology and water quality are considered to be **less** than those of the proposed plan.

Land Use and Planning

Implementation of the Farmland Conservation Alternative would result in development of urban land uses within a smaller footprint compared to the proposed plan. As under the proposed plan, this alternative would not divide an established community, nor would it conflict with plans adopted for the purpose of avoiding or mitigating a significant effect (including the City of Fresno General Plan and the City of Fresno Zoning Ordinance). Fewer new residential units are proposed (75 units versus 91 units). Additionally, no major roadways or other development that could divide a community is proposed. Finally, as for the proposed plan, implementation of the Farmland Conservation Alternative would require a general plan amendment. No significant impacts related to land use and planning were identified for the proposed plan; therefore, implementing this alternative would not reduce or avoid any significant impacts related to land use and planning associated with the proposed plan. The land use and planning impacts of this alternative and the proposed plan therefore would be **similar**.

Noise

Implementing the Farmland Conservation Alternative would result in a smaller development footprint and substantially less development than would occur under the proposed plan. Therefore, construction- and operation-related noise would be considerably slightly reduced compared with the proposed plan. Overall, noise impacts would be **less** under this alternative than under the proposed plan.

Population and Housing

The Farmland Conservation Alternative would generate 18 percent less population and job growth than the proposed plan. As under the proposed plan, implementation of this alternative would not displace substantial numbers of existing housing or people. No significant impacts related to population and housing were identified for the proposed plan; therefore, implementing this alternative would not reduce or avoid any significant impacts related to population or housing associated with the proposed plan. Overall, population and housing impacts would be **similar** under this alternative than under the proposed plan.

Public Services and Recreation

The Farmland Conservation Alternative would generate fewer residential, and lower population and job growth than the proposed plan. Therefore, this alternative would have a lesser potential to increase demand for fire and police services, which nonetheless could result in the need for new or expanded fire and police facilities. Nonetheless, similar to the proposed plan, there is no evidence to suggest that construction or expansion of such facilities would result in

unmitigable, adverse effects on the environment. No significant impacts related to public services or recreation were identified for the proposed plan; therefore, implementing this alternative would not reduce or avoid any significant impacts related to public services or recreation associated with the proposed plan. For these reasons, impacts related to public services and recreation would be **less** under this alternative than under the proposed plan.

Transportation and Circulation

Implementation of the Farmland Conservation Alternative would result in less development than under the proposed plan (with an overall 18-percent reduction in development and less residential, retail, office, and industrial uses). It is expected that VMT could be higher under this alternative compared to the proposed plan because a reduced amount of development (especially job-generating uses) would occur under this alternative; it is unknown whether VMT under this alternative would be reduced compared to 2015 existing conditions and 2035 no project conditions. The decrease in VMT under the proposed plan would be the result of creating increased employment opportunities (industrial and commercial development) in areas a shorter driving distance from surrounding housing. Both the proposed plan and Farmland Conservation Alternative would include job-generating uses; however, because this alternative would include less development, it may not achieve the same VMT reduction as the proposed plan, and it is unknown whether VMT would be reduced compared to 2015 existing conditions and 2035 no project conditions. With less industrial development under the Farmland Conservation Alternative, plan-generated truck traffic could be less compared to the proposed plan.

Similar to the proposed plan, there is no evidence to suggest that this alternative would conflict with any applicable program, plan, ordinance, or policy addressing the circulation system; substantially increase transportation hazards from design features or incompatible uses; or result in inadequate emergency access.

Overall, the impact related to transportation and circulation under this alternative would be **similar** to those associated with the proposed plan.

Utilities and Service Systems

Overall development would be less intense under the Farmland Conservation Alternative than under the proposed plan (with less residential, retail, office, and industrial uses), thereby reducing overall demand for water, wastewater treatment, and solid waste disposal compared with the proposed plan. No significant impacts related to utilities and service systems were identified for the proposed plan; therefore, implementing this alternative would not reduce or avoid any significant impacts related to utilities and service systems associated with the proposed plan. Overall, impacts on utilities and service systems would be **less** under this alternative than under the proposed plan.

6.4.3 Reduced Plan Area Alternative

The City explored alternatives that would reduce the intensity and overall amount of industrial development described for the proposed plan. It was determined that downward adjustments to allowable floor area ratios of individual parcels, beyond those assumed in the proposed plan, would not be feasible because they would limit development potential to such a degree that parcels would not be able to support industrial development. For example, lowering the floor area ratio may limit the feasibility to develop uses such as warehouse, office, and research and development. In addition, this change may encourage heavy industrial uses, because these use do not require as much building square footage. The only feasible option was to reduce the number of overall acres designated for industrial development. One reasonable alternative is to consider an alternative that focuses development fully within the Fresno city limits. Therefore, this alternative removes any development potential currently within the county and within the City's sphere of influence (Figure 6-3). Although it is possible that some or all of this excluded land area could be proposed for development either with the County as lead agency or in the future by the City after annexation of land, the specifics of such development would be speculative, and it is reasonable to assume that removing the area within the sphere of influence from the SCSP would have a dampening effect on the rate and intensity of development in those areas.

This alternative would reduce the size of the Plan Area by approximately 42 percent (3,224 acres versus 5,567 acres for the proposed plan), have a commensurate reduction in development, and include a similar mix of land uses (Table 6-7).

Table 6-7 Development Projections for the Reduced Plan Area Alternative and Proposed Plan (2022–2040)

Land Use	Proposed Plan (sq. ft.)	Reduced Plan Area Alternative (sq. ft.) ¹	Difference (sq. ft.)
Retail	866,676	502,672	364,004
Office	578,790	335,698	243,092
Industrial	10,576,278	6,134,241	4,442,037
Total Non-Residential	12,021,744	6,972,612	5,049,132
Residential Units	91 units	53 units	38 units

¹ Estimates for the Reduced Plan Area Alternative were generated assuming proportionate reductions of the same mix of land uses included in the proposed plan on a smaller footprint.

Source: Prepared by Ascent Environmental in 2024.

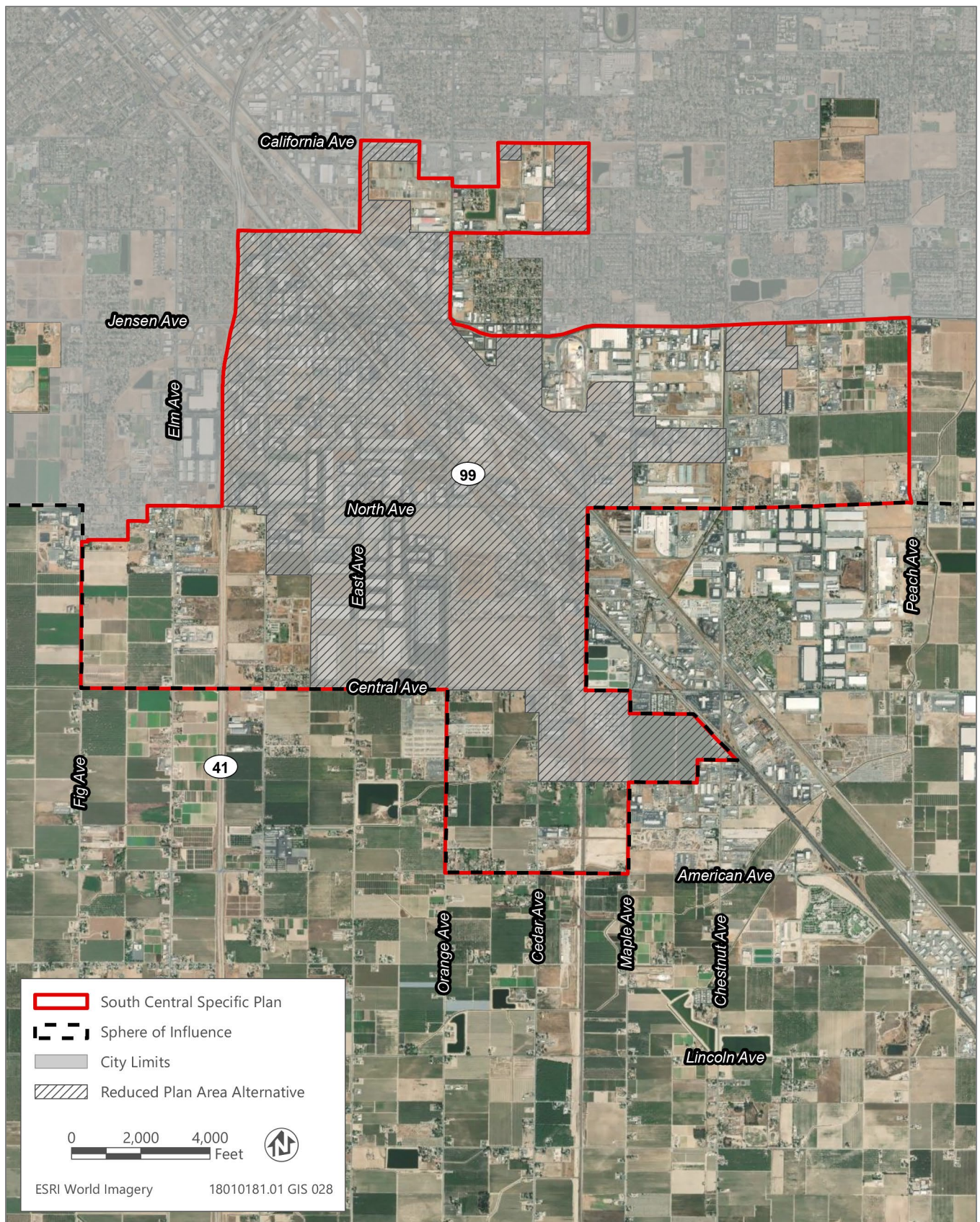
Table 6-8 shows the population and job growth anticipated to occur in the Plan Area with implementation of the Reduced Plan Area Alternative compared with growth under the proposed plan. Assuming proportionate reductions, this alternative would generate 42 percent less population and job growth than the proposed plan. The use regulations, permit requirements, and development standards for this alternative would be the same as the proposed plan.

Table 6-8 Anticipated Population and Job Growth for the Reduced Plan Area Alternative and Proposed Plan (2022–2040)

Land Use	Proposed Plan	Reduced Plan Area Alternative ¹	Difference
Total Residential Growth	313 persons	182 persons	131 persons
Food (Restaurants)	183 employees	106 employees	77 employees
Industrial	10,576 employees	6,134 employees	4,442 employees
Office	1,928 employees	1,118 employees	810 employees
Retail	1,624 employees	942 employees	682 employees
Total Job Growth	14,311 employees	8,300 employees	6,011 employees

¹ Estimates for the Reduced Plan Area Alternative were generated using the same growth assumptions used for the proposed plan. Thus, it is conservatively assumed that implementing the Reduced Plan Area Alternative would result in 42 percent less residential and job growth compared to the proposed plan.

Source: Prepared by Ascent Environmental in 2024.



