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PROGRAM ENVIRONMENTAL IMPACT REPORT

REGIONAL TRANSPORTATION PLAN / SUSTAINABLE COMMUNITIES STRATEGY

FRESNO, CALIFORNIA

LSA

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LIST OF ABBREVIATIONS AND ACRONYMS

°F	degrees Fahrenheit
2022 RTP/SCS	Fresno Council of Governments 2022 Regional Transportation Plan/Sustainable Communities Strategy
AB	Assembly Bill
ABM	activity-based model
ACMs	asbestos-containing materials
AIA	airport influence area
AICUZ	Air Installation Compatible Use Zone
ALUC	airport land use commission
ALUCP	airport land use compatibility plan
AMBAG	Association of Monterey Bay Area Governments
amsl	above mean sea level
AOC	Auto Operation Cost
APCO	Air Pollution Control Officer
APS	Alternative Planning Strategy
APSA	Aboveground Petroleum Storage Act
AQMP	Air Quality Management Plan
ARPA	Archaeological Resources Protection Act
ASL	American Short Line and Regional Railroad Association
ATMS	Advanced Transportation Management System
ATP	Active Transportation Plan
Basin	San Joaquin Valley Air Basin
BIL	Bipartisan Infrastructure Law

BIOS	Biogeographic Information and Observation
BLM	Bureau of Land Management
BMP	best management practice
BNSF	BNSF Railway
BRT	Bus Rapid Transit
BTU	British thermal units
BUILD	Better Utilizing Investments to Leverage Development Transportation Discretionary
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Occupational Safety and Health Administration
CalARP	California Accidental Release Prevention Program
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
Caltrans	California Department of Transportation
CAP	climate action plan
CAPCOA	California Air Pollution Control Officers Association (CAPCOA
CARB	California Air Resources Board
CARB Handbook	*Air Quality and Land Use Handbook*
CBC	California Building Code
CBD	Center for Biological Diversity

CCAA	California Clean Air Act
CCAP	Climate Change Action Plan
CCAP-A	County of Fresno Comprehensive Climate Action Plan Analysis
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERP	Community Emission Reduction Plan
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH_4	methane
CHHSL	California Human Health Screening Levels
CHL	California Historical Landmark
CIRIS	California Interregional Intermodal Service
CLCA	California Land Conservation Act of 1965
Cleanup Program	DTSC Brownfields and Environmental Restoration Program
CMAQ	Congestion Mitigation and Air Quality Improvement
CMP	Congestion Management Program
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide

CO_2	carbon dioxide
CO_2e	carbon dioxide equivalents
COG	Council of Governments
Construction General Permit	*National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities,* Order No. 2022-0057-DWQ, NPDES No. CAS000002
County	County of Fresno
CPKC	Canadian Pacific Kansas City
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CTC	California Transportation Commission
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
CWHR	California Wildlife Habitat Relationship
DART	Dinuba Area Regional Transit
dB	decibels
dBA	A-weighted decibels
dbh	diameter at breast height
DIF	development impact fee
DOC	California Department of Conservation
DPM	diesel particulate matter
DPR	Department of Parks and Recreation
DPS	Distinct Population Segment
DRRP	Diesel Risk Reduction Plan

DTSC	Department of Toxic Substances Control
EAG	Executive Advisory Group
EI	expansion index
EIR	Environmental Impact Report
EMFAC2021	California Emissions Factor Model, Version 2021
EO	Executive Order
EPA	United States Environmental Protection Agency
EV	electric vehicle
Farm Bill	1981 Agriculture and Food Act
FAST Act	Fixing America's Surface Transportation Act
FAT	Fresno Yosemite International Airport
FAX	Fresno Area Express
FCAA	federal Clean Air Act
FCRTA	Fresno County Rural Transit Agency
FEMA	Federal Emergency Management Agency
FESA	federal Endangered Species Act
FHWA	Federal Highway Administration
FMM	Fresno COG Mitigation Measure
FMMP	Farmland Mapping and Monitoring Program
FPPA	Farmland Protection Policy Act
FRCTA	Fresno County Rural Transportation Authority
Fresno COG Region	region under the jurisdiction of Fresno Council of Governments
FRPP	Farm and Ranch Lands Protection Program
FSZ	Farmland Security Zone

FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program
g	acceleration of gravity
GAMAQI	*Guidance for Assessing and Mitigating Air Quality Impacts*
GHG	greenhouse gas
GHGRx	Greenhouse Gas Reduction Exchange
GWh	gigawatt-hours
GWP	global warming potential
HBOS	Highway Beautification Overlay Standards
HCP	Habitat Conservation Plan
HDT	heavy-duty truck
HFCs	hydrofluorocarbons
HI	Hazard Index
HMP	Hazard Mitigation Plan
HRA	Health Risk Assessment
HRS	Hydrogen Refueling Station
HSR	high-speed rail
I-	Interstate
IIJA	Infrastructure Investment and Jobs Act
IRA	Inflation Reduction Act of 2022
IS	Initial Study
ITS	Intelligent Transportation System
Justification Report	Bay Area Air District *Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans*

KART	Kings Area Rural Transit
KCAG	Kings County Association of Governments
kg/day	kilograms per day
kWh	kilowatt-hours
LAFCO	Local Agency Formation Commission
LCFS	low carbon fuel standard
LED	light-emitting diode
LESA	Land Assessment and Site Evaluation
LEV	Low-Emission Vehicle
LID	low impact development
LOS	level(s) of service
LPP	Local Partnership Program
LTCAP	Local Transportation Climate Adaptation Program
MAP-21	Moving Ahead for Progress in the 21st Century Act
MBTA	Migratory Bird Treaty Act
MCTC	Madera County Transportation Commission
MDT	medium-duty truck
MEI	maximally exposed individual
MICR	maximum individual cancer risk
MLD	Most Likely Descendant
MLRSP	Multijurisdictional Local Road Safety Plan
MM	Modified Mercalli
MMT	million metric tons
MND	Mitigated Negative Declaration

mpg	miles per gallon
MPO	Metropolitan Planning Organization
MW	megawatts
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NAS	Naval Air Station
NCCP	Natural Communities Conservation Plan
ND	Negative Declaration
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NMFS	National Marine Fisheries Service
NO_2	nitrogen dioxide
NOP	Notice of Preparation
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
O_3	ozone

OHP	California Office of Historic Preservation
OPR	Governor's Office of Planning and Research
PAC	Policy Advisory Committee
Pb	lead
PEIR	Program Environmental Impact Report
PFCs	perfluorocarbons
PG&E	Pacific Gas & Electric Company
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
PMM	Project-Specific Mitigation Measure
Porter-Cologne	Porter-Cologne Water Quality Control Act
ppm	parts per million
PRC	Public Resources Code
project	Fresno Council of Governments 2026 Regional Transportation Plan/Sustainable Communities Strategy
Regionwide MS4 Permit	*NPDES Permit and Waste Discharge Requirements General Permit for Discharges from Municipal Separate Storm Sewer Systems, Order No. R5-2016-0040, NPDES No. CAS0085324*
RHNA	Regional Housing Needs Assessment
ROG	reactive organic gases
Roundtable Committee	Fresno COG RTP/SCS Roundtable Committee
ROW	right-of-way
RPA	Registered Professional Archaeologists
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan

RTPA	Regional Transportation Planning Agency
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCCP	Solutions for Congested Corridor Program
SCE	Southern California Edison Company
SCEA	Sustainable Community Environmental Assessment
SCH	State Clearinghouse
SCS	Sustainable Communities Strategy
SF_6	sulfur hexafluoride
SFRDHA	Surface Fault Rupture Displacement Hazard Analysis
SHMA	Seismic Hazard Mapping Act
SHOPP	State Highway Operation and Protection Program
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SJJPA	San Joaquin Joint Powers Authority
SJVAPCD	San Joaquin Valley Air Pollution Control District
SJVR	San Joaquin Valley Railroad
SLF	Sacred Lands File
SO_2	sulfur dioxide
SR-	State Route
SSC	Species of Special Concern
SSJVIC	Southern San Joaquin Valley Information Center
STB	Surface Transportation Board
STBG	Surface Transportation Block Grant Program

STIP	State Transportation Improvement Program
SUV	sport utility vehicle
SWPPP	Stormwater Pollution Prevention Plan
TA	Technical Advisory
TAC	toxic air contaminant
TAF	Transportation Analysis Framework
TCAG	Tulare County Association of Governments
TCC	Transformative Climate Communities
TCEP	Trade Corridor Enhancement Program
TCR	Tribal cultural resource
TDM	Transportation Demand Management
TIP	Transportation Improvement Program
TNC	transportation network company
TOC	Traffic Operation Center
TPP	transit priority project
TPZ	Timberland Preserve Zone
TSM	Transportation Systems Management
UNFCCC	United Nations Framework Convention on Climate Change
UPRR	Union Pacific Railroad
USACE	United States Army Corps of Engineers
USC	United States Code
USDA	United States Department of Agriculture
USDOT	United States Department of Transportation
USFS	United States Forest Service

USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VERA	Voluntary Emission Reduction Agreement
VHD	vehicle hours of delay
VHT	vehicle hours traveled
VMT	vehicle miles traveled
VOC	volatile organic compound
WEAP	Worker Environmental Awareness Program
ZEV	zero-emission vehicle
ZNE	zero net energy
µg/m³	micrograms per cubic meter

1.0 EXECUTIVE SUMMARY

1.1 INTRODUCTION

The California Environmental Quality Act (CEQA) requires that local government agencies, before taking action on projects over which they have discretionary approval authority, consider the environmental[1] consequences of such projects. An Environmental Impact Report (EIR) provides the public and local and State governmental agency decision makers with an analysis of potential project environmental consequences to support informed decision making. One form of an EIR is a Program EIR (PEIR), which Section 15168(a) of the *State CEQA Guidelines* defines as follows:

> A PEIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either: (1) geographically; (2) as logical parts in a chain of contemplated actions; (3) in connection with issuance of rules, regulations, plans, or other general criteria, to govern the conduct of a continuing program; or (4) as individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.

The proposed project is programmatic in nature and would not directly result in physical development. This PEIR is intended to serve as the first tier of environmental review, providing a foundation for future, site-specific projects that may be implemented under the 2026 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS).

This Draft PEIR has been prepared by the Fresno Council of Governments (COG) to evaluate environmental impacts associated with implementation of the proposed 2026 RTP/SCS (proposed project); to discuss alternatives; and to propose mitigation measures that will minimize, offset, or otherwise reduce or avoid any identified potentially significant environmental impacts. This PEIR has been prepared pursuant to the requirements of CEQA and the *State CEQA Guidelines.* The Fresno COG, as the Lead Agency, has reviewed all submitted drafts, technical studies, and reports for consistency with applicable regulations and policies and has commissioned the preparation of this PEIR to reflect its own independent judgment.

For the purposes of reviewing the potential environmental impacts associated with the proposed project, this Draft PEIR has been informed by coordination with the Fresno COG; review of adopted plans and policies; review of available studies, reports, and data; and a specialized traffic assessment prepared for the project. Given that the 2026 RTP/SCS represents a long-range planning document with a horizon year of 2049, the Fresno COG cannot know all the details or have all the information it would need regarding each and every transportation improvement project identified in the RTP, or the detailed information regarding the specific type of future land use development that will

[1] Per *State CEQA Guidelines* §15360, "environment" is defined as the physical conditions that exist within the areas that will be affected by a proposed project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. The area involved shall be that in which significant effects would occur either directly or indirectly as a result of the project. The "environment" includes both natural and man-made conditions.

occur in each local jurisdiction between 2023 (base year), 2026 (current year), and 2049 (horizon year). Further, the Fresno COG does not have any land use authority to actually implement the projects identified in the 2026 RTP/SCS; this authority is held by the local member agencies of the Fresno COG Policy Board, known as "implementing agencies." As such, a PEIR is the appropriate approach for evaluating the proposed project under CEQA.

A PEIR allows a lead agency to evaluate broad policy alternatives, identify program-wide environmental impacts, and identify cumulative effects early in project development, providing the agency flexibility to shape the program in response to potential concerns. In doing so, the PEIR provides a foundation for subsequent environmental review of individual projects carried out under the larger program (also termed "tiering"). Subsequent tiers prepared by local jurisdictions or other agencies (later EIRs and Negative Declarations) will include an analysis of narrower, subsequent projects by "incorporating by reference" the general discussions from the broader first-tier PEIR. Second-tier environmental reviews will focus on the impacts of individual improvement projects that implement the RTP/SCS, related programs, and/or policies.

This Executive Summary is intended to highlight the major areas of importance in the environmental analysis for the proposed project as required by *State CEQA Guidelines* Section 15123. It includes a brief description of the proposed project; areas of controversy known to the Fresno COG, including issues raised by agencies and the public (Section 1.3); a summary of the significant unavoidable impacts of the proposed project (Section 1.5); and a summary of alternatives evaluated in the PEIR (Section 1.6). This Executive Summary also provides a table summarizing: (1) the potential environmental impacts that would occur as a result of project implementation and operation; (2) the level of significance prior to implementation of mitigation measures; (3) mitigation measures that avoid or reduce the significant impacts of the proposed project; and (4) the level of significance after mitigation measures are implemented.

As previously stated, the Fresno COG does not have land use authority to actually implement the projects identified in the 2026 RTP/SCS. Similarly, the Fresno COG does not have the legal authority to compel implementing agencies to adhere to the mitigation measures identified throughout this PEIR. As such, the mitigation measures presented in this PEIR are suggestions, but they contain a sufficient level of detail to guide implementing agencies in implementation.

1.2 PROPOSED PROJECT

The proposed project includes the preparation and adoption of the Fresno COG 2026 RTP/SCS, which would discuss potential transportation improvements, forecast future conditions and needs, and pool the planning resources and expertise of Fresno COG member agencies to facilitate development of a shared strategic vision for transportation and development in the Fresno COG Region, which consists of Fresno County. The Fresno COG, as the federally designated Metropolitan Planning Organization (MPO) and State-designated Regional Transportation Planning Agency (RTPA) for the Fresno COG Region, is responsible for preparation of the 2026 RTP/SCS in accordance with

applicable federal and State planning mandates.[2] The proposed 2026 RTP/SCS would also be consistent with the California Transportation Commission (CTC) RTP Guidelines, which were adopted in January 2024 to assist in the preparation of the RTP/SCS. The Fresno COG's fulfillment of these requirements ensures the eligibility of the Fresno region for federal and State funding for transportation planning and improvements.

The current Fresno COG RTP/SCS was adopted in 2022. According to the 2024 CTC RTP Guidelines, the Fresno COG is required to adopt an updated RTP every 4 years. The RTP must be developed in cooperation with the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), the California Department of Transportation (Caltrans), and other stakeholders, including transportation system users. The 2026 version of the RTP is the fourth Fresno COG RTP to contain an SCS as required by California Senate Bill (SB) 375. SB 375, enacted in 2008, requires that each MPO include an SCS that integrates land use and transportation planning for meeting greenhouse gas (GHG) emission reduction targets set forth by the California Air Resources Board (CARB). Specifically, the SCS encourages urban improvements to improve accessibility to transit and avoid urban sprawl through guiding development in planned growth areas consistent with the general plans of member agencies.

The 2026 RTP/SCS identifies the region's transportation needs and issues, sets forth an action plan of projects and programs to address the needs consistent with the adopted policies, and documents the financial resources needed to implement the plan. Additional areas of emphasis and policy initiatives in the 2026 RTP include updated project lists and updated performance measures from those outlined in the 2022 RTP. Specifically, the 2026 RTP/SCS will:

- Identify the region's transportation goals and policies.
- Include the SCS, which demonstrates how the region will meet its GHG reduction targets through integrated land use and housing and transportation planning. Once adopted by the Fresno COG, the SCS becomes part of the RTP.
- Set forth an action plan of projects and programs to address the needs consistent with the Policy Element, such as:
    - Allocating growth along transportation corridors in support of high-capacity transit systems.
    - Facilitating the development of mixed land use districts, which promote living, working, shopping, and recreation accessible by foot or bicycle and are served by centrally located

[2] Applicable federal and State mandates include California Government Code Section 65080 et seq.; federal surface transportation legislation, including the Bipartisan Infrastructure Law (BIL), Moving Ahead for Progress in the 21st Century Act (MAP-21), and Fixing America's Surface Transportation Act (FAST Act); air quality conformity requirements pursuant to 40 Code of Federal Regulations (CFR) Parts 51 and 93; and GHG emissions reduction mandates established under Assembly Bill (AB) 32 (the California Global Warming Solutions Act of 2006) and SB 375 (the Sustainable Communities and Climate Protection Act of 2008).

transit routes (the Tower District in Fresno, Clovis' Old Town, and many of the Fresno COG Region's small cities serve as examples built more than 40 years ago).

  - Maintaining and improving the regional street system, connecting local jurisdictions within Fresno County, and connecting the Fresno COG Region to adjacent counties.
  - Enhancing and maintaining existing transit systems and the frequency of current services.
  - Developing connecting bikeway systems and facilitating and encouraging their use.
  - Improving connectivity between highways, streets and roads, transit and rail, transit and air travel, cycling and transit, etc.
  - Reserving future "park and ride" opportunities.
  - Providing an organized public education effort.
  - Designating appropriate financing, including both operations and capital investment.
- Integrate results reflected in the Congestion Management Program.
- Document the financial resources needed to implement the plan.
- Reflect the results of the Transportation Conformity Analysis.
- Highlight the 2026 RTP/SCS PEIR process and results.
- Detail the RTP/SCS public outreach process.
- Include the environmental justice analysis process.[3]

The proposed RTP/SCS would address all transportation modes, including motor vehicles, transit, rail, goods movement (rail freight, trucking, etc.), bicycle and pedestrian facilities, aviation systems, and transportation systems management programs and projects with the horizon year of 2049. As previously stated, the Fresno COG does not have the land use authority to actually implement the future projects identified in the 2026 RTP/SCS. Instead, the Fresno COG member agencies, including the County and the 15 incorporated cities within the Fresno COG Region, would be responsible for implementing the transportation improvement projects and approving future land use developments reflected in the 2026 RTP/SCS. Caltrans would also be responsible for implementing transportation improvement projects, as applicable. Other implementing agencies may include, but are not limited to, transit agencies and Native American Tribes.