Source: Adapted by Ascent in 2024

Figure 6-3 Reduced Plan Area Alternative

COMPARISON OF REDUCED PLAN AREA ALTERNATIVE AND PROPOSED PLAN IMPACTS

The Reduced Plan Area Alternative would occupy approximately 3,224 acres, or 2,343 fewer acres than under the proposed plan. With less land identified for development, subsequent projects under the alternative plan would have proportionately reduced construction- and operation-related impacts. The following discussion focuses on the potential for this alternative to reduce the proposed plan's significant impacts.

Aesthetics

Although the overall level of development would be less than under the proposed plan, the density of new development would still be substantial in the alternative plan area, resulting in a visual character that, although generally consistent with the urbanized portions of the Plan Area, would still be substantially altered. The substantial reduction in development would reduce impacts related to the change in the character of the site (because less of the site would be developed); however, it would not substantially reduce the aesthetic impacts of development. Areas of abrupt transition from preserved farmland/open space land to developed land would still occur under this alternative. In addition, although the reduced level of potential development would result in a reduced level of night lighting, the extent of night lighting would still be considerable and would not avoid the proposed plan's significant impact related to light and glare (although mitigation is available to reduce this impact to a less-than-significant level). However, less development under this alternative would result in less light pollution than would occur under the proposed plan. Overall, impacts on aesthetics would be **less** than under the proposed plan.

Agriculture and Forestry Resources

The Reduced Plan Area Alternative would remove 2,343 acres of land from development compared with the proposed plan. Implementation of this alternative would affect fewer acres of land, which would also likely result in less farmland conversion. Implementation of this alternative would also involve less construction than the proposed plan (because of the smaller footprint for potential development) and would therefore result in slightly less likelihood that existing farmland would be converted to urban development. Mitigation measures required for this alternative would be similar to those required for the proposed plan. Overall, the agriculture impacts of the Reduced Plan Area Alternative would be **less** compared to those resulting from the proposed plan.

Air Quality

Implementing the Reduced Plan Area Alternative would result in a smaller development footprint and therefore substantially less development than would occur under the proposed plan. Construction- and operation-related air pollutant emissions would be considerably reduced. However, the emissions associated with the Reduced Plan Area Alternative would still be substantial for both construction and operation. Regarding exposure to TACs, the Reduced Plan Area Alternative would include fewer residential units; therefore, compared to the proposed plan, it would expose fewer sensitive receptors to substantial sources of TACs. The overall impact related to air quality would be **less**.

Biological Resources

Implementation of the proposed plan would result in significant, but mitigable, impacts related to the permanent loss of habitat for special-status-species and other sensitive habitat. Implementation of the Reduced Plan Area Alternative would result in fewer acres of developed land, which would result in benefits to special-status species and their habitats. Implementation of this alternative would also involve less construction than the proposed plan (because of the smaller development footprint) and would therefore result in less likelihood that special-status species could be affected during construction. Mitigation measures required for this alternative would be similar to those required for the proposed plan. Overall, the biological resource-related impacts of the Reduced Plan Area Alternative would be **less** compared to those resulting from the proposed plan.

Cultural and Tribal Cultural Resources

Implementation of the Reduced Plan Area Alternative would result in fewer acres of developed land, and, therefore, there would be a reduction in the potential to damage unrecorded historic sites, but given the large amount of land that would still be developed under this alternative, the reduction would be inconsequential. Overall, the impacts of the Reduced Plan Area Alternative would be **similar** to those under the proposed plan, and this alternative would not eliminate the proposed plan's significant and unavoidable impacts to cultural resources.

Energy

As discussed under "Transportation and Circulation," below, VMT from cars and light trucks could be higher under this alternative compared to the proposed plan because employment centers in the reduced area of development would be smaller, potentially increasing commute distances for workers living farther from the region, but because this alternative would include less industrial development, truck traffic would be reduced. Because of its reduced area, this alternative would have lower energy demands compared with those of the proposed plan. Similar to the proposed plan, it is assumed that this alternative would meet the mandatory EV charging requirements of the CALGreen Code and comply with 2022 California Energy Code Standards; however, also similar to the proposed plan, this alternative may conflict with the energy-related measures of the City's GHGRP, which requires that commercial projects achieve ZNE electricity. Although VMT may be somewhat higher and energy demands would be less under this alternative, the energy-related impact would be **less** compared to that of the proposed plan; however, implementing this alternative would not avoid the significant and unavoidable impact related to energy that would occur under the proposed plan.

Geology, Soils, and Mineral Resources

Implementation of the Reduced Plan Area Alternative would involve similar grading and other ground-disturbing activities as the proposed plan but over a smaller footprint. Therefore, this alternative would have impacts that are similar in nature but reduced in magnitude in the following areas: seismic ground-shaking, soil erosion, geological hazards, expansive soils, and paleontological resources. The same mitigation measures required for the proposed plan would also be required for this alternative. Overall, the impacts of the Reduced Plan Area Alternative would be **less** compared to those resulting from the proposed plan.

Greenhouse Gas Emissions and Climate Change

The amount of operation-related emissions of GHGs generally correlate to the size and intensity of a project and the associated energy consumed and VMT. Implementation of the proposed plan would generate a considerable amount of GHG emissions. Implementation of mitigation measures identified in the EIR would substantially reduce on-site emissions; however, emission levels would still be high (there is no City or SJVAPCD significance threshold). Implementing the Reduced Plan Area Alternative would result in less overall development than would occur under the proposed plan. With implementation of the same mitigation measures identified for the proposed plan, the overall GHG emissions associated with operation of this alternative would likely still be substantial, although not as substantial as under the proposed plan. For these reasons, the GHG emission impact associated with the Reduced Plan Area Alternative would be **less** compared to the impact resulting from the proposed plan.

Hazards and Hazardous Materials

Although a smaller amount of land would be developed under the Reduced Plan Area Alternative, implementation of the alternative would still involve the routine transport, use, and disposal of hazardous materials; potential for hazardous emissions or handling of hazardous materials within 0.25 mile of an existing or proposed school; potential to be located on a site included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5; and potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Implementing the Reduced Plan Area Alternative would generally result in impacts that are similar in nature to those of the proposed plan, but over a smaller area. Mitigation measures similar to those identified for the proposed plan would still be required. Overall, impacts related to hazards and hazardous materials would be **less** than those of the proposed plan.

Hydrology and Water Quality

Although the Reduced Plan Area Alternative would have a smaller overall development footprint and overall less development compared with the proposed plan, the development types would be similar, and construction and operation of this alternative would require compliance with the same water quality regulations required for the proposed plan. Overall, impacts related to hydrology and water quality would be **less** to those of the proposed plan.

Land Use and Planning

Implementation of the Reduced Plan Area Alternative would result in development of urban land uses within a smaller footprint compared to the proposed plan. As under the proposed plan, this alternative would not divide an established community, nor would it conflict with plans adopted for the purpose of avoiding or mitigating a significant effect (including the City of Fresno General Plan and the City of Fresno Zoning Ordinance). Fewer new residential units are proposed (53 units versus 91 units). Additionally, no major roadways or other development that could divide a community is proposed. Finally, as for the proposed plan, implementation of the Reduced Plan Area Alternative would require a general plan amendment. No significant impacts related to land use and planning were identified for the proposed plan; therefore, implementing this alternative would not reduce or avoid any significant impacts related to land use and planning associated with the proposed plan. The land use and planning impacts of this alternative and the proposed plan therefore would be **similar**.

Noise

Implementing the Reduced Plan Area Alternative would result in a smaller development footprint and substantially less development than would occur under the proposed plan. Therefore, construction- and operation-related noise would be considerably reduced compared with the proposed plan. Overall, noise impacts would be **less** under this alternative than under the proposed plan.

Population and Housing

The Reduced Plan Area Alternative would generate 42 percent less population and job growth than the proposed plan. As under the proposed plan, implementation of this alternative would not displace substantial numbers of existing housing or people. No significant impacts related to population and housing were identified for the proposed plan; therefore, implementing this alternative would not reduce or avoid any significant impacts related to population or housing associated with the proposed plan. Overall, population and housing impacts would be **similar** under this alternative than under the proposed plan.

Public Services and Recreation

The Reduced Plan Area Alternative would generate fewer residential units, and lower population and job growth than the proposed plan. Therefore, this alternative would have a lesser potential to increase demand for fire and police services, which nonetheless could result in the need for new or expanded fire and police facilities. Nonetheless, similar to the proposed plan, there is no evidence to suggest that construction or expansion of such facilities would result in unmitigable adverse effects on the environment. No significant impacts related to public services or recreation were identified for the proposed plan; therefore, implementing this alternative would not reduce or avoid any significant impacts related to public services or recreation associated with the proposed plan. For these reasons, impacts related to public services and recreation would be **less** under this alternative than under the proposed plan.

Transportation and Circulation

Implementation of the Reduced Plan Area Alternative would result in less development than under the proposed plan (with an overall 42-percent reduction in development and less residential, retail, office, and industrial uses). It is expected that VMT could be higher under this alternative compared to the proposed plan because a reduced amount of development (especially job-generating uses) would occur under this alternative; it is unknown whether VMT under this alternative would be reduced compared to 2015 existing conditions and 2035 no project conditions. The decrease in VMT under the proposed plan would be the result of creating increased employment opportunities (industrial and commercial development) in areas a shorter driving distance from surrounding housing. Both the proposed plan and Reduced Plan Area Alternative would include job-generating uses; however, because this

alternative would include less development, it may not achieve the same VMT reduction as the proposed plan, and it is unknown whether VMT would be reduced compared to 2015 existing conditions and 2035 no project conditions. With less industrial development under the Reduced Plan Area Alternative, plan-generated truck traffic could be less compared with the proposed plan.

Similar to the proposed plan, there is no evidence to suggest that this alternative would conflict with any applicable program, plan, ordinance, or policy addressing the circulation system; substantially increase transportation hazards from design features or incompatible uses; or result in inadequate emergency access.

Overall, the impacts related to transportation and circulation under this alternative would be **similar** to those associated with the proposed plan.

Utilities and Service Systems

Overall development would be less intense under the Reduced Plan Area Alternative than under the proposed plan (with less residential, retail, office, and industrial uses), thereby reducing overall demand for water, wastewater treatment, and solid waste disposal compared with the proposed plan. No significant impacts related to utilities and service systems were identified for the proposed plan; therefore, implementing this alternative would not reduce or avoid any significant impacts related to utilities and service systems associated with the proposed plan. Overall, impacts on utilities and service systems would be **less** under this alternative than under the proposed plan.

6.4.4 Community Plan Option

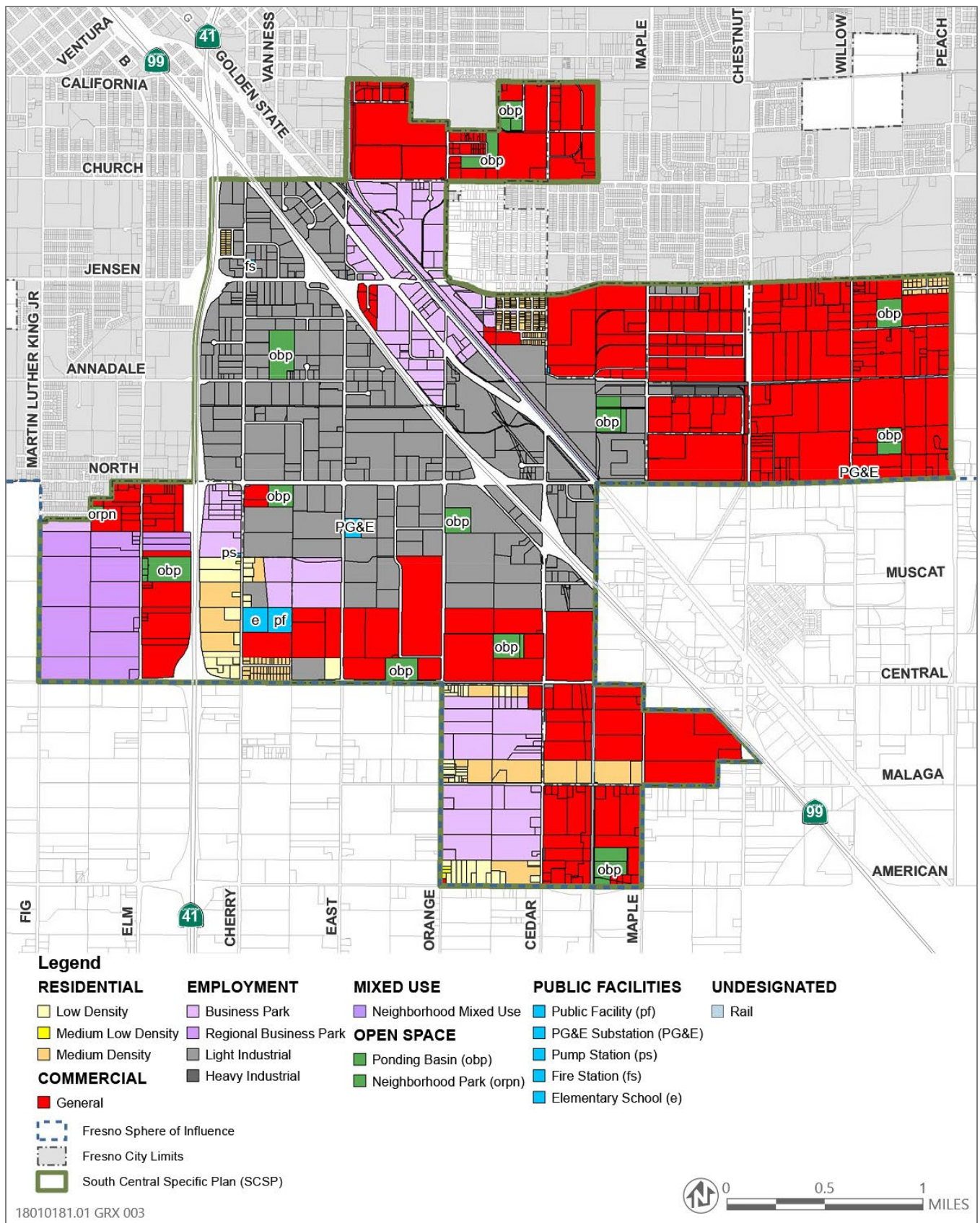
The Community Plan Option reflects the community’s desire to increase quality of life in the Plan Area by decreasing land use intensity. This alternative would reclassify parcels with a Heavy Industrial planned land use designation to a Commercial-General or Light Industrial planned land use designation to decrease land use intensity throughout the Plan Area, including surrounding sensitive uses (Figure 6-4). The Community Plan Option would designate as Residential lands that currently support those uses and would substantially increase the amount of office and retail uses while substantially reducing the amount of industrial land uses (Table 6-9). Further, this alternative would include 739 residential units, an increase of 648 units from the proposed plan. Figure 6-5 shows the parcels that would change planned land use designations from the adopted General Plan under this alternative.

Table 6-9 Development Projections for the Community Plan Option and Proposed Plan (2022-2040)

Land Use	Proposed Plan (sq. ft.)	Community Plan Option (sq. ft.)	Difference (sq. ft.)
Retail	866,676	3,871,826	3,005,150
Office	578,790	4,008,553	3,429,763
Industrial	10,576,278	4,141,365	-6,434,913
Total Non-Residential	12,021,744	12,021,744	0
Residential Units	91 units	739 units	648 units

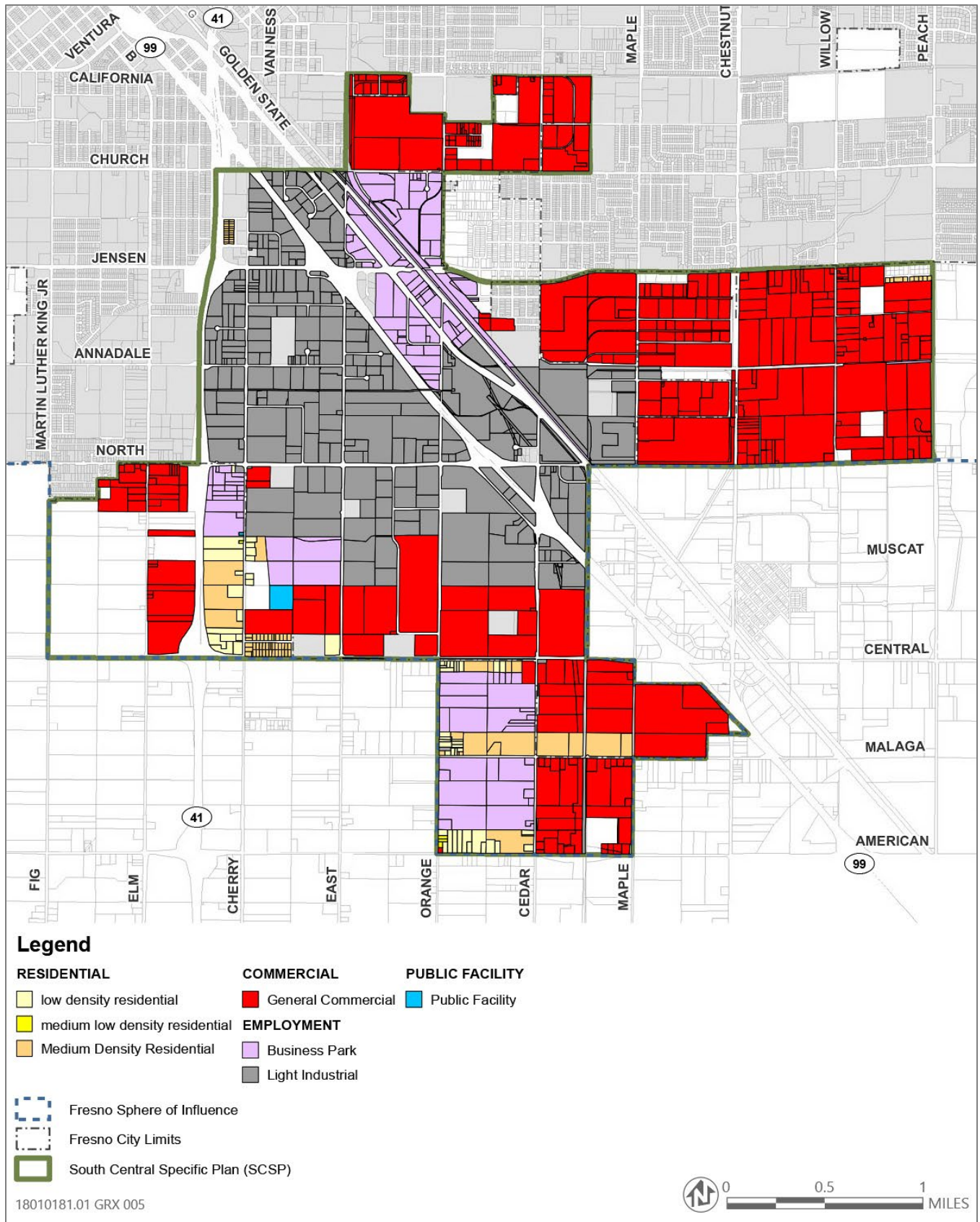
Source: Prepared by Ascent Environmental in 2024.

Consistent with the General Plan, planned parks, open space, and public facilities on vacant land carry dual land use designations. If the facility is not needed, alternative private or public development consistent with zoning and development standards may be approved. The Community Plan Option dual planned land use designations are identified by an asterisk (*) on the map. The Community Plan Option would double the size of public facilities northeast of Elm and Cherry Avenues, which could be meant for an expansion of Orange Center Elementary School. The Community Plan Option also eliminates public facilities and open space on vacant land elsewhere for commercial land uses, which do not need a dual designation.



Source: Image produced and provided by the city of Fresno, Adapted by Ascent Environmental in 2023.

Figure 6-4 Community Plan Option: Proposed Land Use



Source: Image produced and provided by the City of Fresno, Adapted by Ascent Environmental in 2023.

Figure 6-5 Parcels Changing Under Community Plan Option

The use regulations, permit requirements, and development standards proposed for the Community Plan Option are listed below. These regulations, requirements, and standards would govern all future private development actions in the Plan Area, including new construction, additions, and renovations to existing structures and/or new land uses proposed for existing facilities. These regulations would not, however, govern legal non-conforming uses, structures, site features or lots, as described in Chapter 15, Article 4 of the Fresno Municipal Code. Figure 6-6 identifies the proposed buffer zones that would be implemented under the Community Plan Option to protect sensitive uses, including residential, school, park, and day care facilities.

The following development regulations would apply to the Community Plan Option:

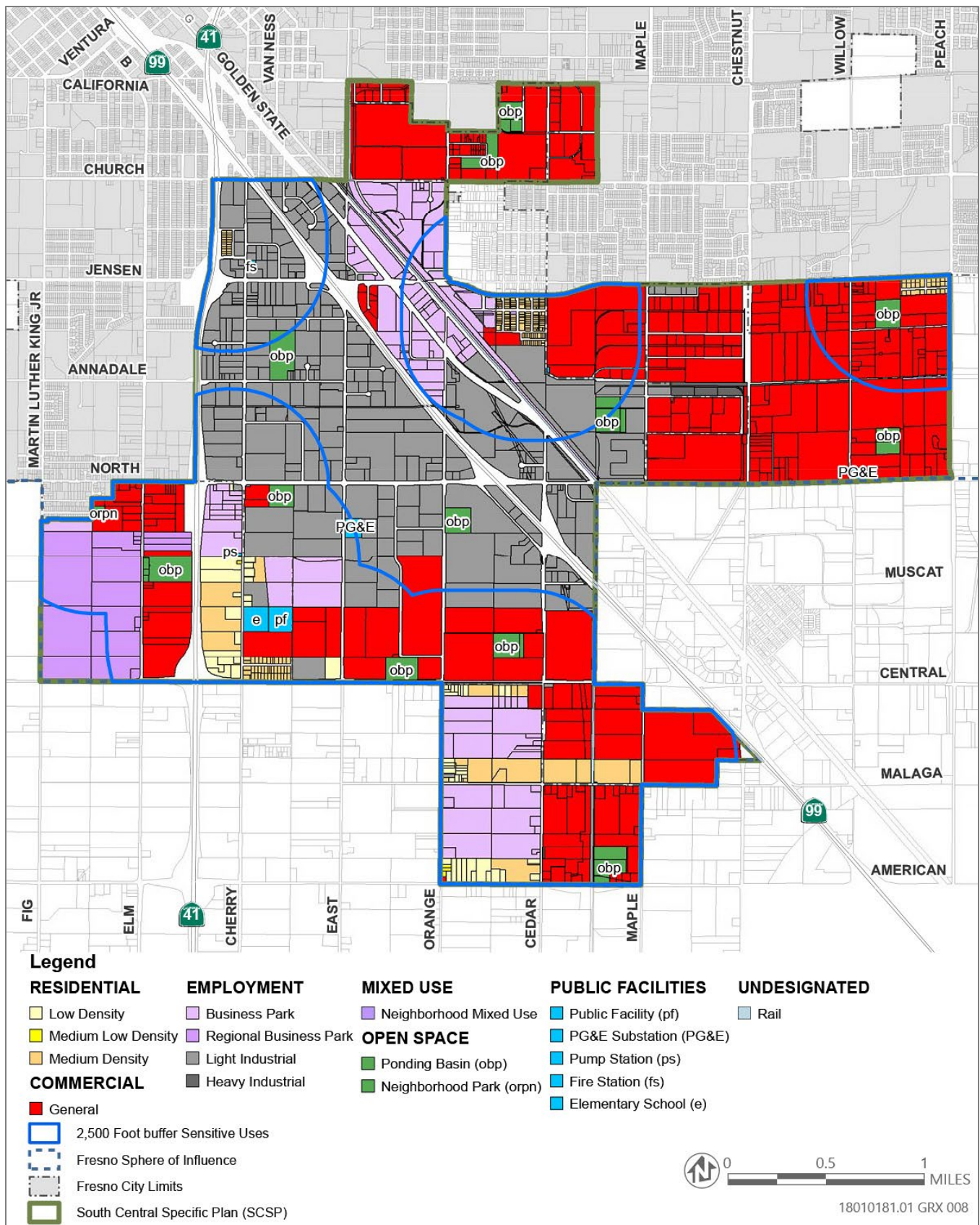
1. Prohibit the following use classifications within 2,500 feet of sensitive uses within and, where applicable, immediately outside the SCSP boundary lines:
 - ▶ Service Station
 - ▶ Towing and Impound
 - ▶ Motorcycle/Riding Club
 - ▶ Shooting/Archery Range
 - ▶ Maintenance and Repair Services
 - ▶ Retail Sales: Building Materials and Services
 - ▶ Construction and Material Yards
 - ▶ Custom Manufacturing
 - ▶ Limited Industrial
 - ▶ General Industrial
 - ▶ Intensive Industrial
 - ▶ Recycling Processing Facility
 - ▶ Salvage and Wrecking
 - ▶ Freight/Truck Terminals and Warehouses
 - ▶ Warehousing, Storage, and Distribution: Chemical and Mineral Storage
 - ▶ Warehousing, Storage, and Distribution: Indoor Warehousing and Storage
 - ▶ Warehousing, Storage, and Distribution: Outdoor Storage
 - ▶ Warehousing, Storage, and Distribution: Wholesaling and Distribution
 - ▶ Light Fleet-Based Services
 - ▶ Utilities, Major
 - ▶ Waste Transfer Facility
 - ▶ Mining and Quarrying
 - ▶ Rendering
 - ▶ Slaughterhouse
2. Truck entrances and docking stations shall be placed away from sensitive uses so that tailpipe emissions are as far away as possible.
3. Vegetative barriers design standards must require native vegetative plants that mitigate the pollution, heat island effects, noise, and light. Landscape must be able to reach maturity to provide the most protection within five to seven years.

Table 6-10 shows the residential and job growth anticipated to occur within the Plan Area with implementation of the Community Plan Option versus the proposed plan. This alternative would generate substantially more residential growth (86 percent more [1,949/2,262]) and job growth than the proposed plan (45 percent more [11,644/25,955]).

Table 6-10 Estimated Population and Employment for the Community Plan Option, as compared to the Proposed Plan (2022-2040)

Land Use	Proposed Plan	Community Plan Option	Difference
Total Residential Growth	313 persons	2,262 persons	1,949 persons
Food (Restaurants)	183 employees	2,650 employees	2,467 employees
Industrial	10,576 employees	4,141 employees	-6,435 employees
Office	1,928 employees	13,010 employees	11,082 employees
Retail	1,624 employees	6,154 employees	4,530 employees
Total Job Growth	14,311 employees	25,955 employees	11,644 employees

Source: Prepared by Ascent Environmental in 2024.



Source: Image produced and provided by the city of Fresno, Adapted by Ascent Environmental in 2023.

Figure 6-6 Community Plan Option with Proposed Buffers

COMPARISON OF COMMUNITY PLAN OPTION AND PROPOSED PLAN IMPACTS

Because the Community Plan Option includes the same development footprint, it would require a similar amount of construction and would result in a similar amount of conversion of undeveloped land to urban use, compared with the proposed plan. However, this option would involve a different mix of land uses, with substantially more retail and office uses and substantially less industrial uses. Further, this option would generate substantially more residential and job growth than the proposed plan. The following discussion focuses on the potential for this alternative to reduce the proposed plan's significant impacts.

Aesthetics

Implementation of the Community Plan Option would result in development of urban land uses within the same footprint as the proposed plan. The primary difference between the Community Plan Option and the proposed plan is the types of land uses. Unlike the proposed plan, the Community Plan Option has a greater number of residential and would substantially increase the amount of office and retail uses while substantially reducing the amount of industrial land uses. Regarding the proposed plan's significant impacts related to visual character and light and glare, this alternative would result in similar impacts due to the same footprint being developed with similar land uses and a large number of new light sources. For these reasons, the impacts to aesthetics would be **similar** between the proposed plan and this option, and this option would not eliminate the proposed plan's significant and unavoidable impact related to visual character.

Agriculture and Forestry Resources

As described in Section 4.2, "Agriculture and Forestry Resources," the Plan Area includes approximately 992 acres of Prime Farmland and Farmland of Statewide Importance as well as approximately 153 acres (located outside the existing City limits but within the City's sphere of influence) under Williamson Act contracts. Because the total amount of future development (5,567 acres) and the Plan Area footprint would remain unchanged between the Community Plan Option and the proposed plan, this alternative would result in a similar amount of conversion of Important Farmland and farmland under Williamson Act contracts compared to the proposed plan, which are considered significant impacts. The impacts to agricultural resources would be **similar** between the proposed plan and this option, and this alternative would not eliminate the proposed plan's significant and unavoidable impacts related to the conversion of farmland and conflicts with Williamson Act contracts.

Air Quality

Implementing the Community Plan Option would result in a similar level of development within the same footprint as the proposed plan. Therefore, construction-related air pollutant emissions would be similar. However, due to the different mix of urban land uses (substantially more residential, retail, and office uses and substantially less industrial uses), operational emissions would be less than those of the proposed plan due to the substantial reduction in industrial development. Regarding exposure to TACs, the Community Plan Option would include more residential units compared to the proposed project; therefore, it would result in a slightly greater potential to place sensitive receptors near high-volume roadways or other substantial sources of TACs. The overall impact related to air quality would be **less**.

Biological Resources

Under the Community Plan Option, the same amount of land would be developed with urban uses within the Plan Area as the proposed plan. Therefore, this option would have similar impacts compared to the proposed plan related to the disturbance, injury, or mortality of several special-status plant and wildlife species, if present; reduced reproductive productivity of these species; and contribution to loss of species habitat. Development under this option could also result in the degradation or loss of riparian habitat (e.g., reduction of vegetation cover, trampling, alteration of root structure), if it is present on a particular project site; and the loss of state or federally protected wetland habitat, which includes seasonal wetlands. The Community Plan Option would generally result in similar impacts and would require similar mitigation measures compared to the proposed plan. Overall, impacts to biological resources would be **similar**.

Cultural and Tribal Cultural Resources

The Community Plan Option would result in development of the Plan Area, which could contain unrecorded historic sites. Thus, implementation of the Community Plan Option could result in a significant impact related to historic resources if such a resource exists and damage to or destruction of the resource occurred. This impact would be **similar** to the proposed plan's impact, and this option would not eliminate the proposed plan's significant and unavoidable impacts to cultural resources.

Energy

As discussed under "Transportation and Circulation," below, VMT would be slightly lower under this option compared to the proposed plan. Energy demands would be substantially less than those of the proposed plan due to the substantial reduction in industrial land uses. Similar to the proposed plan, it is assumed that this option would meet the mandatory EV charging requirements of the CALGreen Code and comply with 2022 California Energy Code Standards; however, also similar to the proposed plan, this option may conflict with the energy-related measures of the City's GHGRP, which requires that commercial projects achieve ZNE electricity. Although VMT would be slightly lower and energy demands would be less, this impact would be **similar** to the proposed plan's impact, because this option would not eliminate the proposed plan's significant and unavoidable impact related to energy.

Geology, Soils, and Mineral Resources

Implementation of this option would involve grading and other ground-disturbing activities similar to the proposed plan and on the same footprint. Therefore, this option would have similar impacts associated with seismic ground-shaking, soil erosion, geological hazards, expansive soils, and paleontological resources. The same mitigation measures required for the proposed plan would also be required for this option. Overall, impacts to geology, soils, and mineral resources would be **similar**.

Greenhouse Gas Emissions and Climate Change

Operational emissions of GHG generally correlate to the size and intensity of a project and the associated energy consumed and VMT. Implementation of the proposed plan would generate a considerable amount of GHG. Implementation of mitigation measures identified in the EIR would substantially reduce on-site emissions; however, emissions levels would still be high (there is no City or SJVAPCD significance threshold). This option would result in a similar level of overall development as the proposed plan; however, operational GHG emissions would be less than those of the proposed plan due to the substantial reduction in industrial development. Even assuming the same mitigation measures apply, the overall GHG emissions associated with operation of this option would likely be substantial. For these reasons, the GHG impact associated with the Community Plan Option would be **less** compared to the impact resulting from the proposed plan.

Hazards and Hazardous Materials

Implementation of this option would involve the routine transport, use, and disposal of hazardous materials; potential for hazardous emissions or handling of hazardous materials within 0.25 mile of an existing or proposed school; potential to be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5; and potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The Community Plan Option would generally result in similar impacts and would require similar mitigation measures compared to the proposed plan. Overall, impacts related to hazards and hazardous materials would be **similar**.

Hydrology and Water Quality

The Community Plan Option would have the same development footprint as the proposed plan, and construction associated with this alternative would require compliance with the same water quality regulations as the proposed plan. In addition, although there are differences between the land use types identified for this option compared to the proposed plan, the overall level of development would be similar, and this option would also be required to comply with the same construction and operational regulations as the proposed plan. Overall, impacts related to hydrology and water quality would be **similar**.