[3] Due to regulatory changes at the federal level that have occurred since adoption of the 2022 RTP/SCS, environmental justice will be addressed in the SCS portion of the RTP/SCS only.

1.2.1 Project Objectives

Section 15124(b) of the *State CEQA Guidelines* requires that a Project Description disclose the objectives of a proposed project. For the purposes of this PEIR, the project objectives are the goals included in Chapter 4 of the 2026 RTP/SCS, titled "Implementing the Plan." These goals will aid decision makers in their review of the proposed project and associated environmental impacts. The 2026 RTP/SCS goals, also considered the proposed project's objectives, are listed below and described in greater detail in Section 3.0, Project Description, of this PEIR.

- **Goal #1:** Improved mobility and accessibility for all.
- **Goal #2:** Vibrant communities that are accessible by sustainable transportation options.
- **Goal #3:** A safe, well-maintained, efficient, and climate-resilient multimodal transportation network.
- **Goal #4:** A transportation network that supports a sustainable and vibrant economy.
- **Goal #5:** A region embracing clean transportation, technology, and innovation.

1.3 AREAS OF CONTROVERSY

Pursuant to *State CEQA Guidelines* Section 15123, this PEIR acknowledges the areas of controversy and issues to be resolved that are known to the Fresno COG or were raised during the scoping process. The Fresno COG held a hybrid public scoping meeting (in person at the Sequoia Room of the Fresno COG offices at 2035 Tulare Street, Suite 201, Fresno, California, and online via Zoom) on May 28, 2025, to present the proposed project and solicit input from interested parties regarding environmental issues that should be addressed in this PEIR.

During the Notice of Preparation (NOP) comment period (May 13, 2025, through June 12, 2025), the City received four comment letters, three of which raised environmental issues. The following issues were raised:

- **Air Quality:** The comment letter received from San Joaquin Valley Air Pollution Control District (SJVAPCD) dated May 29, 2025, recommended the analysis include pollution exposure in disadvantaged communities, construction and operational emissions of future development projects facilitated by the proposed project, potential health risks on surrounding receptors, ambient air quality analysis, Voluntary Emission Reduction Agreement (VERA) implementation, vegetative barriers, and applicable SJAPCD rules and regulations.
- **Biological Resources:** The comment letter received from the California Department of Fish and Wildlife (CDFW) dated June 12, 2025, recommended the consideration of special-status species, botanical survey requirements, California Endangered Species Act (CESA) compliance, United States Fish and Wildlife Service (USFWS) consultation, lake and streambed alteration impacts, nesting bird impacts, and CDFW filing fees.

- **Energy:** The comment letter received from SJVAPCD dated May 29, 2025, recommended the incorporation of solar power systems and electric vehicle charging equipment into future development projects facilitated by the proposed project.

- **Transportation:** The comment letter received from SJVAPCD dated May 29, 2025, recommended the analysis of truck routing patterns, vehicle miles traveled (VMT) reduction strategies, and locomotive fleet modernization incentives.

- **Tribal Cultural Resources:** The comment letter received from the Native American Heritage Commission (NAHC) dated May 27, 2025 provided a summary of Native American consultation requirements pursuant to Assembly Bill (AB) 52 and recommended consultation with California Native American Tribes that are traditionally and culturally affiliated with the geographic area of the proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect Tribal cultural resources.

This PEIR addresses the above areas of concern in detail, examines project-related and cumulative environmental impacts, identifies significant adverse environmental impacts, and proposes mitigation measures and/or alternatives designed to reduce or eliminate potentially significant impacts. Appendix A to this PEIR includes the NOP and copies of the written comments received in response to the NOP.

1.4 SIGNIFICANT IMPACTS

Under CEQA, a significant impact 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."[4] As described below under Section 1.5, Significant Unavoidable Impacts, all resource topics would be considered significant and unavoidable, expect for Threshold 4.4.6 in Section 4.4, Biological Resources, which would result in no impacts.

1.5 SIGNIFICANT UNAVOIDABLE IMPACTS

The PEIR identifies mitigation in the form of both Fresno COG mitigation measures (i.e., broader programmatic measures to be undertaken by the Fresno COG) and project-specific mitigation measures (specific actions to be undertaken by lead agencies and/or project sponsors associated with future transportation improvement projects or land use developments facilitated by the proposed project) to reduce or avoid identified impacts.

As described throughout this PEIR, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, as described in Chapter 4.0, Existing Environmental Setting, Environmental Analysis, Impacts, and Mitigation

[4] *State CEQA Guidelines* § 15382.

Measures, of this PEIR, the proposed project would result in significant and unavoidable impacts with respect to all environmental topics analyzed in this PEIR, as follows:

1. Aesthetics
2. Agriculture and Forestry Resources
3. Air Quality
4. Biological Resources
5. Cultural Resources
6. Energy
7. Geology and Soils
8. Greenhouse Gas Emissions
9. Hazards and Hazardous Materials
10. Hydrology and Water Quality
11. Land Use and Planning
12. Mineral Resources
13. Noise
14. Population and Housing
15. Public Services
16. Recreation
17. Transportation
18. Tribal Cultural Resources
19. Utilities and Service Systems
20. Wildfire

Also refer to Table 1.A in Chapter 1.0, Executive Summary, for a description of each significant and unavoidable impact by threshold. The only thresholds for which a significant and unavoidable impact was not identified were as follows:

- Threshold 4.4.6 (refer to Section 4.4, Biological Resources), which reads: *"Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?"*
    - As described in Section 4.4, no impacts would occur related to this threshold because there are no adopted regional Habitat Conservation Plans (HCPs) or Natural Communities Conservation Plans (NCCPs) in the Fresno COG Region. However, all other thresholds under the Biological Resources topic are considered to have significant and unavoidable impacts.
- Threshold 4.17.1 (refer to Section 4.17, Transportation), which reads: "*Would the project conflict with program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?*"
    - As described in Section 4.17, the proposed 2026 RTP/SCS approach would be aligned with other regional programs, plans, and policies, as well as the general plans of each of the 15 incorporated cities and the County. Therefore, potential impacts related to this threshold were found to be less than significant. However, all other thresholds under the Transportation topic are considered to have significant and unavoidable impacts.

1.6 ALTERNATIVES TO THE PROPOSED PROJECT

An EIR must describe a range of reasonable alternatives to a project, or to the location of a project, which would feasibly attain most of the project objectives and would avoid or substantially lessen its significant effects. An EIR need not consider every conceivable alternative; rather it must consider a reasonable range of potentially feasible alternatives that "… foster informed decision making and public participation." The Fresno COG, as Lead Agency, has identified six project alternatives, including five SCS alternative scenarios, in addition to the No Project scenario, as required under *State CEQA Guidelines* Section 15126.6(e).

The five SCS alternative scenarios were developed by the Fresno COG RTP/SCS Roundtable Committee, which was composed of a number of diverse stakeholders representing constituents from throughout the Fresno COG Region. The Roundtable Committee reviewed each of the alternative scenarios considering public input resulting from public workshops and recommended that Alternative Scenario C be the Preferred Project Alternative. The Fresno COG Board took into consideration the Roundtable and public recommendations and selected Alternative Scenario C as the Preferred Alternative. As a result, the proposed project, as analyzed in this Draft PEIR, is the 2026 RTP/SCS based upon and incorporating SCS Alternative Scenario C.

Alternatives that fail to meet most of a project's stated objectives, are infeasible, or do not avoid significant environmental effects may be rejected by the lead agency. As required under *State CEQA Guidelines* Section 15126.6(e), the "no project" analysis shall be included to discuss the existing conditions at the time the NOP preparation is published, or if no NOP is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the "no project" alternative, an EIR shall also identify an environmentally superior alternative among the other alternatives.

Section 5.0, Alternatives, of this PEIR provides a detailed description of each project alternative, assesses the potential environmental impacts associated with construction and operation of each alternative, and provides justification for the selection of the environmentally superior alternative. Fresno COG has identified the following alternatives to the project.

1.6.1 Alternative 1: No Project

State CEQA Guidelines Section 15126.6(e)(3(a) states:

> When the project is the revision of an existing land use or regulatory plan, policy or ongoing operation, the "no project" alternative will be the continuation of the existing plan, policy or operation into the future. Typically this is a situation where other projects initiated under the existing plan will continue while the new plan is developed. Thus, the projected impacts of the proposed plan or alternative plans would be compared to the impacts that would occur under the existing plan.

As such, the No Project Alternative for the purposes of this PEIR represents a scenario in which the proposed 2026 RTP/SCS is not approved and the 2022 RTP/SCS remains in place as the current RTP/SCS for the Fresno COG Region. The No Project Alternative assumes that planned improvements to the future transportation system, as identified in the 2026 RTP, would not be made except those that would "reasonably" be expected to be constructed and open if the 2026 RTP/SCS is not approved. Therefore, those projects that could reasonably be expected to open to the public would be those projects programmed in the previously conformed FTIP or projects currently underway that are scheduled for completion or opening in 2026 and 2027.

The No Project Alternative also assumes that growth and development (through to the year 2049) would occur in a fashion consistent with the adopted general plans of each of its 16 local

jurisdictions (15 cities and the County), including residential densities and unit types, minimal mixed-use development, residential persons-per-acre densities consistent with historical trends, transit-oriented development, and other continued suburban growth and development resulting in an increasing development footprint and continued farmland conversion.

As noted above, the No Project Alternative reflects all existing transportation systems and future project improvements contained in the most recently approved Federal Transportation Improvement Program (FTIP) for which an air quality conformity package was also prepared and approved. The FTIP has been conformed for purposes of air quality impacts in accordance with federal air quality conformity requirements. As a result, those projects can reasonably be expected to move forward toward construction.

1.6.2 Alternative 2: SCS Scenario A (Connectivity and Mobility)

This scenario supports connectivity and community access through capacity enhancements while maintaining current growth patterns. Strategies and priorities identified under this scenario include the following:

- Highest investment in road capacity;
- Strong funding for road maintenance and operations;
- Providing a variety of housing options;
- Growth across urban centers and suburbs; and
- Maintaining current development trends.

1.6.3 Alternative 3: SCS Scenario B (Resilient Roadways)

This scenario pairs maintaining and operating existing roads (with some capacity improvements) with maintaining urban density and some redevelopment. Strategies and priorities identified under this scenario include the following:

- Highest investment in maintenance and operation;
- Strong funding for capacity improvements;
- Considering redevelopment and efficient land use; and
- Growth distributed from centers to suburbs.

1.6.4 Alternative 4: SCS Scenario D (Urban Rail and Transit-Oriented Growth)

This scenario links activity centers to the planned high-speed rail station and airport with light rail, targeting growth along transit corridors and infill areas. Strategies and priorities identified under this scenario include the following:

- Significant investment in transit improvements;
- Introduction of light rail connections between major corridors and centers;
- Prioritizing transit-oriented development and efficient land uses; and
- Promoting redevelopment for densification.

1.6.5 Alternative 5: SCS Scenario E (Regional Rail and Connected Communities)

This scenario connects cities with commuter rail, encouraging infill development and strong regional connectivity. Strategies and priorities identified under this scenario include the following:

- Highest investment in transit;
- Least focus on road capacity expansion;
- Dense core growth by maximizing infill development; and
- High-density transit-oriented development.

1.6.6 Identification of the Environmentally Superior Alternative

CEQA requires the identification of an Environmentally Superior Alternative among the proposed project and the alternatives evaluated in an EIR. As described in Chapter 5.0, Alternatives, Alternative 4 (Scenario D) would be the Environmentally Superio Alternative. Alternative 4 would result in generally similar impacts for 13 of the 20 environmental topics analyzed, and would result in lesser impacts for the following five environmental topics: Aesthetics, Energy, Hydrology and Water Quality, Mineral Resources, and Tribal Cultural Resources. However, Alternative 4 would result in slightly greater impacts for the topics of Population and Housing and Transportation, due to increased development intensity and infill concentration within existing urbanized areas, which could result in infill development that could displace existing housing units and affected residents to a greater degree than Scenario C. Additionally, Alternative 4 would generate a marginal increase in VMT compared to Scenario C. While Alternative 4 would be considered the environmentally superior alternative due to its more compact land use pattern and improved mode share distribution, it would nonetheless require implementation of the same mitigation measures as the proposed project and would not eliminate any significant and unavoidable impacts of the proposed project.

1.7 SUMMARY OF IMPACTS, MITIGATION, AND LEVEL OF IMPACTS

Table 1.A identifies the potential project environmental impacts, proposed mitigation measures, and level of significance after mitigation is incorporated into the project. Mitigation measures identified in Table 1.A include both Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs). PMMs are project-specific measures developed to reduce or avoid environmental impacts associated with implementation of the proposed project. FMMs are Fresno COG measures that provide guidance and recommendations for member agencies and implementing agencies to consider during planning, review, and implementation of future projects.

1.7.1 Secondary Effects of Mitigation Measures

In accordance with *State CEQA Guidelines* Section 15126.4(a)(1)(D), if any mitigation measure would cause one or more significant effects in addition to those that would be caused by the proposed project, the effects of the mitigation measure shall be discussed. The regulations and policies listed in the mitigation measures have been evaluated during their respective adoptions or approval processes. No secondary effects related to the proposed mitigation measures are expected to occur.

Table 1.A: Summary of Project Impacts, Mitigation Measures, and Level of Significance after Mitigation

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.1: Aesthetics			
Threshold 4.1.1: The proposed project would have a substantial adverse effect on a scenic vista.	Potentially Significant Impact.	**PMM AES-1**: Implementing agencies shall consider mitigation measures to address potential aesthetic impacts that substantially degrade scenic vistas and visual character, as applicable and feasible: ● During construction of individual Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) projects, the following measures shall be incorporated to minimize temporary and visual impacts: ○ Pre-construction clearing shall be limited to that necessary for construction. ○ Where feasible, existing vegetation, particularly vegetation along the edge of construction areas, shall be preserved to help screen views. ○ Existing trees shall be protected, where feasible, or replaced where removed to minimize visual impacts associated with clear-cutting. ○ After construction, areas disturbed by construction, staging, and storage shall be restored to original contours and revegetated with plant material similar in quantities and types to that which was removed and in compliance with local jurisdictional requirements. ○ To the extent feasible, construction staging shall not be located within the immediate foreground distance (~500 feet) of existing residential neighborhoods, recreational areas, or other land uses that include highly sensitive viewers. Where unavoidable, staging sites shall be screened from viewers using appropriate solid screening materials such as temporary fencing and walls. Fencing and walls shall be maintained, including removal of any graffiti. ○ Project design shall minimize contrasts in scale and massing between project elements and surrounding natural forms. This includes proposed grading that matches surrounding terrain in accordance with county and city hillside ordinances, where applicable. ● During design and operation of individual RTP/SCS projects, the following measures shall be incorporated to minimize permanent visual impacts: ○ New development shall provide appropriate transitions in building height and bulk that are sensitive to the physical and visual character of adjoining neighborhoods that have lower development intensities and building heights. ○ During project design, comparable range of colors and textures for building materials shall be used. Projects shall specify graffiti-resistant materials and finishes, where feasible and appropriate. ○ Landscaping shall be replaced and renewed where existing vegetation is removed. Project design shall incorporate plant species that complement the surrounding landscape and proposed development. ○ Project design shall incorporate see-through safety barrier designs (e.g., railings rather than walls), as appropriate. ○ Project design shall incorporate landscaping along highway corridors to introduce natural elements and visual interest that soften the hard-edged, linear character of the transportation corridors, while following local design guidelines (where feasible), to ensure visual compatibility with the existing setting and minimize changes in visual quality or character. Local design guidelines may include setback buffers, landscaping, color, texture, signage, and lighting criteria. ○ Where sound walls are proposed, visual impacts shall be accounted for during sound wall design and construction, as follows: ▪ Transparent panels shall be used, if feasible, to preserve views where proposed sound walls would block views from residences. ▪ Landscaped earth berms, or a combination of wall and berm, shall be used, if feasible, to minimize the apparent sound wall height. ▪ Sound walls of materials shall be designed with color and texture that complements the surrounding landscape and develops visual interest. ▪ Landscaping shall be incorporated near proposed sound walls to screen the wall, where feasible. Native vegetation shall be used where feasible.	Significant and Unavoidable
Threshold 4.1.2: The proposed project would substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.	Potentially Significant Impact.	Refer to **PMM AES-1.**	Significant and Unavoidable
Threshold 4.1.3: The proposed project would substantially degrade the existing visual character or quality of public views of the site and its surroundings (public views are those that are experienced from publicly accessible vantage point), and due to the location of the project in an urbanized area, the project would conflict with applicable zoning and other regulations governing scenic quality**.**	Potentially Significant Impact.	Refer to **PMM AES-1.**	Significant and Unavoidable
Threshold 4.1.4: The project would create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.	Potentially Significant Impact.	**PMM AES-2:** Implementing agencies shall consider mitigation measures to address potential aesthetic impacts from light and glare, as applicable and feasible: ● During construction, light and glare shall be minimized through the implementation of temporary lighting controls and construction best management practices (BMPs). These practices include: ○ Limiting nighttime construction lighting to the minimum necessary for safety and security; ○ Shielding and directing temporary lighting downward and away from sensitive receptors and roadways;	Significant and Unavoidable

Table 1.A: Summary of Project Impacts, Mitigation Measures, and Level of Significance after Mitigation