Land Use and Planning

Implementation of the Community Plan Option would result in development of urban land uses within the same footprint as the proposed plan. Similar to the proposed plan, the Community Plan Option would not divide an established community, nor would it conflict with plans adopted for the purpose of avoiding or mitigating a significant effect (including the City of Fresno General Plan and the City of Fresno Zoning Ordinance). Additionally, no major roadways or other development that could divide a community is proposed. No significant impacts related to land use and planning were identified for the proposed plan; therefore, this option would not reduce or avoid any significant impacts related to land use and planning associated with the proposed plan. Impacts would be **similar** between the proposed plan and this alternative.

Noise

Implementing the Community Plan Option would result in a similar level of development within the same footprint as the proposed plan. Therefore, construction-related noise would be similar. Even though this option would include a different mix of urban land uses (more residential, more retail, less industrial), operational noise and traffic noise would also be similar to the proposed plan due to the development of over 12 million sq. ft. of nonresidential development, which is the same amount of development under this option and the proposed plan. Overall, noise impacts **similar**.

Population and Housing

The Community Plan Option would generate 86 percent more residential and 45 percent more job growth than the proposed plan. Similar to the proposed plan, implementation of this option would not displace substantial numbers of existing housing or people. Overall, impacts associated with the Community Plan Option would be **greater** than those of the proposed plan, but only in that it would induce currently unplanned population growth in the Plan Area.

Public Services and Recreation

The Community Plan Option would generate substantially more residential and job growth than the proposed plan. As such, this option would have a greater potential to increase demand for fire and police services, which could result in the need for new or expanded fire and police facilities. Nonetheless, similar to the proposed plan, there is no evidence to suggest that construction or expansion of such facilities would result in unmitigable, adverse effects on the environment. No significant impacts related to public services and recreation were identified for the proposed plan; therefore, this option would not reduce or avoid any significant impacts related to public services and recreation associated with the proposed plan. Therefore, impacts would be **similar**.

Transportation and Circulation

Implementation of the Community Plan Option would result in the development of substantially more residential, retail, and office uses and substantially less industrial uses compared with the proposed plan, all of which would generate vehicle trips. Regarding VMT, the Transportation Impact Analysis prepared for the SCSP (TJKM 2023b) indicates that the Community Plan Option would generate 22.76 VMT per service population, which is a decrease of 22.12 VMT or almost 50 percent from 2015 existing conditions (44.88 VMT) and 2035 no project conditions (46.44 VMT). By comparison, the proposed plan is anticipated to generate 29.87 VMT per service population, which is also a decrease from both 2015 existing conditions and 2035 no project conditions. The decrease in VMT under both the proposed plan and the Community Plan Option is the result of creating increased employment opportunities through the implementation of industrial and commercial development leading to improved proximity between the jobs in the Plan Area and surrounding housing by shortening driving distance and, therefore, reducing VMT. Resulting VMT would be slightly lower under this alternative compared to the proposed plan.

Similar to the proposed plan, there is no evidence to suggest that this option would conflict with any applicable program, plan, ordinance, or policy addressing the circulation system; substantially increase transportation hazards from design features or incompatible uses; or result in inadequate emergency access.

Overall, the impact related to transportation and circulation would be **similar** to the impact associated with the proposed plan.

Utilities and Service Systems

Because of the different mix of urban land uses (substantially more residential, retail, and office uses and substantially less industrial uses), implementation of the Community Plan Option would result in greater demands for water, wastewater treatment, and solid waste disposal compared with the proposed plan. No significant impacts related to utilities and service systems were identified for the proposed plan; therefore, this option would not reduce or avoid any significant impacts related to utilities and service systems associated with the proposed plan. Overall, impacts would be **greater**.

6.4.5 Business Plan Option

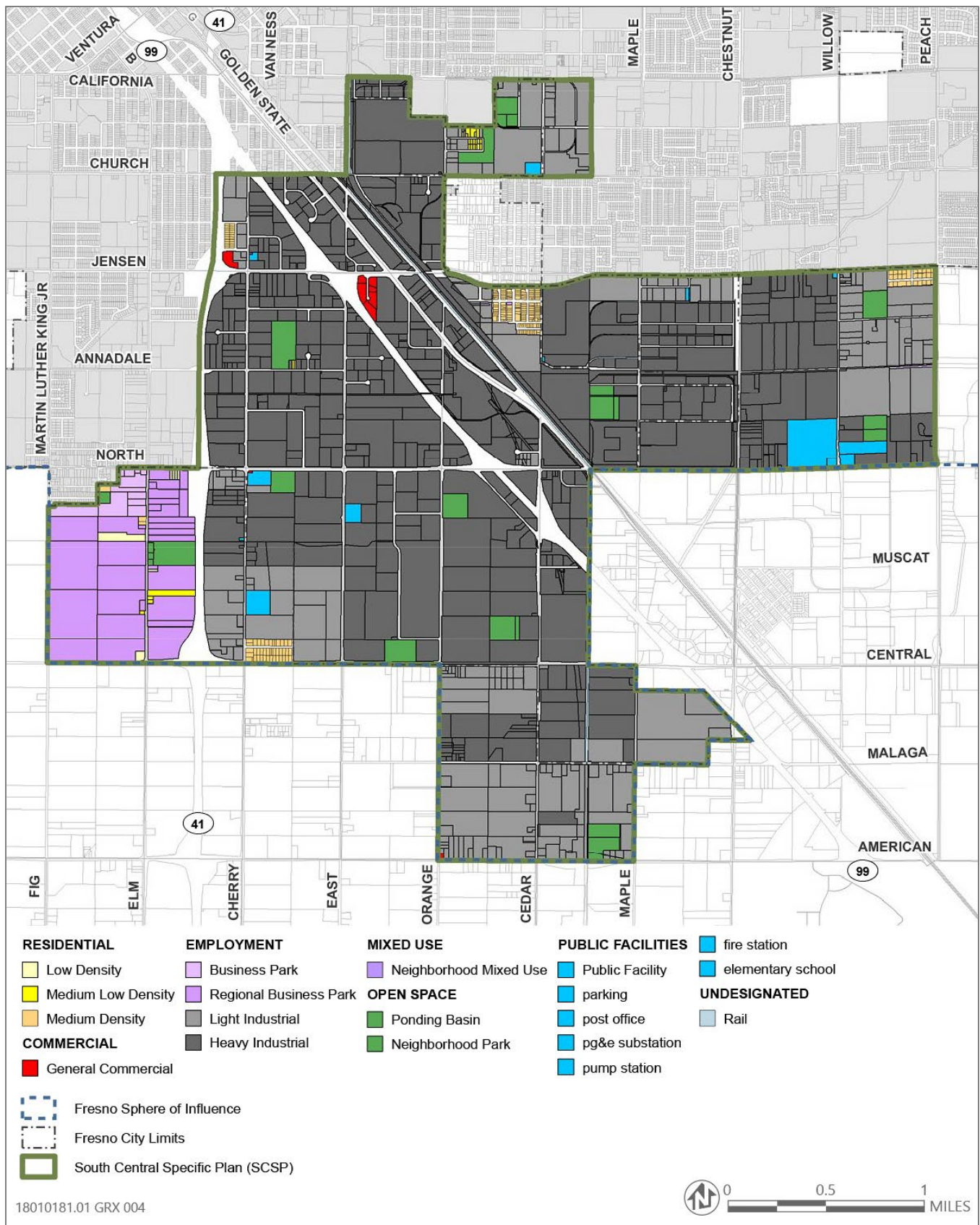
The Business Plan Option honors the community’s desire to maximize economic growth and would maintain General Plan planned land use designations for most parcels. This option would reclassify some parcels with a Heavy Industrial planned land use designation to a Light Industrial planned land use designation, thus maintaining the majority of the Plan Area land for industrial uses (Figure 6-7). Like the SCSP and Community Plan Alternative, the Business Plan Option would designate lands that currently support residential uses as “Residential.” Although the Business Plan Option planned land use designations primarily envision industrial development, they would allow ancillary retail uses and light industrial uses such as warehousing, distribution, and manufacturing, increasing the total capacity for potential industrial uses (Table 6-11). Figure 6-8 show the parcels that would change planned land use designations from the adopted General Plan under the Business Plan Option.

Table 6-11 Development Projections for the Business Plan Option and Proposed Plan (2022-2040)

Land Use	Proposed Plan (sq. ft.)	Business Plan Option (sq. ft.)	Difference
Retail	866,676	277,375	-589,301
Office	578,790	578,790	0
Industrial	10,576,278	11,165,579	589,301
Total Non-Residential	12,021,744	12,021,744	0
Residential Units	91 units	0	-91 units

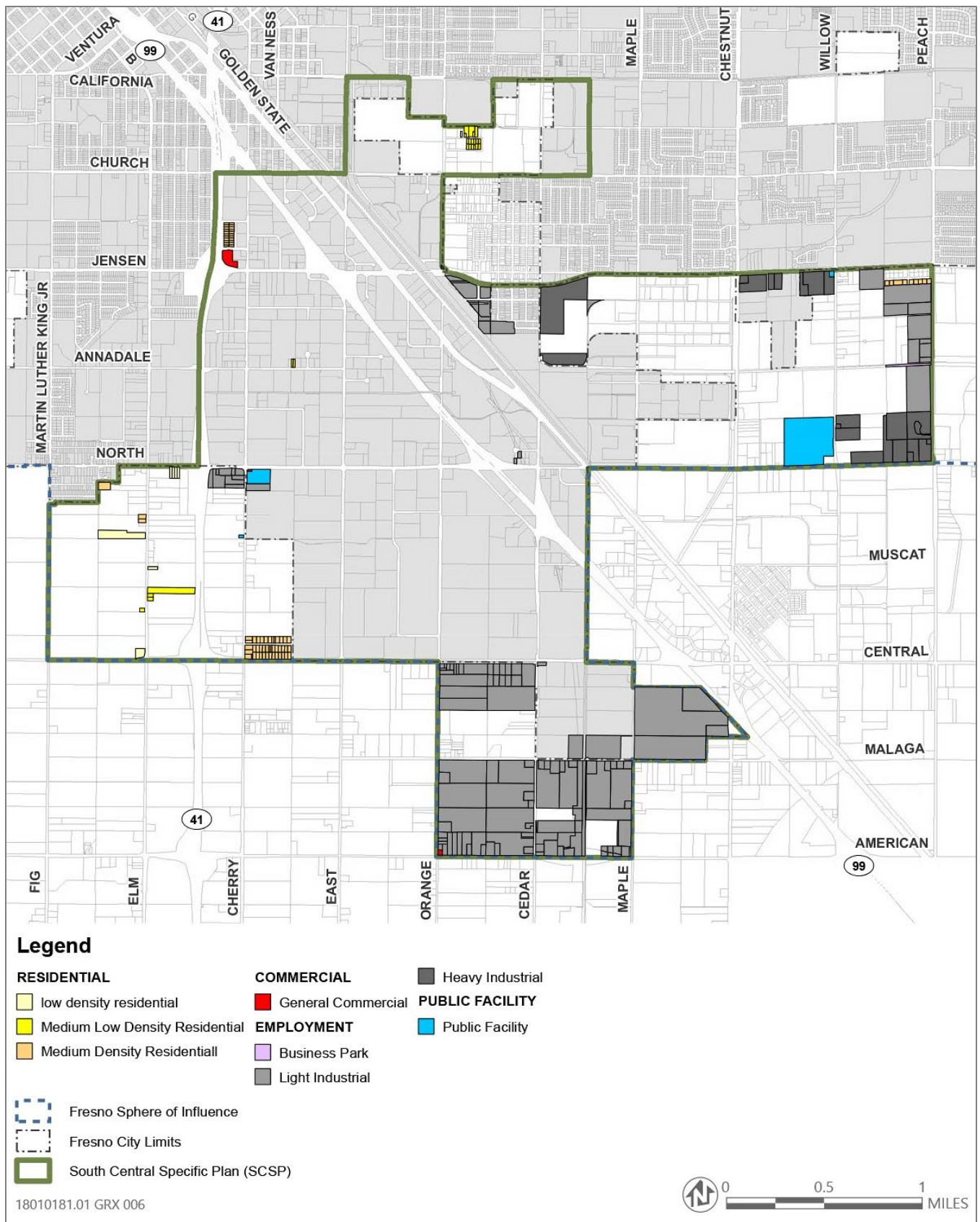
Source: Prepared by Ascent Environmental in 2024.

Consistent with the General Plan, planned parks, open space, and public facilities on vacant land carry dual land use designations. If the facility is not needed, alternative private or public development consistent with zoning and development standards may be approved. The Business Plan Options matches the dual planned land use designations of the General Plan. The use regulations, permit requirements, and development standards proposed for the Business Plan Option are listed below. Similar to the Community Plan Option, these regulations, requirements, and standards would govern all future private development actions in the Plan Area, including new construction, additions, and renovations to existing structures and/or new land uses proposed for existing facilities. These regulations would not, however, govern legal non-conforming uses, structures, site features or lots, as described in Chapter 15, Article 4 of the Fresno Municipal Code. Figure 6-9 identifies the proposed buffer zones that would be implemented under the Business Plan Option to protect sensitive uses, including residential, school, park, and day care facilities.



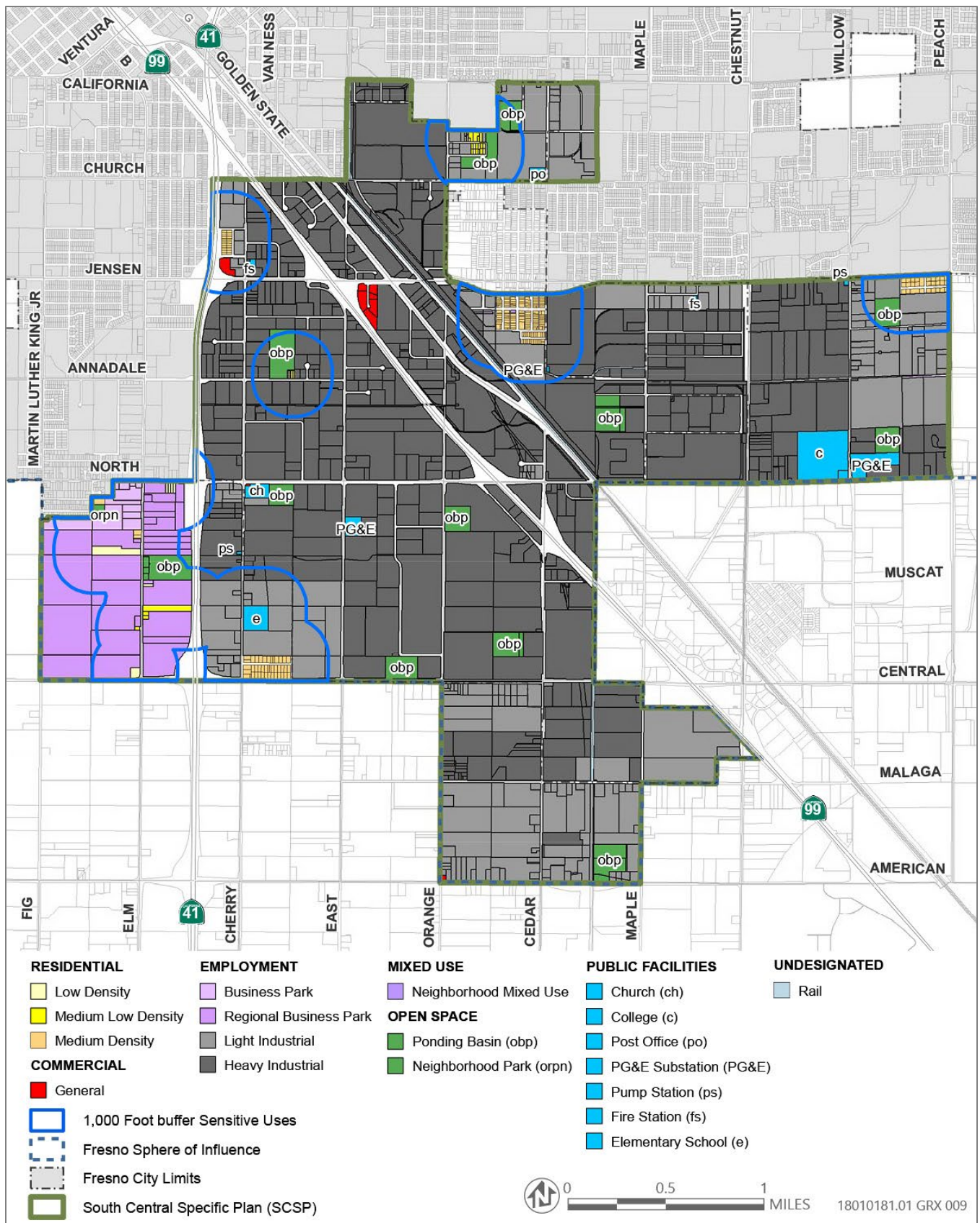
Source: Image produced and provided by the city of Fresno, Adapted by Ascent Environmental in 2023.

Figure 6-7 Business Plan Option: Proposed Land Use



Source: Image produced and provided by the city of Fresno, Adapted by Ascent Environmental in 2023.

Figure 6-8 Parcels Changing Under Business Plan Option



Source: Image produced and provided by the city of Fresno, Adapted by Ascent Environmental in 2023.

Figure 6-9 Business Plan Option with Proposed Buffers

The following development regulations would apply to the Business Plan Option:

1. Prohibit the following use classifications:
 - a. Rendering
 - b. Slaughterhouse
2. Require a CUP for the following use classifications that fall within 1,000 feet of a sensitive use (residential, school, park, and daycare):
 - a. Motorcycle/Riding Club
 - b. Shooting/Archery Range
 - c. Salvage and Wrecking
 - d. Warehousing, Storage, and Distribution: Chemical and Mineral Storage
 - e. Exception for those uses related to the pharmaceutical industry or are ancillary to the primary use
 - f. Waste Transfer Facility
 - g. Mining and Quarrying
3. Require enhanced screening conditions for the following use classifications that fall within 1,000 feet of a sensitive use (residential, school, park, and daycare):
 - a. Construction and Material Yards
 - b. Limited Industrial
 - c. Recycling Processing Facility
 - d. Warehousing, Storage, and Distribution: Indoor Warehousing and Storage
 - e. Warehousing, Storage, and Distribution: Outdoor Storage
 - f. Warehousing, Storage, and Distribution: Wholesaling and Distribution
4. Enhanced screening standards:
 - a. Outdoor storage areas, service yards, and truck docks should be screened so as not to be visible from sensitive uses.
 - b. Screening walls and fences shall be architecturally compatible with the main structure on the site.
 - c. Earth berms (minimum of 3ft) or plant materials may serve to satisfy screening requirements as alternative materials.

Table 6-12 shows the residential and job growth anticipated to occur within the Plan Area with implementation of the Business Plan Option versus the proposed plan. This alternative would generate no residential and slightly less job growth than the proposed plan (4.5 percent less [654/14,311]).

Table 6-12 Anticipated Population and Job Growth for the Business Plan Option and Proposed Plan (2022-2040)

Land Use	Proposed Plan	Business Plan Option	Difference
Total Residential Growth	313 persons	0	-313 persons
Food (Restaurants)	183 employees	19 employees	-164 employees
Industrial	10,576 employees	11,166 employees	590 employees
Office	1,928 employees	1,929 employees	1 employees
Retail	1,624 employees	543 employees	-1,081 employees
Total Job Growth	14,311 employees	13,657 employees	-654 employees

Source: Prepared by Ascent Environmental in 2024.

COMPARISON OF BUSINESS PLAN OPTION AND PROPOSED PLAN IMPACTS

Because the Business Plan Option includes the same development footprint, it would require a similar amount of construction and would result in a similar amount of conversion of undeveloped land to urban use, compared with the proposed plan. However, this option would involve a different mix of land uses, with no residential, substantially less retail, similar office, and more industrial uses. Further, this option would generate no residential and slightly less job growth than the proposed plan. The following discussion focuses on the potential for this option to reduce the proposed plan's significant impacts.

Aesthetics

Implementation of the Business Plan Option would result in development of urban land uses within the same footprint as the proposed plan. The primary difference between the Business Plan Option and the proposed plan is the types of land uses. Unlike the proposed plan, the Business Plan Option does not specifically include residential land uses—the land use designations are nonresidential. Regarding the proposed plan's significant impacts related to visual character and light and glare, this option would result in similar impacts due to the same footprint being developed with similar land uses and a large number of new light sources. For these reasons, the impacts to aesthetics would be **similar** between the proposed plan and this option, and this option would not eliminate the proposed plan's significant and unavoidable impact related to visual character.

Agriculture and Forestry Resources

As described in Section 4.2, "Agriculture and Forestry Resources," the Plan Area includes approximately 992 acres of Prime Farmland and Farmland of Statewide Importance as well as approximately 153 acres (located outside the existing City limits but within the City's sphere of influence) under Williamson Act contracts. Because the total amount of future development (5,567 acres) and the Plan Area footprint would remain unchanged between the Business Plan Option and the proposed plan, this option would result in a similar amount of conversion of Important Farmland and farmland under Williamson Act contracts compared to the proposed plan, which are considered significant impacts. The impacts to agricultural resources would be **similar** between the proposed plan and this option, and this option would not eliminate the proposed plan's significant and unavoidable impacts related to the conversion of farmland and conflicts with Williamson Act contracts.

Air Quality

Implementing the Business Plan Option would result in a similar level of development within the same footprint as the proposed plan. Therefore, construction-related air pollutant emissions would be similar. However, due to the different mix of urban land uses (substantially less retail, similar office, and more industrial), operational emissions would be slightly greater than those of the proposed plan due to the increase in industrial development. Regarding exposure to TACs, the Business Plan Option does not identify residential land uses; therefore, unlike the proposed plan, it would not place sensitive receptors near high-volume roadways or other substantial sources of TACs. The overall impact related to air quality would be **greater**.