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		○ Positioning lighting to avoid glare to motorists; ○ Using non-reflective materials on temporary structures and equipment, where feasible; ○ Installing temporary screening where construction occurs adjacent to light-sensitive uses. ● Glare from transportation projects shall be minimized through the adoption of project design features that reduce glare. These features include: ○ Planting trees along transportation corridors to reduce glare from the sun; ○ Landscaping off-street parking areas, loading areas, and service areas; ○ Shielding transportation lighting fixtures to minimize off-site light trespass; ○ Requiring lighting that illuminates parking areas to be hooded and arranged so as not to cause a nuisance to highway traffic or sensitive receptors. ● Glare from land use projects shall be minimized through the adoption of project design features that reduce glare. These features include: ○ Limit the use of reflective materials, such as metal to the extent feasible. ○ Use non-reflective glass (or glass treated with a non-reflective coating) for all exterior windows and glass used on building surfaces. ○ Provide structural and/or vegetative screening from light-sensitive uses. ○ Direct architectural lighting onto building surfaces with low reflectivity to minimize glare, limit spillover onto adjacent properties, and reduce skyglow into the nighttime sky, thereby avoiding incidental light impacts on nearby private properties and undeveloped open space.	
Cumulative Aesthetics Impacts: The proposed project, in combination with past, present, and reasonably foreseeable projects, would contribute to a significant cumulative impact with respect to aesthetics.	Potentially Significant Impact.	No mitigation measures are applicable.	Significant and Unavoidable
4.2: Agricultural and Forestry Resources			
Threshold 4.2.1: The project would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the FMMP of the California Resources Agency, to non-agricultural use.	Potentially Significant Impact.	**FMM AG-1:** The Fresno COG shall encourage member agencies to pursue infill development in place of development in rural and environmentally sensitive areas. The Fresno COG shall encourage member agencies to seek funding to prepare specific plans and related environmental documents to facilitate mixed-use development, and to allow these areas to serve as receiver sites for transfer of development rights away from environmentally sensitive lands and rural areas outside established urban growth boundaries. The Fresno COG shall encourage member agencies to consider agricultural resources in all projects and avoid or minimize impacts on these areas.	Significant and Unavoidable
Threshold 4.2.2: The project would conflict with existing zoning for agricultural use, or a Williamson Act contract.	Potentially Significant Impact.	Refer to **FMM AG-1.** **PMM AG-1:** Implementing agencies shall consider measures to reduce or mitigate substantial adverse effects related to the conversion of agricultural land to a non-agricultural use and/or lands under a Williamson Act or Farmland Security Zone (FSZ) contract, as applicable and feasible: ● During design, consider project relocation or corridor realignment to avoid active agricultural lands and land under a Williamson Act or FSZ contract. ● Establish off-site conservation easements on farmland of equal acreage and quality consistent with the recommendations of the California Department of Conservation (DOC); establish 20-year Farmland Security Zone contracts (Government Code Section 51296 et seq.) or 10-year Williamson Act contracts (Government Code Section 51200 et seq.) on farmland of equal acreage and quality; or use other conservation tools available from the DOC Division of Land Resource Protection. Should the appropriate implementing agency require mitigation as described above, the project sponsor shall provide proof for verification by the implementing agency that the measure has been fulfilled.	Significant and Unavoidable
Threshold 4.2.3: The project would 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)).	Potentially Significant Impact.	Refer to **FMM AG-1** and **PMM AG-1.**	Significant and Unavoidable
Threshold 4.2.4: The project would result in the loss of forest land or conversion of forest land to non-forest use.	Potentially Significant Impact.	Refer to **FMM AG-1** and **PMM AG-1.**	Significant and Unavoidable

Table 1.A: Summary of Project Impacts, Mitigation Measures, and Level of Significance after Mitigation

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
Threshold 4.2.5: The project would involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.	Potentially Significant Impact.	Refer to **FMM AG-1** and **PMM AG-1.**	Significant and Unavoidable
Cumulative Agricultural Resources Impacts: The project, in combination with past, present, and reasonably foreseeable projects, would result in significant cumulative impacts with respect to agricultural resources.	Potentially Significant Impact.	Refer to **PMM AG-1.**	Significant and Unavoidable
4.3: Air Quality			
Threshold 4.3.1: The project would conflict with or obstruct implementation of the applicable air quality plan	Potentially Significant Impact.	**PMM AQ-1:** Implementing agencies shall consider mitigation measures to address potential air quality impacts that would conflict with or obstruct implementation of the applicable air quality plan, as applicable and feasible: ● Prior to approval of individual RTP/SCS projects, each individual project shall conduct a project-level air quality analysis consistent with the requirements of the California Environmental Quality Act (CEQA) and applicable guidance from the San Joaquin Valley Air Pollution Control District (SJVAPCD) for review and approval by the appropriate member agency. The analysis shall quantify construction and operational emissions of criteria air pollutants and precursors and evaluate those emissions against the applicable thresholds of significance adopted by the SJVAPCD. ● If analysis demonstrates that project emissions would exceed one or more applicable thresholds of significance, the implementing agency shall require that all feasible mitigation measures to reduce emissions to the maximum extent practicable be identified and implemented. Such measures may include, but are not limited to, the following: ○ **Construction Measures:** ▪ All off-road diesel-powered construction equipment ≥50 horsepower shall meet or exceed Tier 4 Final emission standards. ▪ For projects where electrical grid power is available, construction shall minimize the use of diesel generators. ▪ Low-volatile-organic-compound (VOC) architectural coatings, paints, adhesives, and sealants shall be used to the extent feasible. ○ **Operational Measures:** ▪ Projects shall be designed to minimize or eliminate the use of natural gas in buildings, prioritizing all-electric building systems where feasible. ▪ Electric vehicle (EV) charging infrastructure shall be installed consistent with, or exceed, applicable code requirements to support zero-emission vehicle use. ▪ Zero-emission landscaping equipment, or the requirement for electric-powered maintenance equipment, shall be incorporated into project design where feasible.	Significant and Unavoidable
Threshold 4.3.2: Implementation of the proposed project would result in a cumulatively considerable net increase of criteria pollutants for which the project region is non-attainment under an applicable federal or State ambient air quality standards.	Potentially Significant Impact.	Refer to **PMM AQ-1** and **FMMs EN-1** and **EN-2** as detailed in Section 4.6, Energy.	Significant and Unavoidable
Threshold 4.3.3: Implementation of the proposed project would expose sensitive receptors to substantial pollutant concentrations.	Potentially Significant Impact.	**PMM AQ-2:** Implementing agencies shall consider mitigation measures to address potential air quality impacts that would expose sensitive receptors to substantial pollutant concentrations, as applicable and feasible: ● For projects proposed within 500 feet of existing sensitive receptors, the implementing agency shall require the preparation of a Construction Health Risk Assessment (HRA) prior to project approval. The HRA shall: ○ Estimate emissions of toxic air contaminants (TACs), including diesel particulate matter (DPM), from construction equipment and activities. ○ Model pollutant dispersion to determine project-specific concentrations at nearby sensitive receptor locations. ○ Evaluate potential cancer and non-cancer hazards in comparison to the SJVAPCD's adopted health risk thresholds. ● If it is determined that the unmitigated health risk would exceed applicable thresholds, measures to reduce TAC exposure may include, but are not limited to, the following: ○ The project shall use Tier 4, or cleaner, off-road equipment during construction. ○ For projects where electrical grid power is available, construction shall minimize the use of diesel generators to the extent feasible. ○ Construction shall be phased to reduce simultaneous heavy equipment activity near sensitive receptors, where feasible.	Significant and Unavoidable
Threshold 4.3.4: The project would result in significant odors that could adversely affect a substantial number of people.	Potentially Significant Impact.	No mitigation measures are applicable.	Significant and Unavoidable

Table 1.A: Summary of Project Impacts, Mitigation Measures, and Level of Significance after Mitigation

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
Cumulative Air Quality Impacts: The project, in combination with other projects, would contribute to a significant cumulative impact related to air quality.	Potentially Significant Impact.	Refer to **PMMs AQ-1** and **AQ-2** and to FMMs **EN-1**, **EN-2**, and **EN-4**, as detailed in Section 4.6, Energy.	Significant and Unavoidable
4.4: Biological Resources			
Threshold 4.4.1: The project 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 the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.	Potentially Significant Impact.	**PMM-BIO-1**: Implementing agencies for a project shall consider mitigation measures to reduce substantial adverse effects related to threatened and endangered species, as applicable and feasible: ● Occupied habitat and potentially suitable habitat for threatened, endangered, or rare species, as well as designated critical habitat in project design, shall be avoided during project design wherever practicable and feasible. ● Where projects impact suitable habitat for special-status species and/or listed or sensitive species that have specific field survey protocols/guidelines outlined by the United States Fish and Wildlife Service (USFWS), the California Department of Fish and Wildlife (CDFW), or other local agency, focused species surveys shall be conducted prior to construction. If appropriate, surveys shall follow applicable protocols and guidelines and be conducted by qualified personnel. If sensitive plants or wildlife are present, qualified staff shall identify species-specific measures to avoid, minimize, and/or mitigate for potential impacts in consultation with the USFWS or CDFW. ● Where avoidance is infeasible for species protected under the federal Endangered Species Act (FESA), the California Endangered Species Act (CESA), or local/regional ordinances and policies, conservation measures to mitigate the loss of habitat and fulfill the requirements of the applicable authorization for incidental take pursuant to Section 7 or 10(a) of FESA, Section 2081 of CESA to support issuance of an incidental take permit, and/or as identified in local/regional plans shall be implemented. Conservation strategies to protect the survival and recovery of federally and State-listed endangered and local special-status species may include: ○ Impact minimization strategies ○ Contribution of in-lieu fees ○ Use of in-kind mitigation bank credits ○ Habitat restoration, creation, rehabilitation, and/or enhancement ○ Establishment of conservation easements ● Temporary access roads and staging areas shall not be located within areas containing sensitive plants, wildlife species, or native habitat wherever feasible. ● A worker environmental awareness program (environmental education) shall be implemented during construction to inform project workers of their responsibilities and avoid/minimize impacts on sensitive biological resources. ● A qualified botanist shall evaluate the project area during design to document the presence or absence of special status plant species. ● A qualified biologist shall monitor construction activities within or adjacent to occupied special-status species habitat to facilitate the avoidance of resources not permitted for impact. ● Highly visible markers and/or temporary fencing shall be installed prior to the start of construction to keep project activities within the cleared disturbance footprint. ● Construction shall be temporarily halted if protected wildlife enter work areas to allow wildlife to move through the work area unharmed. ● If special status-species or sensitive habits are identified, a qualified biologist shall be used to monitor implementation of mitigation measures during construction. ● Construction activities shall be scheduled to avoid sensitive time periods for biological resources (e.g., steelhead spawning periods during the winter and spring, the nesting bird season). ● An invasive species control plan shall be developed for areas of high-quality native habitat disturbed by project construction. ● Appropriate sound attenuation measures and other BMPs shall be implemented, where needed, to protect sensitive wildlife species. ● Pre-construction surveys shall be conducted prior to construction by a qualified biologist to delineate sensitive species habitat to facilitate avoidance. ● During design, existing habitat on both sides of the proposed project shall be considered and design features included to retain/improve wildlife connectivity where feasible.	Significant and Unavoidable
Threshold 4.4.2: The project would have a substantial adverse effect on any riparian habitat or other sensitive natural community.	Potentially Significant Impact.	**PMM BIO-2:** Implementing agencies shall consider mitigation measures to reduce substantial adverse effects related to riparian habitats and other sensitive natural communities, as applicable and feasible: ● During project design, implementing agencies shall consult with the USFWS and/or National Marine Fisheries Service (NMFS) where riparian or sensitive habitats provide potential for occupied habitat for federally listed rare, threatened, and endangered species afforded protection pursuant to FESA. ● During project design, implementing agencies shall consult with the United States Forest Service (USFS) where sensitive or riparian habitats provide potential for occupied habitat for Forest Sensitive Species for the four national forests in the Fresno COG Region. ● During project design, implementing agencies shall consult with the CDFW where such State-designated sensitive or riparian habitats provide potential for occupied habitat for State-listed rare, threatened, and endangered species afforded protection pursuant to CESA, or Fully Protected Species afforded protection pursuant to the California Fish and Game Code. ● During project design, implementing agencies shall consult with the CDFW pursuant to the provisions of Section 1600 of the State Fish and Game Code as they relate to impacts to lakes and streambeds. ● During project design, implementing agencies shall consult with the USFWS, USFS, and CDFW, as appropriate, where State-designated sensitive or riparian habitats are occupied by birds afforded protection pursuant to the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code during the breeding season.	Significant and Unavoidable

Table 1.A: Summary of Project Impacts, Mitigation Measures, and Level of Significance after Mitigation

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		● Sensitive natural communities and riparian habitats shall be avoided, wherever practicable and feasible, during project design. Where practicable and feasible, upland buffers shall be included in the project to minimize impacts to riparian corridors. ● Where avoidance is infeasible, sufficient conservation measures shall be developed through coordination with local agencies and the regulatory agency (i.e., USFWS or CDFW), as appropriate, to protect sensitive natural communities and riparian habitats and develop appropriate compensatory mitigation where required. ● A qualified biologist shall monitor construction activities that may occur in, or adjacent to, sensitive and riparian habitats and implementation of mitigation measures. ● When construction activities require stream crossings, work shall be scheduled during dry conditions and use rubber-wheeled vehicles, when feasible. A qualified wetland scientist or regulatory specialist shall determine if potential project impacts require regulatory permits from the United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and/or CDFW prior to construction. ● Temporary construction fencing, or other suitable markings, shall be installed around the perimeter of sensitive and riparian habitat prior to construction. ● Topsoil (the surface material from 6 to 12 inches deep) and perennial native plants, when recommended by a qualified ecologist/biologist, shall be salvaged and stockpiled for use in restoring native vegetation to areas of temporary disturbance within the project area. Salvage of soils containing invasive species, seeds, and/or rhizomes shall be avoided as identified by a qualified ecologist/biologist. ● Appropriate, locally native vegetation shall be installed following the completion of construction activities, as identified by a qualified ecologist/biologist. ● BMPs shall be used at construction sites to minimize erosion and sediment transport from the area. BMPs include encouraging growth of native vegetation in disturbed areas, using straw bales or other silt-catching devices, and using settling basins to minimize soil transport.	
Threshold 4.4.3: The project would 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.	Potentially Significant Impact.	**PMM BIO-3:** Implementing agencies shall consider mitigation measures to reduce substantial adverse effects related to aquatic resources, as applicable and feasible: ● An aquatic resources delineation shall be completed by a qualified biologist or regulatory specialist during project design to identify and map the extent of State and federally protected aquatic resources. Impacts to these aquatic resources shall be avoided or minimized in project design, consistent with the provisions of Sections 404 and 401 of the Clean Water Act (CWA), the Porter-Cologne Water Quality Control Act, and/or Section 1600 of Fish and Game Code. ● Where avoidance of aquatic resources is infeasible and authorizations from the USACE, RWQCB, and/or CDFW are required, sufficient conservation measures and/or mitigation shall be developed to fulfill the requirements of those authorizations.	Significant and Unavoidable
Threshold 4.4.4: The project could 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.	Potentially Significant Impact.	**PMM BIO-4:** Implementing agencies for a project shall consider mitigation measures to reduce substantial adverse effects related to wildlife movement, as applicable and feasible: ● During project design, implementing agencies shall consult with the USFS where impacts to migratory wildlife corridors may occur in an area afforded protection by an adopted Forest Land Management Plan or Resource Management Plan for the four national forests in the region. ● During project design, implementing agencies shall consult with counties, cities, and/or other local organizations, as appropriate, when impacts may occur to open space areas that have been designated as important for wildlife movement related to local ordinances or conservation plans. ● A qualified biologist shall conduct surveys to identify active migratory/native bird nests no more than 7 days before the start of construction at project sites from February 1 through August 31. ● Construction activities shall be prohibited within 250 feet of active raptor nests and 50 feet of active non-raptor nests. ● When feasible and practicable during project design, impacts shall be minimized to wildlife movement and existing functional wildlife corridors shall be preserved. Site-specific analyses of opportunities to preserve or improve habitat linkages shall be conducted during project design, if appropriate. ● Long, linear projects with the possibility of impacting wildlife movement shall analyze habitat linkages/wildlife movement corridors on a broad scale to avoid critical choke points that could reduce the function of recognized movement corridors. ● Construction drawings and habitat connectivity mapping shall be reviewed by a qualified biologist during design to determine the risk of habitat fragmentation. ● When practicable and feasible, projects shall be designed to promote wildlife corridor redundancy by including multiple connections between habitat patches. ● During project design, the potential for overpasses, underpasses, and culverts shall be evaluated to create wildlife crossings where a project may interrupt the movement of species. Wildlife crossings shall be provided in accordance with proven standards, such as the Federal Highway Administration's (FHWA) *Critter Crossings*, and in consultation with wildlife corridor authorities. ● Directional wildlife fencing shall be installed, where appropriate, to minimize wildlife injury due to direct interaction between wildlife and roads or construction. ● Where avoidance is infeasible, sufficient conservation measures shall be designed through coordination with local agencies and the regulatory agency (i.e., USFWS or CDFW) and in accordance with the respective County and cities' general plans to mitigate for the temporal or permanent loss of fish and wildlife movement corridors and/or wildlife nursery sites. The consideration of conservation measures may include the following measures where applicable: ○ Wildlife movement buffer zones ○ Corridor realignment ○ Appropriately spaced breaks in center barriers ○ Stream rerouting ○ Culverts ○ Creation of artificial movement corridors such as freeway under- or overpasses ○ Acquisition of contiguous adjacent land parcels to be protected in perpetuity from encroachment and development ○ Other comparable measures	Significant and Unavoidable

Table 1.A: Summary of Project Impacts, Mitigation Measures, and Level of Significance after Mitigation

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		● Applicable and appropriate guidance (e.g., FHWA HEP 16 059), as well as BMPs, shall be incorporated into project design to benefit pollinators, with a focus on native plants. ● During design, berms and sound/sight barriers at wildlife crossings shall be evaluated to encourage wildlife to utilize crossings. Sound and lighting shall be minimized, particularly in areas adjacent to natural habitats. ● Lighting impacts on sensitive species shall be reduced through implementation of mitigation measures, such as, but not limited to: ○ High-pressure sodium and/or cut-off fixtures shall be incorporated into project design instead of typical mercury-vapor fixtures for outdoor lighting. ○ Exterior lighting shall be designed to confine illumination to the project site. Structural and/or vegetative screening shall be provided for light-sensitive uses where feasible. ○ Non-reflective glass, or glass treated with a non-reflective coating, shall be specified for all exterior windows and glass used on building surfaces. ○ Architectural lighting onto building surfaces shall be directed to minimize glare and limit light intrusion onto adjacent properties. ● Noise impacts to sensitive species shall be minimized through implementation of mitigation measures. Some measures from **PMM NOI-1** (see Section 4.13, Noise) may also be applicable where they support these objectives, including, but not limited to: ○ Temporary noise barriers shall be installed around sensitive habitat during construction. ○ Where feasible, structural and/or vegetative screening shall be provided for noise sensitive habitats. ○ Construction equipment shall be properly maintained per manufacturers' specifications and fitted with the best available noise suppression devices. ○ Hydraulically or electrically powered tools shall be used during construction to avoid noise associated with compressed air exhaust from pneumatic tools. Where pneumatic tools are unavoidable, exhaust mufflers and tool jackets shall be used to reduce noise. ○ Quieter procedures (e.g., drills rather than impact equipment) shall be used during construction, when feasible. ○ Equipment and trucks with the best available noise control techniques shall be used during construction. ● Where feasible, include buffers as large as possible between sensitive habitats and freeways in project design. ● To the extent practicable, construction at night and during dawn and dusk, when wildlife activity is highest, shall be avoided.	
Threshold 4.4.5: The project would conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	Potentially Significant Impact.	**PMM BIO-5:** Implementing agencies shall consider mitigation measures to reduce conflicts with local policies and ordinances protecting biological resources, such as trees, as applicable and feasible: ● During design, implementing agencies shall consult with the appropriate local agency responsible for the administration of the policy or ordinance protecting biological resources. ● Existing trees shall be retained on site consistent with local regulations. Adequate protection during construction shall be provided for any trees that are to remain, as recommended by an International Society of Arboriculture (ISA) Certified Arborist. ● During design, if specific project area trees are designated as "Protected Trees," "Landmark Trees," or "Heritage Trees," approval for encroachment or removals shall be obtained through the appropriate entity. Appropriate mitigation measures shall be developed to ensure that the trees are replaced. Mitigation trees shall be locally sourced native species, as directed by a certified arborist. ● An ISA-Certified Arborist shall monitor construction activities that may occur in areas with trees designated as "Protected Trees," "Landmark Trees," or "Heritage Trees" to facilitate avoidance of resources not permitted for impact. Before the start of any clearing, excavation, construction, or other work on the site, fencing shall be installed for every protected tree deemed to be potentially endangered by said site work. Fences shall be left in place for the duration of all such work. All trees to be removed shall be clearly marked. ● The removal and disposal of logs, brush, earth, and other debris shall be planned to avoid injury to any protected tree. Where proposed development or other site work could encroach upon the dripline of any protected tree, special measures to allow the roots to breathe and obtain water and nutrients shall be implemented. Excavation, cutting, filling, or compaction of the existing ground surface shall be minimized within the dripline. No change in existing ground level shall occur from the base of any protected tree. No burning or use of equipment with an open flame shall occur near or within the protected perimeter of any protected tree. ● No storage or dumping of oil, gas, chemicals, or other substances that may be harmful to trees shall occur within the dripline of any protected trees or any other location on the site from which such substances might enter the protected perimeter. No heavy construction equipment or construction materials shall be operated or stored within the dripline of any protected trees. Wires, ropes, or other devices shall not be attached to any protected tree, except as needed for support of the tree. ● The leaves of protected trees shall be periodically sprayed with water during construction to prevent buildup of dust and other pollution that would inhibit leaf transpiration, as directed by the certified arborist. ● If any damage to a protected tree occurs during construction, the appropriate local agency shall be immediately notified of such damage. If the damaged tree cannot be preserved in a healthy state, as determined by the certified arborist, the tree shall be replaced with another tree or trees on the same site as deemed adequate by the local agency to compensate for the loss of the tree that is removed. ● Where avoidance is infeasible, sufficient conservation measures shall be developed to fulfill the requirements of the applicable policy or ordinance, such as to support issuance of a tree removal permit. The consideration of conservation measures may include: ○ Avoidance strategies ○ Contribution of in-lieu fees ○ Planting of replacement trees ○ Re-landscaping areas with native vegetation post-construction ○ Other comparable measures developed in consultation with the local agency and certified arborist.	Significant and Unavoidable

Table 1.A: Summary of Project Impacts, Mitigation Measures, and Level of Significance after Mitigation

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
Threshold 4.4.6: The project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan	No Impact.	No mitigation is required.	No Impact.
Cumulative Biological Resources Impacts: The project would have a substantial adverse cumulative effect on biological resources.	Potentially Significant Impact.	Refer to **PMMs BIO-1** through **BIO-5.**	Significant and Unavoidable
4.5: Cultural Resources			
Threshold 4.5.1: The project could cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the CEQA Guidelines.	Potentially Significant Impact.	**PMM CUL-1:** Implementing agencies shall consider mitigation measures to reduce substantial adverse changes in the significance of a historical resource, as applicable and feasible: ● As part of the appropriate environmental review of individual projects, a record search at the Southern San Joaquin Valley Information Cetner (SSJVIC) at California State University, Bakersfield, shall be conducted to determine whether the project area has been previously surveyed and whether resources were identified. **PMM CUL-2**: Implementing agencies shall consider mitigation measures to reduce substantial adverse changes in the significance of an archaeological resource. Such measures may include the following or other comparable measures identified by implementing agencies: ● If SJJVIC recommends a survey of an individual project site, the implementing agency shall obtain a qualified architectural historian to conduct historic architectural surveys of affected buildings, structures, or objects to determine their individual or potential collective eligibility for listing in the California Register of Historical Resources (CRHR) and/or National Register of Historic Places (NRHP). ● Based on the results of the surveys, the implementing agency shall develop measures to mitigate potential impacts to historical resources, including maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation, relocation, or reconstruction of any impacted historic resource, which shall be conducted in a manner consistent with the Secretary of the Interior's Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings, as set forth in *State California Environmental Quality Act (CEQA) Guidelines* Section 15064.5(b)(3). ● When the above measures are not feasible or possible, the implementing agency shall secure a qualified architectural historian, or other such qualified person, to document any significant historical resource(s) by way of historic narrative, photographs, or architectural drawings, as mitigation for the effects of demolition of a historic resource. This work shall follow the general guidelines as described in the Historic American Building Survey (HABS), Historic American Engineering Record (HAER), or the Historical American Landscapes Survey (HALS). The appropriate level of recordation shall be established by the implementing agency based on the resource(s) that may be adversely affected by each project, including the number of copies to prepare and a list of designated recipients identified (e.g., local historical societies, museums, library branch, local government agency or department, and the SSJVIC). The report preparer shall contact the organizations identified and inquire whether (1) they are interested in receiving a copy of the documentation and, (2) if so, what format they prefer (e.g., a bound hard copy, a copy saved electronically and stored on a thumbdrive, or both). ● The implementing agency shall coordinate with the documentation preparer(s) and determine when the documentation package is finalized and deemed complete. A set number of copies and distribution or hosting the information on a website shall occur. The development of project-specific mitigation plans based on site and resource characteristics shall reduce potential impacts to the extent feasible. **PMM CUL-3**: Implementing agencies shall consider mitigation measures to reduce potential impacts related to the disturbance human remains, including those interred outside of formal cemeteries, as applicable and feasible: ● Prior to issuance of grading permits for projects that contain known archaeological resources (or could potentially contain archaeological resources according to SSJVIC records), a Secretary of the Interior's Standards qualified and certified Registered Professional Archaeologist (RPA) (project archaeologist) shall be contracted to oversee archaeological monitoring of ground-disturbing. Ground-disturbing activities may include, but are not limited to, pavement removal, potholing or auguring, grubbing, boring, grading, excavation, drilling, and trenching. The project archaeologist, in consultation with the developer, shall develop an Archaeological Monitoring Plan to address the details, timing, and responsibility of all archaeological and cultural activities that will occur on the project site. Details in the plan shall include: ○ Project grading and development scheduling. ○ Cultural resources sensitivity training requirement for all earthwork-related construction personnel ○ If applicable, the development of a rotating or simultaneous schedule in coordination with the project sponsor and the project archaeologist for designated Native American Tribal monitors, if any, during grading, excavation, and ground-disturbing activities on the site. ○ The safety requirements, duties, scope of work, and Native American Tribal monitors' authority to stop and redirect grading activities in coordination with all project archaeologists. ○ The protocols and stipulations that the developer, Tribes, and project archaeologist must follow in the event of inadvertent cultural resources discoveries, including any newly discovered cultural resource deposits that shall be subject to a cultural resources evaluation. ● The archaeological monitor shall maintain a daily log documenting, at a minimum, the identity of the monitor, the work monitored, and any cultural materials identified or other actions taken by the monitor. The monitoring logs shall be provided to the implementing agency upon request and may be shared with interested parties at the implementing agency's discretion.	Significant and Unavoidable

Table 1.A: Summary of Project Impacts, Mitigation Measures, and Level of Significance after Mitigation

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		● On-site monitoring shall end when the project site grading and excavation activities are completed, or when the monitor has indicated that the site has a low potential for archaeological resources. **PMM CUL-4:** Implementing agencies shall consider mitigation measures to reduce substantial adverse effects to prehistoric or historic-era subsurface archaeological features or deposits, as applicable and feasible. In the event that evidence of any prehistoric or historic-era subsurface archaeological features or deposits (e.g., ceramic shards, trash scatters, lithic scatters) are discovered during construction, all ground-disturbing activity within 50 meters (165 feet) of the discovery shall be halted until an RPA (project archaeologist) can assess the significance of the find. If the find is a prehistoric archaeological site, the appropriate Native American group shall be notified. If the project archaeologist determines that the find does not meet the Center for Regional Heritage Research standards of significance for cultural resources, construction may proceed. If the project archaeologist determines that further information is needed to evaluate significance, a testing plan shall be prepared and implemented. If the find is determined to be significant by the project archaeologist (i.e., because the find is determined to constitute either a historical resource or a unique archaeological resource), the project archaeologist shall work with the project sponsor to avoid disturbance to the resources, and if complete avoidance is not feasible in light of project design, economics, logistics, and other factors, shall recommend additional measures such as the preparation and implementation of a data recovery plan. All cultural resources work shall follow accepted professional standards in recording any find, including submittal of standard Department of Parks and Recreation (DPR) Primary Record forms (Form DPR 523) and location information to the appropriate California Historical Resources Information System office for the project area.	
Threshold 4.5.2: The project could cause a substantial adverse change in the significance of an archaeological resource as defined in Section 15064.5 of the CEQA Guidelines.	Potentially Significant Impact.	Refer to **PMMs CUL-1** through **CUL-4.**	Significant and Unavoidable
Threshold 4.5.3: The project could disturb human remains, including those interred outside of formal cemeteries.	Potentially Significant Impact.	Refer to **PMMs CUL-1** through **CUL-4.**	Significant and Unavoidable
Cumulative Cultural Resource Impacts: The proposed project, in combination with past, present, and reasonably foreseeable projects, could result in cumulative impacts to cultural resources.	Potentially Significant Impact.	No mitigation measures are applicable.	Significant and Unavoidable
4.6: Energy			
Threshold 4.6.1: The project would result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.	Potentially Significant Impact.	**FMM EN-1:** The Fresno COG shall encourage member agencies to increase the number of alternative fuel vehicles (i.e., vehicles not powered strictly by gasoline or diesel fuel) both in publicly owned vehicles, as well as those owned by franchisees of these agencies, such as trash haulers, green waste haulers, street sweepers, and curbside recyclable haulers. **FMM EN-2:** The Fresno COG shall encourage member agencies to alter zoning to improve the jobs/housing balance, create communities where people live closer to work, and offer alternatives to personal automobile travel (bike, walk, and transit). **FMM EN-3:** The Fresno COG shall encourage member agencies to streamline permitting and provide public information to facilitate accelerated construction of solar and wind power. **FMM EN-4:** The Fresno COG shall encourage member agencies to adopt a "Green Building Program" to promote green building standards that go beyond minimum mandatory requirements, such as achieving California Green Building Standards Code (CALGreen) Tier 1 or Tier 2 measures. Green building standards include energy efficiency, usage of renewable resources, and reduced waste generation. **PMM EN-1:** Implementing agencies shall consider mitigation measures to reduce impacts to the wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation, as applicable and feasible, as follows: ● Expanding light-duty vehicle retirement programs; ● Increasing commercial vehicle fleet modernization; ● Implementing driver training modules on fuel consumption; ● Replacing gasoline-powered mowers with electric mowers; ● Reducing idling from construction equipment; ● Incentivizing alternative fuel vehicles and equipment;	Significant and Unavoidable

Table 1.A: Summary of Project Impacts, Mitigation Measures, and Level of Significance after Mitigation

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		● Developing infrastructure for alternative-fueled vehicles; ● Implementing truck idling rules, devices, and truck-stop electrification; ● Requiring electric truck refrigerator units; ● Reducing locomotives' fuel use; ● Modernizing older off-road engines and equipment; ● Encouraging freight mode shift; ● Limiting use of and developing fleet rules for construction equipment; and ● Requiring zero-emission forklifts. **PMM EN-2**: Implementing agencies shall consider mitigation measures to reduce impacts to the wasteful, inefficient, or unnecessary consumption of energy resources, during construction bid solicitations, as applicable and feasible: Include the use of alternative formulations of cement and asphalt to the extent they are available at a reasonable cost in the marketplace. Solicitations shall include the recycling of construction waste and debris. **PMM EN-3:** Implementing agencies shall consider mitigation measures to reduce impacts to the wasteful, inefficient, or unnecessary consumption of energy resources, during the design and approval, as applicable and feasible: ● Lighting fixtures shall achieve energy reductions beyond an estimated baseline energy use for such lighting. ● Light-emitting diode (LED) technology shall be used for all new or replaced traffic lights, rail signals, and other new development lighting features compatible with LED technology.	
Threshold 4.6.2: The project would conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	Potentially Significant Impact.	Refer to **FMMs EN-1** through **EN-4** and **PMMs EN-1** though **EN-3.**	Significant and Unavoidable
Cumulative Energy Impacts: The proposed project, in combination with past, present, and reasonably foreseeable projects, would contribute to a significant cumulative impact with respect to energy.	Potentially Significant Impact.	Refer to **FMMs EN-1** through **EN-4** and **PMMs EN-1** though **EN-3.**	Significant and Unavoidable
4.7: Geology and Soils			
Threshold 4.7.1(i): The project could directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault.	Potentially Significant Impact.	**PMM GEO-1:** Implementing agencies shall consider mitigation measures to reduce substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as applicable and feasible: ● During project design and prior to construction of individual RTP/SCS projects, a qualified geologist shall be retained by the implementing agency to prepare a geotechnical investigation to establish site-specific geotechnical conditions, identify seismic and other geologic hazards, and develop appropriate project-specific recommendations to address those hazards. ● The implementing agency shall incorporate the recommendations of the geotechnical investigation into project design and construction, as applicable.	Significant and Unavoidable
Threshold 4.7.1(ii): The project could directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.	Potentially Significant Impact.	Refer to **PMM GEO-1.**	Significant and Unavoidable
Threshold 4.7.1(iii): The project could directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction.	Potentially Significant Impact.	Refer to **PMM GEO-1.**	Significant and Unavoidable

Table 1.A: Summary of Project Impacts, Mitigation Measures, and Level of Significance after Mitigation

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
Threshold 4.7.1(iv): The project could directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.	Potentially Significant Impact.	Refer to **PMM GEO-1.** **PMM GEO-2:** Implementing agencies shall consider mitigation measures to reduce substantial adverse effects, including the risk of loss, injury, or death involving landslides, as applicable and feasible: ● Prior to construction of individual RTP/SCS projects, the implementing agency shall confirm that adequate slope drainage and appropriate landscaping are incorporated into project design to minimize the potential for slope instability and erosion.	Significant and Unavoidable
Threshold 4.7.2: The project would result in substantial soil erosion or the loss of topsoil.	Potentially Significant Impact.	Refer to **PMMs HYD-1** and **HYD-2** as detailed in Section 4.10, Hydrology and Water Quality.	Significant and Unavoidable
Threshold 4.7.3: Implementation of the proposed project could result in future projects being located on a geologic unit or soil that is unstable, or that would become unstable, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.	Potentially Significant Impact.	Refer to **PMM GEO-1** and **PMM GEO-2.**	Significant and Unavoidable
Threshold 4.7.4: Implementation of the proposed project could result in future projects being located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.	Potentially Significant Impact.	Refer to **PMM GEO-1.**	Significant and Unavoidable
Threshold 4.7.5: The project could 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	Potentially Significant Impact.	Refer to **PMM GEO-1.**	Significant and Unavoidable
Threshold 4.7.6: The project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	Potentially Significant Impact.	**PMM GEO-3**: Implementing agencies shall consider mitigation measures to reduce impacts related to the destruction of unique paleontological resources or unique geologic features, as applicable and feasible: ● During environmental review, an implementing agency or designee shall conduct a project-specific records search at the appropriate Information Center to determine whether the project site has been previously evaluated for paleontological resources and whether any such resources have been identified. ● If determined to be necessary based on the records search, implementing agencies shall retain a qualified paleontologist to conduct a field survey of the project site to assess potential impacts to paleontological resources. As part of this assessment, the qualified paleontologist shall identify and recommend appropriate avoidance, minimization, and/or mitigation measures.	Significant and Unavoidable
Cumulative Geology and Soils Impacts: The proposed project, in combination with past, present, and reasonably foreseeable projects, would contribute to a significant cumulative impact with respect to geology and soils.	Potentially Significant Impact.	Refer to **PMMs GEO-1** through **GEO-3**, and to **PMMs HYD-1** and **HYD-2**, as detailed in Section 4.10, Hydrology and Water Quality.	Significant and Unavoidable
4.8: Greenhouse Gas Emissions			
Threshold 4.8.1: The project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	Potentially Significant Impact.	Refer to **FMM EN-1** through **EN-4** and **PMMs EN-1** and **EN-2** as detailed in Section 4.6, Energy. **FMMs GHG-1:** The Fresno Council of Governments (COG), in partnership with local air districts, shall continue to work with local jurisdictions to adopt qualified greenhouse gas (GHG) reduction plans (e.g., Climate Action Plans), develop GHG-reducing planning policies, and support local implementation of climate initiatives. **PMM GHG-1**: Implementing agencies shall consider mitigation measures to reduce impacts related to the generation of greenhouse gas (GHG) emissions, as applicable and feasible: ● Prior to approval of individual Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) projects, the project sponsor shall prepare and submit a technical	Significant and Unavoidable