Biological Resources

Under the Business Plan Option, the same amount of land would be developed with urban uses within the Plan Area as the proposed plan. Therefore, this option would have similar impacts compared to the proposed plan related to the disturbance, injury, or mortality of several special-status plant and wildlife species, if present; reduced reproductive productivity of these species; and contribution to loss of species habitat. Development under this option could also result in the degradation or loss of riparian habitat (e.g., reduction of vegetation cover, trampling, alteration of root structure), if it is present on a particular project site; and the loss of state or federally protected wetland habitat, which includes seasonal wetlands. The Business Plan Option would generally result in similar impacts and would require similar mitigation measures compared to the proposed plan. Overall, impacts to biological resources would be **similar**.

Cultural and Tribal Cultural Resources

The Business Plan Option would result in development of the Plan Area, which could contain unrecorded historic sites. Thus, implementation of the Business Plan Option could result in a significant impact related to historic resources if such a resource exists and damage to or destruction of the resource occurred. This impact would be **similar** to the proposed plan's impact, and this option would not eliminate the proposed plan's significant and unavoidable impacts to cultural resources.

Energy

As discussed under "Transportation and Circulation," below, VMT would be slightly higher under this option compared to the proposed plan. Energy demands would also be higher than those of the proposed plan due to the slight increase in industrial land uses. Similar to the proposed plan, it is assumed that this option would meet the mandatory EV charging requirements of the CALGreen Code and comply with 2022 California Energy Code Standards; however, also similar to the proposed plan, this option may conflict with the energy-related measures of the City's GHGRP, which requires that commercial projects achieve ZNE electricity. Although VMT would be slightly higher and energy demands would be higher, this impact would be **similar** to the proposed plan's impact, and this option would not eliminate the proposed plan's significant and unavoidable impact related to energy.

Geology, Soils, and Mineral Resources

Implementation of this option would involve grading and other ground-disturbing activities similar to the proposed plan and on the same footprint. Therefore, this option would have similar impacts associated with seismic ground-shaking, soil erosion, geological hazards, expansive soils, and paleontological resources. The same mitigation measures required for the proposed plan would also be required for this option. Overall, impacts to geology, soils, and mineral resources would be **similar**.

Greenhouse Gas Emissions and Climate Change

Operational emissions of GHG generally correlate to the size and intensity of a project and the associated energy consumed and VMT. Implementation of the proposed plan would generate a considerable amount of GHG. Implementation of mitigation measures identified in the EIR would substantially reduce on-site emissions; however, emissions levels would still be high (there is no City or SJVAPCD significance threshold). This option would result in a similar level of overall development as the proposed plan; however, operational GHG emissions would be slightly greater than those of the proposed plan due to the increase in industrial development. Even assuming the same mitigation measures apply, the overall GHG emissions associated with operation of this option would likely be substantial. For these reasons, the GHG impact associated with the Business Plan Option would be **greater** compared to the impact resulting from the proposed plan.

Hazards and Hazardous Materials

Implementation of this option would involve the routine transport, use, and disposal of hazardous materials; potential for hazardous emissions or handling of hazardous materials within 0.25 mile of an existing or proposed school; potential to be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5; and potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The Business Plan Option would generally result in similar impacts and would require similar mitigation measures compared to the proposed plan. Overall, impacts related to hazards and hazardous materials would be **similar**.

Hydrology and Water Quality

The Business Plan Option would have the same development footprint as the proposed plan, and construction associated with this alternative would require compliance with the same water quality regulations as the proposed plan. In addition, although there are differences between the land use types identified for this option compared to the proposed plan, the overall level of development would be similar, and this option would also be required to comply with the same construction and operational regulations as the proposed plan. Overall, impacts related to hydrology and water quality would be **similar**.

Land Use and Planning

Implementation of the Business Plan Option would result in development of urban land uses within the same footprint as the proposed plan. Similar to the proposed plan, the Business Plan Option would not divide an established community, nor would it conflict with plans adopted for the purpose of avoiding or mitigating a significant effect (including the City of Fresno General Plan and the City of Fresno Zoning Ordinance). No new residential land uses are proposed. Additionally, no major roadways or other development that could divide a community is proposed. No significant impacts related to land use and planning were identified for the proposed plan; therefore, this alternative would not reduce or avoid any significant impacts related to land use and planning associated with the proposed plan. Impacts would be **similar** between the proposed plan and this option.

Noise

Implementing the Business Plan Option would result in a similar level of development within the same footprint as the proposed plan. Therefore, construction-related noise would be similar. Even though this option would include a different mix of urban land uses (more industrial, less retail), operational noise and traffic noise would also be similar to the proposed plan due to the development of over 12 million sq. ft. of nonresidential development, which is the same amount of development under this option and the proposed plan. Overall, noise impacts would be **similar**.

Population and Housing

The Business Plan Option would generate no residential growth and 4.5 percent less job growth than the proposed plan. Similar to the proposed plan, implementation of this option would not displace substantial numbers of existing housing or people. No significant impacts related to population and housing were identified for the proposed plan; therefore, this option would not reduce or avoid any significant impacts related to population and housing associated with the proposed plan. Overall, impacts associated with the Business Plan Option would be **less** than those of the proposed plan.

Public Services and Recreation

The Business Plan Option would generate no residential growth and less job growth than the proposed plan. As such, this option would have a lesser potential to increase demand for fire and police services, which nonetheless could result in the need for new or expanded fire and police facilities. Nonetheless, similar to the proposed plan, there is no evidence to suggest that construction or expansion of such facilities would result in unmitigable, adverse effects on the environment. No significant impacts related to public services and recreation were identified for the proposed plan; therefore, this option would not reduce or avoid any significant impacts related to public services and recreation associated with the proposed plan. Therefore, impacts would be **similar**.

Transportation and Circulation

Implementation of the Business Plan Option would result in the development of no residential, substantially less retail, similar office, and more industrial uses compared with the proposed plan, all of which would generate vehicle trips. Regarding VMT, the Transportation Impact Analysis prepared for the SCSP (TJKM 2023b) indicates that the Business Plan Option would generate 31.99 VMT per service population, which is a decrease of 12.89 VMT or almost 29 percent from 2015 existing conditions (44.88 VMT) and 2035 no project conditions (46.44 VMT). By comparison, the proposed plan is anticipated to generate 29.87 VMT per service population, which is also a decrease from both 2015 existing conditions and 2035 no project conditions. The decrease in VMT under both the proposed plan and the Business Plan Option is the result of creating increased employment opportunities through the implementation of industrial and commercial development leading to improved proximity between the jobs in the Plan Area and surrounding housing by shortening driving distance and, therefore, reducing VMT. Resulting VMT would be slightly higher under this alternative compared to the proposed plan but would still be a decrease from 2015 existing conditions and 2035 no project conditions.

Similar to the proposed plan, there is no evidence to suggest that this option would conflict with any applicable program, plan, ordinance, or policy addressing the circulation system; substantially increase transportation hazards from design features or incompatible uses; or result in inadequate emergency access.

Overall, the impact related to transportation and circulation would be **greater** than the impact associated with the proposed plan.

Utilities and Service Systems

Because of the different mix of urban land uses (no residential, substantially less retail, similar office, and more industrial), implementation of the Business Plan Option would result in greater demands for water, wastewater treatment, and solid waste disposal compared with the proposed plan. No significant impacts related to utilities and service systems were identified for the proposed plan; therefore, this option would not reduce or avoid any significant impacts related to utilities and service systems associated with the proposed plan. Overall, impacts would be **greater**.

6.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Table 6-13 provides a summary of the impacts of the proposed plan compared to the alternatives and options. Implementing the No Project/General Plan Land Use Alternative would reduce impacts related to population growth associated with the proposed plan, but only insofar as residential development is not currently planned in the SCSP area. It would result in greater impacts related to air quality and GHG emissions due to the greater amount of industrial development compared to the proposed plan. Regarding utilities and service systems, the No Project/General Plan Land Use Alternative would result in greater demands for water and wastewater treatment compared to the proposed plan. This alternative would not avoid or substantially reduce any of the significant impacts of the proposed plan and it would not meet most of the project objectives as presented above in Section 6.2.

The Reduced Plan Area Alternative would result in a reduction of impacts specifically for air quality, greenhouse gas emissions and noise due to its reduced footprint and reduced level of development. However, this alternative would not avoid or substantially reduce any of the significant impacts of the proposed plan.

The Farmland Conservation Alternative is considered environmentally superior because it would result in the reduction of impacts due to its reduced footprint and reduced level of development. Further, it would eliminate the proposed plan’s significant and unavoidable impacts related to the conversion of farmland and conflicts with Williamson Act contracts.

Table 6-14 identifies whether or not an alternative or option meets the objective of the proposed plan.

Table 6-13 Summary of Environmental Effects of the Alternatives Relative to the Proposed South Central Specific Plan

Environmental Topic	Proposed Plan	No Project/General Plan Land Use Alternative	Farmland Conservation Alternative	Reduced Plan Area Alternative	Community Plan Option	Business Plan Option
Aesthetics	SU	Similar	Less	Less	Similar	Similar
Agriculture and Forestry Resources	SU	Similar	Avoids	Less	Similar	Similar
Air Quality	SU	Greater	Less	Less	Less	Greater
Biological Resources	LTS/M	Similar	Less	Less	Similar	Similar
Cultural and Tribal Cultural Resources	SU	Similar	Similar	Similar	Similar	Similar
Energy	LTS/M	Similar	Less	Less	Similar	Similar
Geology, Soils, and Mineral Resources	LTS/M	Similar	Less	Less	Similar	Similar
Greenhouse Gas Emissions and Climate Change	SU	Greater	Less	Less	Less	Greater

Environmental Topic	Proposed Plan	No Project/General Plan Land Use Alternative	Farmland Conservation Alternative	Reduced Plan Area Alternative	Community Plan Option	Business Plan Option
Hazards and Hazardous Materials	LTS/M	Similar	Less	Less	Similar	Similar
Hydrology and Water Quality	LTS	Similar	Less	Less	Similar	Similar
Land Use and Planning	LTS	Similar	Similar	Similar	Similar	Similar
Noise	SU	Similar	Less	Less	Similar	Similar
Population and Housing	LTS	Similar	Similar	Similar	Greater	Less
Public Services and Recreation	LTS	Similar	Less	Less	Similar	Similar
Transportation and Circulation	LTS	Greater (results in new significant impact)	Similar	Similar	Similar	Greater
Utilities and Service Systems	LTS/M	Greater	Less	Less	Greater	Greater

Notes: LTS = less than significant; LTS/M = less than significant with mitigation; SU = significant and unavoidable.

Source: Data compiled by Ascent Environmental in 2024.

Table 6-14 Summary of Project Objectives Compared to the Proposed Plan Alternatives and Options

Proposed Plan Objectives	No Project/General Plan Land Use Alternative	Farmland Conservation Alternative	Reduced Plan Area Alternative
Would the alternative meet the objective to:			
Stimulate economic development?	Yes, to a lesser extent	Yes, to a lesser extent	Yes, to a lesser extent
Provide diverse employment?	No	Yes, to a lesser extent	Yes, to a lesser extent
Minimize environmental and neighborhood impacts?	No	Yes, to a lesser extent	Yes, to a lesser extent
Preserve existing operations?	Yes	Yes	Yes
Protect against incompatible uses?	Yes	Yes	Yes
Implement infrastructure improvement?	Yes	Yes, to a lesser extent	Yes, to a lesser extent.
Be a good neighbor?	No	Yes, to a lesser extent	Yes, to a lesser extent.