Table 1.A: Summary of Project Impacts, Mitigation Measures, and Level of Significance after Mitigation

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		assessment evaluating potential project-related GHG impacts. The evaluation shall be prepared in conformance with the San Joaquin Valley Air Pollution Control District (SJVAPCD) methodology. ● If the Fresno Council of Governments (COG), Fresno COG member agencies, or SJVAPCD establish numeric thresholds of significance for evaluating the GHG emissions impact of a proposed project (i.e., California Environmental Quality Act [CEQA] qualified Greenhouse Gas Reduction Plan/Climate Action Plan or SJVAPCD project-specific GHG thresholds), the evaluation of project-related GHG emissions shall demonstrate consistency with those thresholds of significance. ● In the absence of project-specific GHG thresholds, projects shall demonstrate compliance with the newest version of the Scoping Plan's GHG requirements, consistent with State GHG emissions reduction and equity prioritization goals, by implementing the following design elements where feasible: ○ Projects shall not include natural gas appliances or natural gas plumbing. ○ Projects shall achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the newest version of the Scoping Plan. ○ Projects shall not result in any wasteful, inefficient, or unnecessary electrical usage, as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines. ○ Projects shall comply with electric vehicle (EV) requirements in the most recently adopted version of California Green Building Standards Code (CALGreen) Tier 2. ● Should a proposed project exceed established thresholds of significance, GHG emission reduction measures shall be implemented to reduce emissions below applicable thresholds or to a level commensurate with implementing the recommended project-design features outlined above. Such mitigation measures could include, but are not limited to, energy efficiency measures, water conservation and efficiency measures, solid waste measures, and transportation and motor vehicles measures. The identified measures shall be included as part of the conditions of approval.	
Threshold 4.8.2: The project would conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	Potentially Significant Impact.	Refer to **PMM GHG-1** and to **FMMs EN-1** through **EN-4**, as detailed in Section 4.6, Energy.	Significant and Unavoidable
Cumulative Greenhouse Gas Emissions Impacts: The proposed project, in combination with past, present, and reasonably foreseeable projects, would contribute to a significant cumulative impact with respect to greenhouse gas emissions.	Potentially Significant Impact.	Refer to **FMM GHG-1** and **PMM GHG-1**, and to **FMMs EN-1** through **EN-4** and **PMMs EN-1** and **EN-2,** as detailed in Section 4.6, Energy.	Significant and Unavoidable
4.9: Hazards and Hazardous Materials			
Threshold 4.9.1: Implementation of the proposed project would facilitate future projects which could create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	Potentially Significant Impact.	Refer to **PMMs HYD-1** and **HYD-2,** as detailed in Section 4.10, Hydrology and Water Quality. **FMM HAZ-1:** The Fresno Council of Governments (COG) shall work with the California Department of Transportation (Caltrans) and the California Highway Patrol to reduce risks associated with the transport of hazardous materials in the Fresno COG Region through its consultation role assisting in the development of routes designated for hazardous materials. **PMM HAZ-1:** Implementing agencies shall consider the following mitigation measures to reduce substantial adverse effects related to the routine transport, use, or disposal of hazardous materials and hazardous materials releases, as applicable and feasible: ● Prior to construction, a project-specific hazardous materials management plan shall be prepared to identify the types, quantities, storage locations, and handling procedures for hazardous materials used during construction. These plans would be implemented by the Construction Contractor during construction. ● Prior to construction, coordination shall be conducted with local emergency response agencies (e.g., fire departments, emergency operations centers) to ensure adequate emergency access, response planning, and integration of the project into existing emergency response plans. ● For projects involving substantial transport of hazardous materials (e.g., rail or highway corridors), coordination shall be conducted with local jurisdictions and emergency response providers prior to construction regarding the nature of materials transported and emergency contact procedures, consistent with applicable federal regulations (e.g., 49 Code of Federal Regulations Part 15).	Significant and Unavoidable
Threshold 4.9.2: Implementation of the proposed project would facilitate future projects which could 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.	Potentially Significant Impact.	Refer to **FMM HAZ-1** and **PMM HAZ-1,** and to **PMMs HYD-1** and **HYD-2**, as detailed in Section 4.10, Hydrology and Water Quality. **PMM HAZ-2:** Implementing agencies shall consider the following mitigation measures to reduce significant hazards to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, as applicable and feasible: ● A records review shall be performed during the environmental review of a project to determine whether there is existing permitted use of hazardous materials, or documented evidence of hazardous waste contamination, within the project site.	Significant and Unavoidable

Table 1.A: Summary of Project Impacts, Mitigation Measures, and Level of Significance after Mitigation

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		● A Phase I Environmental Site Assessment (Phase I ESA) shall be completed during a project's environmental review when it includes any site with the potential for residual hazardous materials as a result of historical land uses or release. The Phase I ESA shall be prepared in conformance with the ASTM E1527-21 standard and shall include the following: ○ A review of federal, State, and local regulatory agency databases for hazardous materials sites; ○ A review of historical sources, including aerial photographs, fire insurance maps, and prior land use records; ○ A site reconnaissance to identify evidence of hazardous materials use, storage, or disposal; ○ Interviews with current and past owners, operators, or other knowledgeable persons, as available; ○ Identification of recognized environmental conditions (RECs), historical RECs, and controlled RECs; ○ Conclusions and recommendations regarding the need for further investigation, if applicable. ● If recommended by the Phase I ESA, a Phase II ESA report shall be prepared for the project prior to construction. The Phase II ESA shall make recommendations for remedial action, if appropriate, and be signed by a professional geologist or professional engineer. Recommendations provided in the Phase II ESA shall be implemented. ● During design, the appropriate local, State, and federal environmental regulatory agencies shall be consulted to ensure sufficient minimization of risk to human health and environmental resources has been implemented. Coordination shall include construction and post-construction considerations, and consider risk posed by soil contamination, groundwater contamination (including dewatering effluent), or other surface hazards such as underground storage tanks, fuel distribution lines, waste pits, and sumps. ● During construction, work shall be stopped if soil, groundwater (including dewatering effluent), or other environmental medium with suspected contamination is encountered unexpectedly. Contamination could be identified by odor or visual staining, or if any underground storage tanks, abandoned drums, or other hazardous materials or wastes are encountered. The Construction Contractor shall secure the area and take all appropriate measures to protect human health and the environment, including, but not limited to, notification of regulatory agencies and identification of the nature and extent of contamination. Construction in the affected area shall be halted until appropriate measures have been implemented, consistent with the guidance of applicable regulatory authorities. ● Soil generated by construction activities shall be stockpiled on site in a secure and safe manner. All contaminated soils determined to be hazardous or non-hazardous waste shall be adequately sampled by the Construction Contractor prior to acceptable reuse or disposal at an appropriate off-site location. Sampling, handling, and transport procedures for reuse or disposal shall be followed in accordance with applicable local, State, and federal laws and policies. ● Groundwater (including dewatering effluent) pumped from the subsurface shall be evaluated for the presence of contaminants prior to discharge or disposal. If contamination is suspected or identified, groundwater shall be characterized in accordance with applicable State and federal hazardous waste regulations to determine appropriate handling, treatment, and disposal requirements. Groundwater pumped from the subsurface shall be contained on site in a secure and controlled manner to prevent releases to the environment and exposure to construction workers and the public. Contaminated groundwater, if identified, shall be managed, treated, and/or disposed of in accordance with applicable California Department of Toxic Substances Control (DTSC), RWQCB, and other regulatory agency requirements, including hazardous waste regulations, as appropriate. Engineering controls, including impermeable or vapor barriers, shall be installed to prevent groundwater-related contaminant movement and vapor intrusion into structures. ● Prior to issuance of any demolition, grading, or building permit, the implementing agency (or other appropriate government agency) shall obtain written verification that the appropriate federal, State, and/or local oversight authorities have granted all required clearances and confirmed that all applicable standards, regulations, and conditions have been met for previous contamination at the site. ● During construction, the Construction Contractor shall develop, train, and implement appropriate worker awareness and protective measures to ensure that worker and public exposure are minimized to an acceptable level and to prevent any further environmental contamination as a result of construction. ● During project design, potential presence asbestos-containing materials (ACMs), lead-based paint (LBP), and any other building materials classified as hazardous waste by State or federal law shall be assessed for projects that include the demolition or modification of structures constructed prior to 1978. ● If ACMs are present in building materials, the implementing agency shall retain a California Occupational Safety and Health Administration (Cal/OSHA) certified Asbestos Inspector/Assessor to prepare specifications for the removal, encapsulation, or enclosure of ACMs. These specifications shall be signed by the certified Inspector/Assessor and submitted to the implementing agency and any applicable local regulatory agencies prior to issuance of demolition or renovation permits and prior to commencement of construction activities that could disturb ACMs. The Construction Contractor shall implement the specifications during demolition or renovation. All ACM removal, encapsulation, or enclosure activities shall be conducted in accordance with applicable federal, State, and local laws and regulations, including, but not limited to: California Code of Regulations (CCR), Title 8 (Section 1529); California Business and Professions Code (BPC) Division 3, (Sections 7058.5, 7180-7189.6, and 7028.1); California Health and Safety Code Sections 25915–25919.7; and any other local regulations. In addition, a completed San Joaquin Valley Air Pollution Control District (SJVAPCD) Asbestos Notification Form shall be submitted at least 10 working days in advance, and all ACMs shall be removed and disposed of by an accredited contractor in accordance with SJVAPCD Rule 8021 (Asbestos NESHAP), the United States Environmental Protection Agency (EPA), Cal/OSHA, and other applicable federal, State, and local standards. ● Where the remediation of LBP is required, the project sponsor shall retain Cal/OSHA-certified Lead Inspector/Assessor or certified Lead Supervisor, Project Monitor, or Project Designer to prepare specifications for the stabilization and/or removal of identified LBP. These specifications shall be submitted to the implementing agency and the appropriate local regulatory agency (e.g., Fresno County Environmental Health Division/Certified Unified Program Agency [CUPA]) prior to issuance of demolition or renovation permits and prior to commencement of construction activities that could disturb LBP. The Construction Contractor shall implement these specifications during demolition or renovation. All stabilization and/or removal activities shall be conducted in accordance with applicable laws and regulations, including, but not limited to: Cal/OSHA's Construction Lead Standard (CCR Title 8, Section 1532.1) and Department of Health Services regulations (17 CCR Sections 35001–36100), as may be amended. If other materials	

Table 1.A: Summary of Project Impacts, Mitigation Measures, and Level of Significance after Mitigation

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		classified as hazardous waste by State or federal law are present, the project sponsor shall submit written confirmation to the appropriate local agency that all State and federal laws and regulations are being followed when profiling, handling, treating, transporting, and/or disposing of such materials.	
Threshold 4.9.3: Implementation of the proposed project would facilitate future projects which could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	Potentially Significant Impact.	Refer to **FMM HAZ-1.** **PMM HAZ-3:** Implementing agencies shall consider mitigation measures to reduce significant hazards to the public, including those within 0.25 mile of an existing or proposed school, involving the release or transport of hazardous materials, as applicable and feasible: ● During construction of for individual RTP/SCS projects within 0.25 mile of an existing or proposed school, the implementing agency shall require the Construction Contractor to avoid the transport of hazardous materials during school hours, where feasible. Where avoidance is not feasible, the Construction Contractor shall provide advance written notification to affected schools regarding the schedule and nature of such transport. ● During project operation of individual RTP/SCS projects, the project operator shall ensure that any project-related transport of hazardous materials within 0.25 mile of an existing or proposed school avoids school hours, where feasible. Where avoidance is not feasible, the project operator shall ensure that advance written notification is provided to affected schools regarding the schedule and nature of such transport.	Significant and Unavoidable
Threshold 4.9.4: Implementation of the proposed project could facilitate future projects which could 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 create a significant hazard to the public or the environment.	Potentially Significant Impact.	Refer to **FMM HAZ-2.**	Significant and Unavoidable
Threshold 4.9.5: Implementation of the proposed project would facilitate future projects which could be 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, and would result in a safety hazard for people residing or working in the project area.	Potentially Significant Impact.	No mitigation measures are applicable.	Significant and Unavoidable
Threshold 4.9.6: The project could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	Potentially Significant Impact.	**PMM HAZ-4:** Implementing agencies shall consider mitigation measures to reduce impacts to an adopted emergency response plan or emergency evacuation plan, as applicable and feasible: ● Prior to construction, all necessary local and State road and railroad encroachment permits shall be obtained. All applicable conditions of approval shall be compiled and tracked for reference during project construction. If required as a permit condition, the Construction Contractor shall prepare a traffic control plan in accordance with professional engineering standards prior to construction. Traffic control plans shall include the following requirements: ○ Identification of all roadway locations where special construction techniques (e.g., directional drilling or nighttime construction) would be used to minimize impacts to traffic flow. ○ Development of circulation and detour plans to minimize impacts to traffic circulation. This may include the use of signing and flagging to guide vehicles through and/or around the construction zone. ○ Scheduling of truck trips outside of peak morning and evening commute hours to the maximum extent feasible. ○ Limiting lane closures during peak hours to the maximum extent feasible. ○ Use of designated haul routes to minimize truck traffic on local roadways to the maximum extent feasible. ○ Inclusion of detours for bicycles and pedestrians in all areas potentially affected by project construction. ○ Development of access plans for highly sensitive land uses such as police and fire stations, transit stations, hospitals, and schools prior to construction. The access plans will include input from the facility owner or administrator. To minimize disruption to emergency vehicles, the plans shall consider the timing, location, and duration of construction activities including detours and lane closures. ○ Storage of construction materials only in designated areas.	Significant and Unavoidable

Table 1.A: Summary of Project Impacts, Mitigation Measures, and Level of Significance after Mitigation

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
Threshold 4.9.7: The project could expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.	Potentially Significant Impact.	Refer to **PMM WILD-2,** as described in Section 4.20, Wildfire.	Significant and Unavoidable
Cumulative Hazards and Hazardous Materials Impacts: The proposed project, in combination with past, present, and reasonably foreseeable projects, would contribute to a significant cumulative impact with respect to hazards and hazardous materials.	Potentially Significant Impact.	Refer to **PMMs HAZ-1** through **HAZ-4**, and to **PMMs HYD-1** and **HYD-2**, as detailed in Section 4.10, Hydrology and Water Quality.	Significant and Unavoidable
4.10: Hydrology and Water Quality			
Threshold 4.10.1: Implementation of the proposed project could violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.	Potentially Significant Impact.	**PMM HYD-1**: Implementing agencies shall consider mitigation measures to reduce project impacts that may violate water quality standards or waste discharge requirements, or otherwise substantially degrade surface water or groundwater quality, as applicable and feasible: ● Prior to construction, the implementing agency shall require the project sponsor to retain a qualified civil engineer to prepare an erosion and sedimentation control plan for review and approval by the appropriate regulatory agency. Applicable BMPs shall include, but are not limited to, the following: ○ On sloped properties, the downhill end of the construction area shall be protected with perimeter control measures (e.g., silt fence, sandbags, filter fabric, silt curtains) and measures (e.g. hay bales) oriented parallel to the contours of the slope at a constant elevation to prevent erosion and limit sediment from entering streets, gutters, and storm drains. ○ In accordance with an approved erosion control plan, the Construction Contractor shall use mechanical and vegetative measures to reduce erosion and sedimentation, including appropriate seasonal maintenance. One hundred percent degradable erosion control fabric shall be installed on all graded slopes to protect and stabilize the slopes during construction and before permanent vegetation is established. All graded areas shall be temporarily protected from erosion by seeding with fast-growing annual species. All bare slopes shall be covered with staked tarps when rain is occurring or is expected. ○ The removal of natural vegetation or ground cover from the site shall be minimized during project design and construction to reduce the potential for erosion. Disturbed areas shall be stabilized with native vegetation as soon as possible. ○ During construction, filter materials shall be installed at storm drain inlets prior to the start of the wet weather season, site dewatering activities, street washing activities, and saw cutting asphalt or concrete. Filter materials shall be maintained and/or replaced, as necessary, to ensure effectiveness and prevent street flooding. ○ During construction, concrete/granite supply trucks or concrete/plaster finishing operations shall not be allowed to discharge wash water into watercourses, street gutters, or storm drains. ○ Tool and equipment cleaning locations shall be selected so that wash water does not discharge into the street, gutters, or storm drains. ○ The Construction Contractor shall provide a contained and covered area for storage of bags of cement, paints, flammables, oils, fertilizers, pesticides, or any other materials that could be discharged to a storm drain system by the wind or in the event of a material spill. ○ Construction debris shall be gathered on a regular basis and placed in a dumpster or other container that is emptied or removed on regular basis (interval approved by the implementing agency). When appropriate, tarps shall be used to collect fallen debris or splatters that could contribute to stormwater pollution. ○ During and following construction, dirt, gravel, refuse, and green waste shall be removed from sidewalks, street pavement, and storm drain systems within and near the project. ○ As appropriate, the Construction Contractor shall sweep street pavement adjacent to the project on a daily basis. Caked-on mud or dirt shall be scraped from these areas prior to sweeping. At the end of each workday, the entire site shall be cleaned and secured against potential erosion, dumping, or discharge to the street, gutter, and/or storm drains. ○ All erosion and sedimentation control measures installed during construction shall be in accordance with the control standards listed in the latest edition of the Erosion and Sediment Control Field Manual published by the Central Valley RWQCB. ○ During construction, all erosion and sedimentation control measures shall be monitored regularly by the Construction Contractor. If measures are insufficient to control sedimentation and erosion, the Construction Contractor, in coordination with the project sponsor, shall develop and implement additional and more effective measures immediately. **PMM HYD-2:** Implementing agencies shall consider mitigation measures to reduce project impacts that may violate water quality standards or waste discharge requirements, or otherwise substantially degrade surface water or groundwater quality, as applicable and feasible: ● During project design, the implementing agency shall incorporate low impact development (LID) BMPs, infiltration BMPs, and hydromodification measures to mimic the natural	Significant and Unavoidable

Table 1.A: Summary of Project Impacts, Mitigation Measures, and Level of Significance after Mitigation

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		hydrology of the site. These would maintain pre-project flow velocities/rates/volumes and retain/treat pollutants in stormwater runoff prior to discharge. Design elements may include, but are not limited to, the following: ○ New drainage channels/culverts; ○ Detention/retention basins; ○ Oil and grease traps; ○ Filter systems; ○ Vegetated buffers/median strips; ○ Incorporation of natural spaces; ○ Wetland/riparian area restoration.	
Threshold 4.10.2: Implementation of the proposed project could substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.	Potentially Significant Impact.	Refer to **PMM HYD-2.**	Significant and Unavoidable
Threshold 4.10.3(i): Implementation of the proposed project could substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on-or off- site?	Potentially Significant Impact.	Refer to **PMMs HYD-1** and **HYD-2.**	Significant and Unavoidable
Threshold 4.10.3(ii): Implementation of the proposed project could 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 substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site?	Potentially Significant Impact.	Refer to **PMMs HYD-1** and **HYD-2.**	Significant and Unavoidable
Threshold 4.10.3(iii): Implementation of the proposed project could 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 create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.	Potentially Significant Impact.	Refer to **PMMs HYD-1** and **HYD-2.**	Significant and Unavoidable
Threshold 4.10.3(iv): Implementation of the proposed project could 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 impede or redirect flood flows.	Potentially Significant Impact.	No mitigation measures are applicable.	Significant and Unavoidable

Table 1.A: Summary of Project Impacts, Mitigation Measures, and Level of Significance after Mitigation

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
Threshold 4.10.4: Implementation of the proposed project could facilitate future projects in flood hazard, tsunami, or seiche zones, which could result in the release of pollutants due to inundation.	Potentially Significant Impact.	No mitigation measures are applicable.	Significant and Unavoidable
Threshold 4.10.5: Implementation of the proposed project could conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	Potentially Significant Impact.	No mitigation measures are applicable.	Significant and Unavoidable
Cumulative Hydrology and Water Quality Impacts: The proposed project, in combination with past, present, and reasonably foreseeable projects, would contribute to a significant cumulative impact with respect to hydrology and water quality.	Potentially Significant Impact.	No mitigation measures are applicable.	Significant and Unavoidable
4.11: Land Use and Planning			
Threshold 4.11.1: Implementation of future transportation improvements and land use development projects facilitated by the proposed project could physically divide an established community**.**	Potentially Significant Impact.	**FMM LU-1:** The Fresno COG shall facilitate the exchange of information (e.g., geographic information system [GIS] shapefiles, demographic information, policy updates) that may be useful for member jurisdictions' reference for their planning documents and funding programs in timely updates.	Significant and Unavoidable
Threshold 4.11.2: Implementation of the proposed project could 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.	Potentially Significant Impact.	**PMM LU-1:** Implementing agencies shall consider mitigation measures to reduce project impacts that may conflict with an applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, as applicable and feasible. During project design, each implementing agency shall protect access to existing community facilities and minimize existing and proposed barriers to pedestrians and bicyclists. Community facilities shall be identified and public access considered. New or expanded pedestrian and bicycle routes connecting to community facilities shall be considered to improve community connectivity.	Significant and Unavoidable
Cumulative Land Use and Planning Impacts: The proposed project, in combination with past, present, and reasonably foreseeable projects, would contribute to a significant cumulative impact with respect to land use and planning.	Potentially Significant Impact.	No Applicable Mitigation Measures.	Significant and Unavoidable
4.12: Mineral Resources			
Threshold 4.12.1: The project could result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.	Potentially Significant Impact.	**PMM MIN-1:** Implementing agencies shall consider mitigation measures to reduce the loss of availability of a known mineral resource, as applicable and feasible: ● During construction, the Construction Contractor shall recycle and reuse building materials resulting from demolition, particularly aggregate and asphalt materials, to the maximum extent practicable. ● During construction, the Construction Contractor shall identify and use recycled building materials, particularly aggregate materials, from other construction sites within a reasonable hauling distance of the project, where feasible. ● During project design, the implementing agency shall evaluate the use of buffer zones or screening to reduce potential conflicts with adjacent or nearby mineral resource extraction areas. ● During project planning and design, the implementing agency shall evaluate and select project sites and design features (e.g., buffers) to avoid or minimize impacts on known mineral resources and mineral resource recovery sites. To the extent feasible, projects shall be sited to maintain portions of Mineral Resource Zone 2 (MRZ-2) in open space or other general plan land use designations and zoning that allow for mineral resource extraction.	Significant and Unavoidable

Table 1.A: Summary of Project Impacts, Mitigation Measures, and Level of Significance after Mitigation

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
Threshold 4.12.2: The project could 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.	Potentially Significant Impact.	Refer to **PMM MIN-1.**	Significant and Unavoidable
Cumulative Impacts to Mineral Resource: The proposed project, in combination with past, present, and reasonably foreseeable projects, would contribute to a significant cumulative impact with respect to mineral resources.	Potentially Significant Impact.	Refer to **PMM MIN-1.**	Significant and Unavoidable
4.13: Noise			
Threshold 4.13-1: The project could result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of future project sites in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	Potentially Significant Impact.	**PMM NOI-1:** Implementing agencies shall consider mitigation measures to reduce construction noise impacts to levels at or below those established in the General Plan Noise Ordinance or other applicable standards (such as the Federal Transit Administration [FTA] construction noise criteria), as applicable and feasible: ● The Construction Contractor shall limit project construction activities to the permitted hours of construction in accordance with local jurisdiction regulations in the applicable general plan noise element or noise ordinance. ● The Construction Contractor shall erect a minimum 10-foot-high temporary construction barrier between project construction activities and noise-sensitive land uses when construction noise is predicted to exceed local or project-specific noise thresholds or during high-noise activities. The barrier shall be continuous with no gaps or holes and may be constructed of any material with a minimum Sound Transmission Class (STC) rating of 28. ● To the extent feasible, the Construction Contractor shall schedule heavy construction activities generating high noise levels, such as the use of bulldozers, scrapers, graders, and pile driving, to the least noise-sensitive hour of the day. ● To the extent feasible, the Construction Contractor shall implement pile driving alternatives to minimize construction noise impacts. These include, but are not limited to, pre-drilling and cast-in-drill-hole (CIDH). ● The Construction Contractor shall stage all stationary construction equipment as far from noise-sensitive receptors as feasible. ● To the extent feasible, construction-related traffic shall be routed away from streets with noise-sensitive land uses, including residences, or to streets with the fewest noise-sensitive land uses. ● The Construction Contractor shall ensure that all construction equipment is properly maintained per manufacturers' specifications and fitted with the best available noise suppression devices (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds, whenever feasible). All intake and exhaust ports on power equipment shall be muffled or shielded. ● To the extent feasible, the Construction Contractor shall use hydraulically or electrically powered tools (e.g., jack hammers, pavement breakers, and rock drills). ● The Construction Contractor shall post the construction schedule, noise complaint procedures, and project contact information in a publicly accessible location for reference in the event of a noise disturbance. **PMM NOI-2:** Implementing agencies shall consider mitigation measures to reduce potential stationary noise impacts, as applicable and feasible: ● During project design of individual RTP/SCS projects, the implementing agency shall require the project sponsor to retain a qualified acoustical consultant to prepare a project-level noise study to assess potential stationary noise impacts from transportation and land development projects. The study shall be prepared in accordance with the applicable guidelines, procedures, and requirements. It shall determine whether project noise levels would result in a substantial permanent increase in ambient noise levels exceeding standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Further, the study shall recommend avoidance, minimization, and/or mitigation measures to reduce noise levels to the extent feasible. Noise reduction measures may include, but are not limited to: ○ Locating stationary noise sources on the site to be shielded by structures (e.g., buildings, enclosures, or soundwalls); and ○ Using equipment with lower noise emission ratings.	Significant and Unavoidable
Threshold 4.13-2: The project could result in the generation of excessive groundborne vibration or groundborne noise levels.	Potentially Significant Impact.	**PMM NOI-3:** Implementing agencies shall consider mitigation measures to reduce to reduce excessive groundborne vibration or groundborne noise levels during construction, as applicable and feasible: ● Heavy construction (e.g., pile driving, blasting, large bulldozers, and loaded trucks) shall be restricted or the use of light construction equipment (e.g., pre-drilling, CIDH, small bulldozers and trucks) shall be required at a distance from off-site building structures that avoids potential damage and minimizes annoyance to the extent feasible. ● Loaded trucks shall be routed away from residential streets or select streets with the fewest homes to the extent feasible. **PMM NOI-4:** Implementing agencies shall consider mitigation measures to reduce operational vibration levels, as applicable and feasible:	Significant and Unavoidable

Table 1.A: Summary of Project Impacts, Mitigation Measures, and Level of Significance after Mitigation

<table>
<tr><th>Environmental Impact</th><th>Level of Significance Prior to Mitigation</th><th>Mitigation Measures</th><th>Level of Significance After Mitigation</th></tr>
<tr><td></td><td></td><td>
The implementing agency shall ensure implementation of applicable mitigation procedures provided in Table 4.13.N of this Program Environmental Impact Report (PEIR) to reduce operational vibration levels. Mitigation may occur at the source, along the propagation path, or at the receiver. If the mitigation procedures listed in Table 4.13.N are not feasible at certain properties, the implementing agency shall attempt to negotiate a vibration easement with affected property owners or, where feasible, consider relocation of sensitive receptors outside the area subject to significant vibration impacts.
Table 4.13.N: Potential Vibration Mitigation Procedures and Descriptions
<table>
<tr><th>Mitigation Procedure</th><th>Location of Mitigation</th><th>Description</th></tr>
<tr><td>Maintenance</td><td>Source</td><td>Rail condition monitoring systems with rail grinding on a regular basis. Wheel truing to re-contour the wheel, provide a smooth running surface, and remove wheel flats. Reconditioning vehicles. Installing wheel condition monitoring systems.</td></tr>
<tr><td>Location and Design of Special Trackwork</td><td>Source</td><td>Careful review of crossover and turnout locations during the preliminary engineering stage. When feasible, relocate special trackwork to a less vibration-sensitive area. Installation of spring frogs eliminates gaps at crossovers and helps reduce vibration levels.</td></tr>
<tr><td>Vehicle Suspension</td><td>Source</td><td>Rail vehicle should have a low unsprung weight, soft primary suspension, minimum metal-on-metal contact between moving parts of the truck, and smooth wheels that are perfectly round.</td></tr>
<tr><td>Special Track Support Systems</td><td>Source</td><td>Floating slabs, resiliently supported ties, high-resilience fasteners, resilient sub-roadbed materials, and ballast mats all help reduce vibration levels from the track support system.</td></tr>
<tr><td>Building Modifications</td><td>Receiver</td><td>For existing buildings, if vibration-sensitive equipment is affected by train vibration, the floor upon which the vibration-sensitive equipment is located could be stiffened and isolated from the remainder of the building. For new buildings, the building foundation should be supported by elastomer pads that are similar to bridge-bearing pads.</td></tr>
<tr><td>Trenches</td><td>Along Vibration Propagation Path</td><td>A trench can be an effective vibration barrier if it changes the propagation characteristics of the soil. It can be open or solid. Open trenches can be filled with Styrofoam. Solid barriers can be constructed with sheet piling. Rows of drilled shafts can be filled with either concrete or a mixture of soil and lime, or concrete poured into a trench.</td></tr>
<tr><td>Operational Changes</td><td>Source</td><td>Reduce vehicle speed. Adjust nighttime schedules to minimize train movements during sensitive hours. Operating restrictions require continuous monitoring and may not be practical.</td></tr>
<tr><td>Buffer Zones</td><td>Receiver</td><td>Negotiate a vibration easement from the affected property owners or expand the rail right-of-way.</td></tr>
</table>
Source: Federal Railroad Administration. 2012. High-Speed Ground Transportation Noise and Vibration Assessment.
</td><td></td></tr>
</table>

Table 1.A: Summary of Project Impacts, Mitigation Measures, and Level of Significance after Mitigation

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
Threshold 4.13-3: Implementation of the proposed project could facilitate future development in the vicinity of a private airstrip or within an airport land use plan area, or, where such a plan has not been adopted, within two miles of a public or public-use airport, which could expose people residing or working in the project area to excessive noise levels.	Potentially Significant Impact.	No mitigation measures are applicable.	Significant and Unavoidable
Cumulative Noise Impacts: The proposed project, in combination with past, present, and reasonably foreseeable projects, would contribute to a significant cumulative impact with respect to noise.	Potentially Significant Impact.	Refer to **PMMs NOI-1** through **NOI-4.**	Significant and Unavoidable
4.14: Population and Housing			
Threshold 4.14.1: The project could 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).	Potentially Significant Impact.	**FMM POP-1:** The Fresno COG shall encourage member agencies to update general, area, community and specific plans to reflect projects included in the 2026 RTP and future land use allocations reflected in the 2026 SCS.	Significant and Unavoidable
Threshold 4.14.2: The project could displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.	Potentially Significant Impact.	**PMM POP-1:** Implementing agencies shall consider mitigation measures to reduce impacts related to the displacement of a substantial number of people, as applicable and feasible: ● During construction of individual RTP/SCS projects, the implementing agency shall require the Construction Contractor to prepare a construction schedule designed to minimize potential neighborhood disruption associated with prolonged construction activity. The schedule shall be submitted to the implementing agency or designated reviewing authority for review and approval. **PMM POP-2:** Implementing agencies shall consider mitigation measures to reduce impacts related to the displacement of a substantial number of people, as applicable and feasible: ● Individual RTP/SCS projects with the potential to displace homes and businesses shall require implementing agencies to evaluate alternative alignments and transportation facility designs early in the design process to minimize displacement.	Significant and Unavoidable
Threshold 4.14.3: The proposed project, in combination with past, present, and reasonably foreseeable projects, would contribute to a significant cumulative impact with respect to population and housing.	Potentially Significant Impact.	No mitigation measures are applicable.	Significant and Unavoidable
4.15: Public Services			
Threshold 4.15.1(i): Implementation of the proposed project could result in substantial adverse physical impacts associated with the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection.	Potentially Significant Impact.	No mitigation measures are applicable.	Significant and Unavoidable

Table 1.A: Summary of Project Impacts, Mitigation Measures, and Level of Significance after Mitigation

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
Threshold 4.15.1(ii): Implementation of the proposed project could result in substantial adverse physical impacts associated with 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 police protection.	Potentially Significant Impact.	No mitigation measures are applicable.	Significant and Unavoidable
Threshold 4.15.1(iii): Implementation of the proposed project could result in substantial adverse physical impacts associated with 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 schools.	Potentially Significant Impact.	No mitigation measures are applicable.	Significant and Unavoidable
Threshold 4.15.1(iv): Implementation of the proposed project could result in substantial adverse physical impacts associated with 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 parks.	Potentially Significant Impact.	No mitigation measures are applicable.	Significant and Unavoidable
Threshold 4.15.1(v): Implementation of the proposed project could result in substantial adverse physical impacts associated with 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 other public facilities.	Potentially Significant Impact.	Refer to **PMM LU-1,** as detailed in Section 4.11, Land Use and Planning**.**	Significant and Unavoidable
Cumulative Public Service Impacts: The proposed project, in combination with past, present, and reasonably foreseeable projects, would contribute to a significant cumulative impact with respect to public services.	Potentially Significant Impact.	No mitigation measures are applicable.	Significant and Unavoidable
4.16: Recreation			
Threshold 4.16-1: The project could result in an increased use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated.	Potentially Significant Impact.	No mitigation measures are applicable.	Significant and Unavoidable

Table 1.A: Summary of Project Impacts, Mitigation Measures, and Level of Significance after Mitigation

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
Threshold 4.16-2: Implementation of future projects facilitated by the proposed project could include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.	Potentially Significant Impact.	No mitigation measures are applicable.	Significant and Unavoidable
Cumulative Recreation Impacts: The proposed project, in combination with past, present, and reasonably foreseeable projects, would contribute to a significant cumulative impact with respect to recreation.	Potentially Significant Impact.	No mitigation measures are applicable.	Significant and Unavoidable
4.17: Transportation and Traffic			
Threshold 4.17.1: The project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.	Less Than Significant Impact.	No mitigation is required.	Less Than Significant
Threshold 4.17.2: The proposed project could conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).	Potentially Significant Impact.	**FMM TRAN-1:** Fresno COG will continue to engage State agencies in developing such policies/program while implementing the following regional/local implementation measures: ● Fresno COG will continue to secure funding for active transportation projects to fund more bike/pedestrian projects in the Fresno County region. ● Fresno COG will encourage and support the local jurisdictions to grow more sustainably by building more infill, compact and mixed uses development. ● Fresno COG will work with transit agencies in Fresno County to secure funding to expand transit services and improve the efficiency of the transit system. ● Fresno COG will continue to support and encourage transit-oriented development through various funding programs. ● Fresno COG will continue to support grant applications to state-wide funding programs such as the Affordable Housing and Sustainable Communities (AHSC), the Transit-Oriented Development (TOD) Housing Program, etc. ● Fresno COG will continue to work with the transit agencies and the local governments to implement micro transit, mobility hubs, and micro-grid system in Fresno County. ● Fresno COG will encourage transit agencies and local governments to implement first mile/last mile strategies to provide connection to the transit service. ● Fresno COG will encourage local to explore the Missing Middle Housing issue, and develop mechanisms to fill the gap of such housing types to meet the affordable housing needs. ● Fresno COG will continue to incentivize carpooling and vanpooling to reduce total VMT in the region. ● Fresno COG will continue to support safe route to school programs/projects. ● Fresno COG will continue to work with the San Joaquin Valley Air Pollution Control District (the Air District) to implement Rule 9410, which requires major employers in the region to provide employees with alternative to private automobiles as commute method. ● Fresno COG will continue to provide support for the implementation of SB 743 by providing technical support for local agencies and the private sector. ● Fresno COG will explore the implementation of a regional VMT mitigation program. ● Fresno COG will explore the feasibility of managed lanes in the region. ● Fresno COG will work with the transit agencies and local governments to provide more efficient demand-response services. ● Fresno COG will encourage local governments to develop and implement Complete Street policies to facilitate more bike and walk trips. ● Fresno COG will continue to support efforts to provide shades to transit riders and pedestrians by building more bus shelters and planting more trees along sidewalks.	Significant and Unavoidable
Threshold 4.17.3: The project could substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	Potentially Significant Impact.	**PMM TRAN-1:** Prior to approval of individual RTP/SCS projects, the project sponsor shall consider preparation of a safety analysis as needed for locations where sight lines could be impeded or other potential safety hazards are present. If prepared, the safety analysis shall be prepared according to the jurisdiction's applicable Municipal Code requirements and the Caltrans Highway Design Manual (HCM) standards and guidelines. Depending on the outcome of the safety analysis, the implementing agency shall consider safety improvements to reduce substantial adverse effects, as applicable and feasible, such as the following: ● Limited use areas (e.g., low-height landscaping); ● On-street parking restrictions (e.g., red curb); and ● Turning restrictions (e.g., right in/right-out).	Significant and Unavoidable
Threshold 4.17.4: The project could result in inadequate emergency access**.**	Potentially Significant Impact.	Refer to **PMM HAZ-4,** as detailed in Section 4.9, Hazards and Hazardous Materials.	Significant and Unavoidable