Source: Data compiled by Ascent Environmental in 2024.

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7 OTHER CEQA-MANDATED SECTIONS

7.1 SIGNIFICANT AND UNAVOIDABLE IMPACTS

The State CEQA Guidelines (Section 15126[b]) require that EIRs identify the significant environmental effects of a proposed project that cannot be reduced to a less-than-significant level. All the significant and unavoidable impacts that would occur under the proposed plan are listed below.

7.1.1 Aesthetics

Impact 4.1-3: Substantially degrade the existing visual character or quality of public views of the site and its surroundings.

7.1.2 Agricultural Resources

Impact 4.2-1: Convert prime farmland, unique farmland, or farmland of statewide importance (farmland) to non-agricultural use.

Impact 4.2-2: Conflict with existing zoning for agricultural use, or a Williamson Act contract.

7.1.3 Air Quality

Impact 4.3-3: Expose Sensitive Receptors to Substantial Pollutant Concentrations.

7.1.4 Biological Resources

No significant and unavoidable impacts.

7.1.5 Cultural and Tribal Cultural Resources

Impact 4.5-1: Cause a substantial adverse change in the significance of a historical resource.

7.1.6 Energy

No significant and unavoidable impacts.

7.1.7 Geology and Soils

No significant and unavoidable impacts.

7.1.8 Greenhouse Gas Emissions

Impact 4.8-1: Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

Impact 4.8-2: Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

7.1.9 Hazards and Hazardous Materials

No significant and unavoidable impacts.

7.1.10 Hydrology and Water Quality

No significant and unavoidable impacts.

7.1.11 Land Use

No significant and unavoidable impacts.

7.1.12 Noise

Impact 4.12-1: Substantial temporary (construction) noise levels that exceed City noise control ordinance standards.

Impact 4.12-2: Substantial permanent stationary or area noise sources that exceed the City residential noise control ordinance standards

Impact 4.12-3: Substantial permanent traffic noise levels that exceed City traffic noise standards.

Impact 4.12-4: Construction or operational vibration levels that exceed FTA's recommended standards with respect to the prevention of structural damage and human response.

7.1.13 Population and Housing

No significant and unavoidable impacts.

7.1.14 Public Services and Recreation

No significant and unavoidable impacts.

7.1.15 Transportation and Circulation

No significant and unavoidable impacts.

7.1.16 Utilities and Service Systems

No significant and unavoidable impacts.

7.2 SIGNIFICANT AND IRREVERSIBLE ENVIRONMENTAL CHANGES

The State CEQA Guidelines (Section 15126) requires a discussion of any significant irreversible environmental changes which would be caused by the proposed plan should it be implemented. The irreversible and irretrievable commitment of resources is the permanent loss of resources for future or alternative purposes. Irreversible and irretrievable resources are those that cannot be recovered or recycled or those that are consumed or reduced to unrecoverable forms. Specifically, the State CEQA Guidelines section 15126.2(c) states:

Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible, since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generation to similar uses. Also, irreversible damage can result

from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

Implementation of the proposed plan would result in the irreversible and irretrievable commitment of energy and material resources during construction and operation, including the following:

- ▶ construction materials, including such resources as soil, rocks, wood, concrete, glass, roof shingles, and steel;
- ▶ land area committed to new project facilities;
- ▶ water supply for project operation; and
- ▶ energy expended in the form of electricity, gasoline, diesel fuel, and oil for equipment and transportation vehicles that would be needed for project construction and operation.

The use of these nonrenewable resources is expected to account for a small portion of the resources from which they're ultimately sourced and would not affect the availability of these resources for other needs within the region and beyond. Mitigation measures identified in this EIR to reduce greenhouse gas (GHG) emissions would also reduce petroleum consumed during construction. As discussed in Section 4.6, "Energy," there is no evidence to suggest that construction activities for future development within the Plan Area would result in inefficient use of energy or natural resources. Also, mitigation measures identified in this EIR to reduce operations-related GHG emissions require efficient use of energy during project construction and operation, including requirements for providing onsite renewable energy generation (during operation). Therefore, long-term project operation would not result in substantial long-term consumption of energy and natural resources. Irreversible changes associated with accidental release of hazardous materials near resources (such as waterways) are also addressed in the EIR. Mitigation Measures 4.91a through 4.9-1i, as well as compliance with federal, state, and local regulations, require future projects to reduce potential impacts associated with accidental release of hazardous materials. Therefore, accidental spills and release of hazardous materials during construction would not result in irreversible changes to natural resources.

7.3 GROWTH INDUCEMENT

An EIR must discuss the ways in which a proposed project could foster economic or population growth or the construction of additional housing, directly or indirectly, in the surrounding environment (State CEQA Guidelines Section 15126.2[d]). Growth can be induced in several ways, such as through elimination of obstacles to growth, stimulation of economic activity in the region, and establishment of policies or other precedents that directly or indirectly encourage additional growth.

Section 15126.2(d) of the State CEQA Guidelines provides the following guidance for assessing growth-inducing impacts of a project:

Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a wastewater treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also, discuss the characteristics of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

A project can induce growth directly, indirectly, or both. Direct growth inducement would result if a project involved construction of new housing. Indirect growth inducement would result, for instance, if implementing a project resulted in any of the following:

- ▶ substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises);

- ▶ substantial short-term employment opportunities (e.g., construction employment) that indirectly stimulates the need for additional housing and services to support the new temporary employment demand; and/or
- ▶ removal of an obstacle to additional growth and development, such as removing a constraint on a required public utility or service (e.g., construction of a major sewer line with excess capacity through an undeveloped area).

Growth inducement itself is not an environmental effect but may foreseeably lead to environmental effects. If substantial growth inducement occurs, it can result in secondary environmental effects, such as increased demand for housing, demand for other community and public services and infrastructure capacity, increased traffic and noise, degradation of air or water quality, degradation or loss of plant or animal habitats, conversion of agricultural and open-space land to urban uses, and other effects.

7.3.1 Elimination of Obstacles to Growth

The elimination of either physical or regulatory obstacles to growth is considered a growth-inducing impact. A physical obstacle to growth typically involves the lack of public infrastructure. The extension of public infrastructure, including roadways, water mains, and sewer lines, into areas not currently provided with roads and utilities would be expected to support new development. Similarly, the elimination of or a change to a regulatory obstacle, including growth and development policies, could result in new growth.

The Plan Area, located in the southern portion of the City of Fresno, is made up of a mix of land uses including industrial, warehouse, commercial, residential, religious, educational, and public. Major transportation networks such as State Route (SR) 41, SR 99, and Burlington Northern Santa Fe (BNSF) and Union Pacific (UP) rail lines traverse the Plan Area, and land has been cleared and construction is underway for the future state high speed rail line. Obstacles to growth in the Plan Area include limited roadway access in some areas (e.g., narrow roads or absence of roads), stormwater drainage capacity, potable water infrastructure, and wastewater conveyance infrastructure. As discussed in Section 3, "Project Description," industrial, retail, office and potential some residential would be developed in the Plan Area, and would be accompanied by infrastructure improvements necessary to serve development, removing these obstacles to growth. These effects are evaluated in this EIR.

Also, the Plan Area includes some land in unincorporated Fresno County outside the City of Fresno that is anticipated to become part of the City in the future. Upon a proposal to annex this unincorporated land, the City would prezone the land in a manner consistent with the General Plan land use designation. Once annexation occurs, County zoning would no longer apply, and the zoning established in the pre-zoning would take effect. This process would remove an obstacle to growth.

As discussed in Section 3, "Project Description," development associated with the proposed plan, would require new on-site and off-site infrastructure to accommodate future development, including the installation of new transmission grids, new wells, and upsizing of pipelines. The proposed infrastructure is sized to serve the proposed plan and is not sized to serve additional unplanned development outside the Plan Area. These infrastructure improvements are evaluated in this EIR as part of the proposed plan's other supporting infrastructure.

Finally, the SCSP proposes land use designation changes for certain areas, requiring a General Plan amendment. The changes are proposed primarily to 1) reconcile land use designations with existing conditions, 2) to buffer sensitive uses (e.g., residential areas, Orange Center School) with less intensive uses (e.g., business park instead of industrial), and 3) to provide more opportunities for neighborhood-serving general commercial uses near residential areas. Amending the General Plan to accommodate these changes would remove obstacles to growth. The potential impacts of the General Plan amendment are evaluated in this EIR.

For these reasons the proposed plan does not extend any infrastructure or otherwise eliminate any existing obstacles to growth beyond the growth anticipated by implementation of the proposed plan, which is consistent with the adopted General Plan.

7.3.2 Stimulation of Economic Activity

A primary impetus for the SCSP is economic development and job growth. More than 14,000 new jobs would be created by 2040 with anticipated development, primarily in the industrial sector, with lesser but still substantial growth in office and retail jobs (Table 7-1).

Table 7-1 Anticipated Job Growth 2022-2040

Land Use Designations	Proposed Job Growth
Food (Restaurants)	183 persons
Industrial	10,576 employees
Office	1,928 employees
Retail	1,624 employees

Source: prepared by Ascent Environmental in 2023.

Implementation of the SCSP is expected to create new jobs based on proposed land uses in the Plan Area. The purpose of the proposed plan is to create jobs for the City and accommodate industrial, commercial and office development, and a minimal amount of residential units. Consistent with the General Plan, the proposed plan would promote balance of jobs and housing within the City. Therefore, the environmental implications associated with the stimulation of economic activity would not lead to significant growth-inducing impacts.

SUMMARY OF GROWTH-INDUCING IMPACTS

Although economic and employment growth in the Plan Area is an intended consequence of the proposed plan, growth inducement directly or indirectly by the proposed plan also could affect the greater Fresno region. Potential effects caused by induced growth in the region would include loss of agricultural land, increased light and glare, increase in surface runoff, environmental impacts attributable to increases in regional water use, impacts of surface water quality, loss of cultural resources, transportation safety impacts, air quality impacts, increases in GHG emissions, increase in noise, and increases in demand for public services and utilities.

However, the purpose of the proposed plan is to create jobs for the City and accommodate industrial, commercial and office development, and a minimal amount of residential units. The proposed plan has the potential to generate future development of approximately 12,021,744 square feet (sf) of non-residential uses (including industrial, retail, and office) and 91 new residential dwelling units. As discussed in Section 4.13, "Population and Housing," the proposed plan is estimated to result in the addition of approximately 313 new residents and add nearly 14,000 jobs in the City of Fresno by 2040. The City is projected to add nearly 70,000 employees between 2022 and 2040. Therefore, implementation of the proposed plan will create jobs for the City's projected growth in population and employment. Consistent with the General Plan, the proposed plan would promote greater balance between jobs and housing in the City. The additional growth of industrial, office, and retail and the small amount of residential units is consistent with citywide planning efforts. Therefore, the proposed plan would not induce substantial unplanned population growth, either directly (i.e., by proposed new unplanned homes) or indirectly (i.e., by the extension of roads or other infrastructure).

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Chapter 7 Other CEQA Sections

No references used in this chapter.



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