Table 1.A: Summary of Project Impacts, Mitigation Measures, and Level of Significance after Mitigation

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
Cumulative Transportation and Traffic Impacts: The proposed project, in combination with past, present, and reasonably foreseeable projects, would contribute to a significant cumulative impact with respect to transportation.	Potentially Significant Impact.	Refer to **FMM TRAN-1** and **PMMs TRAN-1** and **HAZ-4** (as detailed in Section 4.9, Hazardous Materials).	Significant and Unavoidable
4.18: Tribal Cultural Resources			
Threshold 4.18.1(a): The project could cause a substantial adverse change in the significance of a tribal cultural resource, as defined in Public Resources Code Section 21074, including a site, feature, place, cultural landscape (geographically defined in terms of its size and scope), sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k).	Potentially Significant Impact.	Refer to **PMMs CUL-1, CUL-3,** and **CUL-4,** as detailed in Section 4.5, Cultural Resources.	Significant and Unavoidable
Threshold 4.18.1(b): The project could cause a substantial adverse change in the significance of a tribal cultural resource, as defined in Public Resources Code Section 21074, including a site, feature, place, cultural landscape (geographically defined in terms of its size and scope), sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.	Potentially Significant Impact.	Refer to **PMMs CUL-1, CUL-3,** and **CUL-4,** as detailed in Section 4.5, Cultural Resources.	Significant and Unavoidable
Cumulative Tribal Cultural Resources: The proposed project, in combination with past, present, and reasonably foreseeable projects, would contribute to a significant cumulative impact with respect to tribal cultural resources.	Potentially Significant Impact.	Refer to **PMMs CUL-1, CUL-3,** and **CUL-4** as detailed in Section 4.5 Cultural Resources.	Significant and Unavoidable
4.19: Utilities and Service Systems			
Threshold 4.19.1: Implementation of future transportation improvement and land use development projects facilitated by the proposed project would result in increased demand for utility and service systems, including water supply, wastewater treatment, stormwater drainage, electric power, natural gas, and telecommunication systems which could cause significant environmental effects.	Potentially Significant Impact.	Refer to **PMMs HYD-1** and **HYD-2,** as detailed in Section 4.10, Hydrology and Water Quality. **PMM UTIL-1:** Implementing agencies for a project shall consider mitigation measures to ensure adequate capacity and availability of utility and service systems, as applicable and feasible. Such utilities and services include, but are not limited to, water supply, wastewater treatment, stormwater drainage, electric power, natural gas, and telecommunications systems, as applicable and feasible: ● During the environmental review for individual RTP/SCS projects, implementing agencies shall ensure the provision of adequate utilities, including water supply, wastewater treatment, stormwater drainage, electric power, natural gas, and telecommunication systems, to avoid or reduce significant environmental impacts associated with the construction or expansion of such facilities. Projects requiring wastewater service, solid waste collection, or potable water service shall coordinate with the relevant local	Significant and Unavoidable

Table 1.A: Summary of Project Impacts, Mitigation Measures, and Level of Significance after Mitigation

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		agencies to confirm that existing public services and utilities can accommodate the anticipated demand. If the current infrastructure serving an individual RTP/SCS project is inadequate, necessary infrastructure improvements shall be identified in the CEQA documentation for that individual project. Environmental impacts associated with the construction or expansion of utility infrastructure shall be avoided or minimized by adopting conditions of approval that must be followed by those responsible for construction or expansion activities.	
Threshold 4.19.2: Implementation of future transportation improvements and land use development projects facilitated by the proposed project could result in insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years**.**	Potentially Significant Impact.	Refer to **PMM UTIL-1** and to **PMMs HYD-1** and **HYD-2,** as detailed in Section 4.10, Hydrology and Water Quality. **PMM UTIL-2:** Implementing agencies for a project shall consider mitigation measures to ensure sufficient water supplies, as applicable and feasible: ● During design of individual RTP/SCS projects, coordination shall be conducted with relevant water service providers to ensure existing water supplies can accommodate the increase in demand. If any water service provider servicing the project site has inadequate water supply, improvements and/or mitigation measures shall be identified in each project's CEQA documentation. ● Projects shall reduce the use of potable water for landscape irrigation. Project design shall include drought-tolerant plantings for landscaping, water-efficient irrigation systems, and rainwater capture infrastructure, where feasible. ● Project design shall specify drip or other water-conserving or weather-based irrigation systems for landscaping. ● Project design shall incorporate elements that reduce the use of potable water, including water-conserving fixtures such as low-flow toilets, water-efficient clothes washers, reduced-flow faucets, and EnergyStar-rated appliances. ● Project design shall incorporate the use of reclaimed water for non-potable uses, such as landscape irrigation, ornamental water features, concrete mixing, and dust control, when located in an area with existing reclaimed water conveyance infrastructure. For projects areas with planned reclaimed water service, design shall specify dual plumbing systems in anticipation of future reclaimed water use.	Significant and Unavoidable
Threshold 4.19.3: Implementation of the proposed project could result in a determination by the wastewater treatment provider that it does not have adequate capacity to serve a project's projected demand in addition to the provider's existing commitments.	Potentially Significant Impact.	Refer to **PMM UTIL-1.**	Significant and Unavoidable
Threshold 4.19.4: Implementation of the proposed project could 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.	Potentially Significant Impact.	**PMM UTIL-3:** The implementing agency for a project shall consider mitigation measures to reduce the generation of solid waste, as applicable and feasible: ● Maintenance or reuse of existing building structures and materials associated with proposed building renovations and redevelopment shall be incorporated into the project to the extent feasible. ● Construction waste shall be diverted from landfills, where feasible, through the following measures: ○ A construction waste management plan shall be implemented that identifies materials to be diverted from disposal. ○ Salvaged, refurbished, or reused materials shall be used, where practicable, to divert such items from landfills. ○ Diversion targets for construction waste shall be established and met.	
Threshold 4.19.5: Implementation of future transportation improvement and land use development projects facilitated by the proposed project could conflict with federal, state, and local management and reduction statutes and regulations related to solid waste.	Potentially Significant Impact.	Refer to **PMM UTIL-3.**	Significant and Unavoidable
Cumulative Utilities and Service Systems: The proposed project, in combination with past, present, and reasonably foreseeable projects, would contribute to a significant cumulative impact with respect to utilities and service systems.	Potentially Significant Impact.	Refer to **PMMs UTIL-1** through **UTIL-3** and to **PMMs HYD-1** and **HYD-2**, as detailed in Section 4.10, Hydrology and Water Quality.	Significant and Unavoidable

Table 1.A: Summary of Project Impacts, Mitigation Measures, and Level of Significance after Mitigation

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.20: Wildfire			
Threshold 4.18.1: Implementation of the proposed project could substantially impair an adopted emergency response plan or emergency evacuation plan.	Potentially Significant Impact.	Refer to **PMM HAZ-4,** as detailed in Section 4.9, Hazards and Hazardous Materials.	Significant and Unavoidable
Threshold 4.18.2: Implementation of future transportation improvement and land use development projects facilitated by the proposed project could exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.	Potentially Significant Impact.	**FMM WILD-1:** The Fresno COG shall continue to provide a regional forum for collaboration in planning, communication, and information sharing on best practices around wildfire resilience. **PMM WILD-1:** Implementing agencies shall consider the following mitigation measures to reduce wildfire risk, as applicable and feasible: ● Structures proposed in high-fire-hazard areas shall be designed and constructed in accordance with applicable State and federal fire safety standards to improve survivability and allow for shelter-in-place, where appropriate. ● During project design, improvements to roadway access and circulation shall be considered to support emergency response and safe evacuation. ● During project design, defensible space requirements shall be incorporated to reduce flammable vegetation, debris, and combustible materials near structures. ● Fire protection features, such as exterior sprinkler systems with independent water sources, shall be incorporated during project design. ● Where feasible, distributed energy resources (e.g., solar with battery storage) shall be incorporated during project design to reduce reliance on overhead electrical infrastructure. ● Project design shall comply with any existing fire protection plans in high-fire-hazard areas. ● Fire-resistant features shall be incorporated into the design of development project proposed in fire-prone areas, including ember-resistant vents and fire-resistant roofing materials.	Significant and Unavoidable
Threshold 4.18.3: Implementation of future transportation improvements and land use development projects facilitated by the proposed project could require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or result in temporary or ongoing environmental impacts.	Potentially Significant Impact.	Refer to **FMM WILD-1** and **PMM WILD-1.** **PMM WILD-2:** Implementing agencies shall consider the following mitigation measures to reduce fire risk related to the installation or maintenance of associated infrastructure, as applicable and feasible: ● Individual RTP/SCS projects located within Very High Fire Hazard Severity Zones or State Responsibility Areas (SRAs) shall prepare a Construction Fire Prevention Plan prior to initiation of construction. A draft copy of the plan shall be provided to the California Public Utilities Commission (CPUC) and State and local fire agencies at least 90 days before the start of any construction activities in areas designated as Very High or High Fire Hazard Severity Zones. The plan shall also include federal, State, or local agencies with jurisdiction over areas where the project is located. The final plan shall be approved by the CPUC at least 30 days prior to the initiation of construction activities. The plan shall be fully implemented throughout the construction period and include the following: ○ The purpose and applicability of the plan. ○ Responsibilities and duties. ○ Preparedness training and drills. ○ Procedures for fire reporting, response, and prevention that include: ▪ Identification of daily site-specific risk conditions ▪ The tools and equipment needed on vehicles and to be on hand at sites ▪ Reiteration of fire prevention and safety considerations during tailboard meetings ▪ Daily monitoring of the red-flag warning system with appropriate restrictions on types and levels of permissible activity ▪ Coordination procedures with federal and local fire officials ▪ Crew training, including fire safety practices and restrictions ▪ Method(s) for verifying that all plan protocols and requirements are being followed ○ A project Fire Marshal or similar qualified position shall be established to enforce all provisions of the Construction Fire Prevention Plan as well as to perform other duties related to fire detection, prevention, and suppression for the project. Construction activities shall be monitored to ensure implementation and effectiveness of the plan.	Significant and Unavoidable
Threshold 4.18.4: Implementation of the proposed project could expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.	Potentially Significant Impact.	Refer to **PMMs WILD-1** and **WILD-2.**	Significant and Unavoidable

Table 1.A: Summary of Project Impacts, Mitigation Measures, and Level of Significance after Mitigation

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
Cumulative Wildfire Impact: The proposed project, in combination with past, present, and reasonably foreseeable projects, would not contribute to a significant cumulative impact with respect to wildfires.	Potentially Significant Impact.	Refer to **FMM WILD-1, PMM WILD-1,** and **PMM WILD-2.**	Significant and Unavoidable

Source: LSA 2026.
FMM= Fresno COG Mitigation Measure
PMM= Project-Specific Mitigation Measure

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2.0 INTRODUCTION

This Program Environmental Impact Report (PEIR) has been prepared to evaluate environmental impacts associated with implementation of the proposed 2026 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (proposed project) in Fresno County, California. The Fresno Council of Governments (COG) is the "public agency which has the principal responsibility for carrying out or approving the project" and, as such, is the "Lead Agency" for the proposed project under the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Section 21000 et seq.). CEQA requires the Lead Agency to consider the information contained in an Environmental Impact Report (EIR) prior to taking any discretionary action on the proposed project. This PEIR is intended to serve as an informational document to be considered by the Fresno COG and any Responsible Agencies during deliberations on the proposed project. *State CEQA Guidelines* Section 21069 defines a "Responsible Agency" as a public agency other than the Lead Agency that has responsibility for carrying out or approving a project. The approvals and permits associated with the proposed project are described in Chapter 3.0, Project Description.

The Fresno COG, as Lead Agency, determined that the proposed project may have a significant effect on the environment and that an EIR would be required to more fully evaluate potential adverse environmental impacts that may result from implementation of the proposed project. Specifically, given the programmatic nature of the proposed project, a PEIR was determined to be the appropriate approach for evaluating the proposed project under CEQA. As a result, this PEIR has been prepared in accordance with CEQA and the *State CEQA Guidelines* (California Code of Regulations [CCR], Title 14, Section 15000 et seq.).

2.1 REGULATORY BACKGROUND

The proposed project, as defined under PRC Section 21065, is the preparation and adoption of the 2026 update to the Fresno COG's RTP/SCS. The Fresno COG's current RTP/SCS was prepared in 2022 and was approved by the Fresno COG Policy Board on July 28, 2022 (herein referred to as "2022 RTP/SCS").

The RTP/SCS is a long-range comprehensive plan for the Fresno COG region's multi-modal transportation system. The Fresno COG, as the federally designated Metropolitan Planning Organization (MPO) and State-designated Regional Transportation Planning Agency (RTPA) for the Fresno COG Region, is responsible for updating its RTP/SCS every 4 years in accordance with the following federal and State planning mandates:

- California Government Code Section 65080 et seq., which requires each transportation-planning agency in urban areas to adopt and submit an updated RTP to the California Transportation Commission (CTC) and the California Department of Transportation (Caltrans) every 4 years.

- Federal surface transportation legislation, including:

- The Bipartisan Infrastructure Law (BIL), which requires each MPO to use at least 2.5 percent of its Metropolitan Planning (PL) funds on specified planning activities to increase safe and accessible travel options for people of all ages and abilities.
- Moving Ahead for Progress in the 21st Century Act (MAP-21), which introduced new federal requirements for RTPs, including performance measures.
- Fixing America's Surface Transportation Act (FAST Act), which requires that MPOs prepare long-range RTPs and update them every 4 years if they are in areas designated as "nonattainment" or "maintenance" for federal air quality standards.

- 40 CFR Parts 51 and 93, which require that each new RTP and Transportation Improvement Program (TIP) be demonstrated to conform to the State Implementation Plan (SIP) before the RTP and TIP are approved by the MPO or accepted by the United States Department of Transportation (USDOT).
- Greenhouse gas (GHG) emissions reduction mandates established under the following:
  - Assembly Bill (AB) 32 (the California Global Warming Solutions Act of 2006), which established mechanisms to achieve quantifiable reductions in GHG emissions and established a cap on statewide GHG emissions.
  - Senate Bill (SB) 375 (the Sustainable Communities and Climate Protection Act of 2008), which requires each transportation-planning agency in urban areas to adopt and submit an updated RTP to the CTC and Caltrans every 4 years.
- The Clean Air Act Amendments of 1990, which require states to improve coordination between transportation and air quality planning by requiring that local and State plans in nonattainment areas be consistent with, or conform to, the SIPs for clean air. The financially constrained projects listed in the proposed RTP have been analyzed to ensure that their implementation will contribute to the attainment of improved air quality consistent with adopted SIPs.

2.1.1 Role of the Fresno COG

The Fresno COG is a federally designated MPO under 23 United States Code (USC) 134(d)(1) for the Fresno COG Region. The Fresno COG is designated under California State law as a COG and an RTPA for the Fresno COG Region. The Fresno COG was established in 1969 as a voluntary association of local governments and agencies (including the Fresno COG Region and the 15 incorporated cities in the region) through a Joint Powers Agreement.[1]

The Fresno COG itself does not have any land use authority. That right is held by the local agencies that make up the membership of the Fresno COG Policy Board, which includes the County of Fresno (County) and the 15 incorporated cities within the Fresno COG Region (Clovis, Coalinga, Firebaugh, Fowler, Fresno, Huron, Kerman, Kingsburg, Mendota, Orange Cove, Parlier, Reedley, San Joaquin,

[1] Fresno Council of Governments. n.d. About Fresno COG. Website: https://www.fresnocog.org/about-cog/ (accessed November 20, 2025).

Sanger, and Selma) and are commonly referred to as the Fresno COG's member agencies. The Policy Board receives assistance from the Policy Advisory Committee (PAC), comprising each member agency's city managers and the County's Chief Administrative Officer. The Transportation Technical Committee is another standing committee that provides recommendations to the PAC and the Policy Board. It consists of expert staff from member agencies, citizen and interest groups, and other stakeholders.

MPOs are required to adopt an RTP and update it every 4 years if the region is to receive federal and State transportation dollars for public transit, streets/roads, and bicycle and pedestrian improvements, and is in a "non-attainment" or "maintenance" area defined by the federal Clean Air Act. Further, as previously stated, SB 375 requires MPOs to include an SCS element as part of their RTP updates, with the purpose of identifying policies and strategies to reduce per-capita passenger vehicle-generated GHG emissions.

2.1.2 Role of Implementing Agencies

The Fresno COG works in partnership with its member agencies, Caltrans, and other agencies with land use authority to plan the future transportation system, taking into consideration future growth estimates and potential development and land use patterns outlined in each of the adopted or draft general plans prepared by the local governments. Throughout this Draft PEIR, the term "implementing agency" is used to refer to the Fresno COG's partnership agencies that have land use authority and/or legal standing to plan, design, implement, build, operate and maintain transportation infrastructure, including those projects referred to in the RTP/SCS.

The Fresno COG's member agencies implement the transportation improvement projects and approve future land use developments reflected in the 2026 RTP/SCS. Caltrans, as the owner/operator of the State highway system, will also have a role in implementing transportation improvement projects throughout the Fresno COG Region. It will be these and other implementing agencies that will plan for, approve, design, construct, and implement the transportation improvement projects referenced in the RTP/SCS. The member agencies will also plan for, review, and approve the individual land use developments proposed within their individual jurisdictions through the plan's horizon year of 2049.

This Draft PEIR is considered the first-tier CEQA document for future second-tier CEQA documents (commonly referred to as project-level analysis) reflective of the various transportation improvement projects and future land use development projects represented in the 2026 RTP/SCS. The SCS only shows how future growth and development would be allocated to planned growth areas consistent with the general plans of the Fresno COG member agencies together with the planned transportation system. As growth and development occurs, the cities and the County, rather than the Fresno COG, will be responsible for reviewing and approving development proposals and determining their consistency with their plans, programs, and policies.

2.1.3 Relevant Plans and Programs

The RTP/SCS is a planning guide containing transportation policies and projects through the plan's horizon year of 2049. The RTP/SCS includes programs and policies for transportation management and finance as well as planned transit, bicycle and pedestrian, roadway, passenger rail, freight, and

airport facilities. The primary use of the RTP is a regional long-range plan for transportation projects in the region. It also serves as a comprehensive, coordinated transportation plan for all governmental jurisdictions in the region. Many entities have different transportation implementation responsibilities under the RTP, including Caltrans, the transit operators, and the Fresno COG member agencies. The RTP provides a clear vision of regional transportation goals, policies, objectives, and strategies. Specifically, consistent with the CTC's *2024 Regional Transportation Plan Guidelines for Metropolitan Planning Organizations*,[2] the proposed 2026 RTP/SCS has been developed to address the following:

- Assessment of current modes of transportation and the potential of new travel options within the region.
- Forecast of future travel demand based on population, household and employment growth projections for the Fresno COG Region through the year 2049.
- Identification and documentation of specific actions necessary to address the region's mobility and accessibility needs.
- Identification of guidance and documentation of public policy decisions by local, regional, State, and federal officials regarding transportation expenditures and financing.
- Identification of needed transportation improvements.
- Promotion of consistency between the California Transportation Plan, the RTP, and other transportation plans developed by cities, neighboring counties, districts, private organizations, Tribal governments, and State and federal agencies in responding to statewide and interregional transportation issues and needs.
- Providing a forum for participation and cooperation and facilitating partnerships that reconcile transportation issues which transcend regional boundaries.
- Involvement of federal, State, and local agencies, as well as community groups and the general public, in the transportation planning process so as to include them in discussions and decisions on the social, economic, air quality, and environmental issues related to transportation.

Further, the proposed 2026 RTP/SCS addresses the effects of planned growth and development on the existing and planned transportation system. Accordingly, the Fresno COG's 2026 RTP/SCS establishes 2023 as the base year and 2049 as the horizon year for all modeling and analysis conducted under the 2026 RTP/SCS. The resulting analysis documents multimodal transportation system conditions under both the base year (2023) and horizon year (2049) scenarios. As such, modes studied under this analysis include highways and arterials, public transit, nonmotorized systems, passenger

[2] California Transportation Commission (CTC). 2024. *2024 Regional Transportation Plan Guidelines for Metropolitan Planning Organizations.* January 26. Website: https://catc.ca.gov/-/media/ctc-media/documents/programs/transportation-planning/adopted-2024-rtp-guidelines-for-mpos.pdf (accessed March 4, 2026).

and freight rail, and aviation. The analysis conducted as part of this PEIR considers the effects of projects and strategies outlined in the proposed 2026 RTP/SCS.

2.2 PURPOSE AND TYPE OF PEIR/USES OF THE PEIR

2.2.1 PEIR Intent

This PEIR has been prepared to evaluate potential environmental impacts that could result from implementation of the proposed project. As the Lead Agency, the Fresno COG has the principal responsibility for approving the proposed project. In that capacity, the Fresno COG has decided to prepare this PEIR and, after the public review process, will decide whether to certify the Final PEIR.

This PEIR has been prepared because the Fresno COG cannot know all the details or have all the information it would need regarding each and every transportation improvement project identified in the RTP/SCS, or the detailed information regarding the specific type of future land use development that will occur in each local jurisdiction between 2023 (base year), 2026 (current year), and 2049 (horizon year). The design of each transportation improvement project and land use development project, as well as their funding, are unknown. In addition, the specific impacts to resources will vary widely by project. As such, this Draft PEIR presents a regional review and analysis of impacts associated with implementation of the proposed project and identifies feasible mitigation and alternatives for any identified potentially significant impacts.

The Fresno COG's role as the MPO/RTPA for the Fresno COG Region is to prepare a long-range RTP/SCS that reflects consistency with federal and State mandates, including SB 375. It will be the implementing agency that approves, designs, and implements the transportation improvement and land use development projects referenced in the RTP/SCS and that will approve the individual land use developments proposed over the duration of the planning period that tier from this PEIR (refer to Section 3.3.3 regarding tiering under CEQA).

2.2.2 PEIR Requirements

Section 15168 of the *State CEQA Guidelines* establishes the framework for preparing a PEIR. According to Section 15168(a), a PEIR may be appropriate when the actions are related by one or more of the following criteria:

- They are geographically related;
- They are logical parts in the chain of contemplated actions;
- They are connected as rules, regulations, plans, or other general criteria to govern the conduct of a continuing program; or
- They are individual activities carried out under the same statutory or regulatory authority and are expected to result in similar types of environmental effects, which can be mitigated in similar ways.

A PEIR allows a lead agency to evaluate broad policy alternatives, identify program-wide environmental impacts, and identify cumulative effects early in project development, providing the agency flexibility to shape the program in response to potential concerns. In doing so, the PEIR provides a foundation or subsequent environmental review of individual projects carried out under the larger program (also termed tiering).

The advantages of a PEIR, as stated in *State CEQA Guidelines* Section 15168(b), include the ability to:

- Provide a more exhaustive consideration of cumulative effects, policy alternatives, and mitigation strategies than would be practical in a project-level EIR;
- Streamline future project-level environmental reviews by avoiding duplicative analysis of overarching issues, allowing reviews to focus on site-specific impacts not previously assessed; and
- Support the incorporation of program-level mitigation measures into future project-specific activities;

State CEQA Guidelines Section 15168(c) provides direction for evaluating subsequent activities within the program:

- Agencies must evaluate whether the environmental impacts of a later activity were adequately addressed in the PEIR. If not, a new Initial Study (IS) must be prepared to determine the appropriate level of environmental review (e.g., Negative Declaration [ND], Mitigated Negative Declaration [MND], or EIR);
- If the proposed activity falls within the scope of the PEIR and would not result in new significant impacts or require new mitigation measures, no new environmental document would be required, pursuant to *CEQA Guidelines* Section 15162;
- Agencies are required to incorporate applicable and feasible mitigation measures and alternatives identified in the PEIR into future activities[3] under the program;
- For activities with site-specific considerations, a written checklist or similar tool should be used to document whether those environmental effects were considered in the PEIR.

An effective PEIR evaluates the program as specifically and comprehensively as possible, thereby facilitating a streamlined review of subsequent actions. When applicable, the PEIR can also simplify the task of preparing environmental documents for later program actions as follows:

- Provide the basis for a later IS to determine if additional CEQA review is necessary;
- Be incorporated by reference to address regional, cumulative, and indirect impacts; and

[3] For the purposes of this analysis, future "activities" facilitated by the proposed project are expected to be limited to transportation improvement projects and land use development projects proposed by implementing agencies.

- Narrow the focus of future EIRs to new, project-specific effects not previously analyzed.

2.2.3 Subsequent CEQA Review

As a PEIR, this document is prepared for an agency program or series of actions that can be characterized as one large project. This Draft PEIR was prepared as a "tiered" document. The tiering concept is a multi-level approach to streamline subsequent environmental reviews. Typically, such a project involves actions that are closely related geographically and are logical parts of a chain of contemplated events, rules, regulations, or plans that govern the conduct of a continuing program with generally similar environmental effects and mitigation measures. The first-tier PEIR is an analysis of general matters (i.e., in this case, projects contained in the RTP/SCS and related impacts) and is limited to a description of those impacts and mitigation measures related to project implementation without being highly speculative.

Second-tier environmental reviews focus on the impacts of individual improvement projects that implement the plan, program, or policy. Subsequent activities within the program must be evaluated to determine whether a subsequent CEQA document needs to be prepared to "incorporate by reference" the general discussions from the broader first-tier EIR. When subsequent activities involve site-specific issues, the Lead Agency should use a written checklist to document its determination that:

- Environmental effects of the subsequent project were covered in the PEIR and found to be within the scope of the PEIR; no additional environmental review is required.

- A subsequent activity would have effects not within the scope of the PEIR. The Lead Agency must prepare a new IS leading to either an ND, MND, or EIR.

Implementing agencies, as the lead agencies under CEQA for future projects facilitated by the RTP/SCS, will prepare the second-tier, or project-level, environmental documents for the individual transportation improvement projects and future land use developments included in or consistent with the 2026 RTP/SCS. According to *State CEQA Guidelines* Section 15161, a project-level EIR is the most common EIR type and examines the environmental impacts of a specific improvement project or development project. This type of EIR would focus primarily on the changes in the environment that would result from the project and examine all phases of the project, including planning, construction, and operation.

Project-level environmental documents will incorporate, by reference, the appropriate information from this Draft PEIR regarding secondary effects, cumulative impacts, project alternatives, and other relevant factors. If the lead agency for implementation of a later activity finds that the activity would have no new effects and that no new mitigation measures would be required, then the activity would not require additional CEQA review pursuant to *CEQA Guidelines* Section 15162. Where subsequent environmental review is required, such review would focus on significant effects specific to the project, or its site, that have not been considered in this Draft PEIR.

It is anticipated Fresno COG, the Fresno COG Region, the cities, the transit agencies, Caltrans, and other responsible and trustee agencies will use this PEIR for:

- RTP updates
- TIPs
- Grants and other funding-source projects
- Project Study Reports
- Design Studies
- Corridor Studies
- Transit Plans and Studies
- Nonmotorized Plans and Studies
- Aviation Plans and Studies
- Passenger and Freight Rail Plans and Studies
- Other plans and studies, including those for TDM and Intelligent Transportation System (ITS) Improvement Projects
- General Plan Amendments
- Review of transportation and land use development projects
- Capital Improvement Program budgeting and project priorities
- Encroachment Permits

The following responsible and trustee agencies may use this PEIR for potential permits/actions:

- **California Department of Fish and Wildlife (CDFW):** Improvement projects involving Lake or Streambed Alteration Agreements and the California Endangered Species Act (CESA).

- **Caltrans:** Local Assistance Projects, TIP projects, and development permits/encroachment permits on State highways.

- **Member Agency Cities:** Regional transportation planning, Capital Improvement Program budgeting and project priorities, review of transportation and land use development projects, General Plan Amendments, and encroachment permits.

- **County of Fresno (Board of Supervisors, Planning Commission, Airport Land Use Commission, and County staff):** Regional transportation planning, Capital Improvement Program budgeting and project priorities, review of transportation and land use development projects, General Plan Amendments, and encroachment permits.

- **Local Water Departments, Districts, and Regional Irrigation Districts/Companies:** Improvement projects involving waterway crossings, channel re-alignments, piping, etc.

- **San Joaquin Valley Air Pollution Control District (SJVAPCD):** Air quality attainment plan consistency and air quality mitigation measures for improvement projects.

- **Fresno COG:** Development of the RTIP and other regional transportation planning documents, tracking of progress in implementing RTP/SCS strategies, and monitoring of progress made by other entities.

- **Fresno County Transportation Authority:** Development and implementation of the Expenditure Plan.

- **School Districts:** Improvement projects adjacent to or in the vicinity of public schools.

- **Federal Agencies Such As the Federal Highway Administration, Federal Transit Agency, United States Fish and Wildlife Service, Department of Housing and Urban Development (Community Development Block Grant program), etc.:** RTP and funding review and subsequent improvement projects funding and Endangered Species Act.

- **Economic Development Commission**: Strategic Plan development, and identification of infrastructure and road improvements.

Note that transportation projects with a federal nexus (such as the use of federal funds, right-of-way, permits, and/or leases) must comply with the National Environmental Policy Act (NEPA). Since the proposed 2026 RTP/SCS includes transportation improvements that may involve a federal nexus, the requirement for environmental review under NEPA as set forth in 40 CFR Section 1502.13 may be triggered at the time that project-level design is initiated.

2.2.4 Streamlining Process

Under SB 375, general consistency with a California Air Resources Board (CARB) approved SCS allows projects to qualify for two categories of CEQA streamlining. As described in *State CEQA Guidelines* Section 15183.3(c), streamlining under CEQA can range from a complete exemption (i.e., no further environmental analysis is required) to an obligation to prepare a narrowed, project-specific environmental document.

1. **Projects Consistent with the SCS or APS.** A residential or mixed-use project consistent with the density and policies in an SCS is not required to discuss (1) growth-inducing impacts; or (2) project-specific or cumulative impacts from cars and light-duty truck trips on global warming or the regional transportation network if the project incorporates the mitigation measures required by an applicable prior environmental document (PRC Section 21159.28, subd. (a) and (b); California Government Code Section 65080, subd. (b)(2)(l)).

2. **Three Types of Streamlining for Transit Priority Projects.** A "transit priority project" (TPP), as defined under SB 375, must meet three requirements: (1) contain at least 50 percent residential use; (2) have a minimum net density of 20 units per acre; and (3) be located within 0.5 mile of a major transit stop or high-quality transit corridor included in an RTP (PRC Section 21155, subd. (b)).

A TPP is exempt from CEQA if it is not more than 200 units on not more than 8 acres; can be served by existing utilities; does not affect historical resources; has buildings 15 percent more energy efficient than required and is designed to achieve 25 percent less water usage; and provides either a minimum of 5 acres/1,000 residents of open space, or housing for moderate-, low-, or very low-income residents (PRC Section 21155.2, subd. (b)). A TPP that does not qualify for an exemption may qualify for a Sustainable Community Environmental Assessment (SCEA) if the project incorporates mitigation

measures, performance standards, or criteria from prior applicable environmental impact reports. An SCEA is similar to an ND under CEQA.

SB 375 also authorizes the adoption of specific traffic mitigation measures that apply to TPPs to include requirements for traffic control improvements, street or road improvements, transit passes, or other measures that will mitigate the traffic impacts of TPPs. A TPP does not need to comply with any additional mitigation measures for the traffic impacts of that project if traffic mitigation measures have been adopted. However, it is widely believed that very few development projects in the Fresno COG Region could qualify as TPPs, at least in the near future. TPPs are designed for more urban locations with higher development concentrations, such as the Bay Area and the Southern California region. Local jurisdictions maintain the discretion and will be solely responsible for determining the consistency of any future project with the SCS. Fresno COG staff may provide a lead agency with readily available data and documentation to help support its finding upon request.

2.2.5 Criteria for Significance

Significant impacts are defined as a "substantial or potentially substantial, adverse change in the environment" per PRC Section 21068. The PEIR must identify significant impacts that would be expected to result from implementation of the 2026 RTP/SCS. *State CEQA Guidelines* Section 15126.2(a) requires that significant impacts be determined by applying significance criteria to compare the future plan conditions to the existing environmental setting. The existing setting and the criteria for determining significance for each environmental resource issue are described in detail in Chapter 4.0 of this PEIR and represent the most recent, reliable, and representative data to describe current regional conditions. *State CEQA Guidelines* Section 15125 provides that the existing physical conditions at the time the Notice of Preparation (NOP) is published will "normally" constitute the baseline; the PEIR baseline is the base year used in the proposed 2026 RTP/SCS (2023).

CEQA gives the lead agency the responsibility to determine whether an adverse environmental effect identified in an EIR should be classified as "significant" or "less than significant" pursuant to *State CEQA Guidelines* Section 15064(b). Furthermore, "the significance of an activity may vary with the setting," and as a result, an inflexible definition of what constitutes a significant effect is not always possible. The lead agency has discretion to set its own significance criteria, which requires the lead agency to make a policy judgment about how to distinguish impacts that are adverse but significant from impacts that are adverse but not significant.[4] A lead agency may select a standard of significance based on its judgment about an appropriate standard of significance.[5] The standards of significance used in an EIR may also rely upon policies adopted and implemented by the lead agency.[6]

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4 *Eureka Citizens for Responsible Gov't v City of Eureka* (2007) 147 Cal.App.4th 357 Website: https://www.cacities.org/Resources-Documents/Member-Engagement/Professional-Departments/City-Attorneys/Library/2014/2014-Spring-Conf/5-2014-Spring-Sarah-Owsowitz-Existence-and-Scope-o (accessed May 2025).

5 *Sierra Club v. City of Orange* (2008) 163 Cal.App.4th 523, 541 Website: https://www.cacities.org/Resources-Documents/Member-Engagement/Professional-Departments/City-Attorneys/Library/2008/LAC-Litigation-Report-10-17-08 (accessed May 2025).

6 *Mira Mar Mobile Community v. City of Oceanside* (2004) 119 Cal.App.4th 477). Website: https://caselaw.findlaw.com/court/ca-court-of-appeal/1009867.html (accessed May 2025).

2.3 PUBLIC REVIEW PROCESS

In compliance with CEQA and the *State CEQA Guidelines,* the Fresno COG has taken steps to promote opportunities for the public and other public agencies to participate in the environmental review process. The Fresno COG conducted the scoping process and held a public scoping meeting, issued an NOP for the proposed project, and determined that a PEIR was required to evaluate the potentially significant environmental effects resulting from implementation of the proposed project. Further, this Draft PEIR is subject to public review and comment. These topics related to the environmental review process are described in further detail below.

2.3.1 Notice of Preparation

The Fresno COG, as the lead agency under CEQA, issued an NOP for the PEIR on May 13, 2025. The NOP was distributed via the State Clearinghouse (SCH). (No. 2025050609). In accordance with the *State CEQA Guidelines,* Section 15082, the NOP was circulated to responsible agencies and individuals for a period of 30 days, during which time written comments were solicited pertaining to environmental issues and topics that the PEIR should evaluate. The NOP comment period ended on June 12, 2025. Appendix A includes copies of written comments received in response to the NOP. Responses to the NOP were received from the following agencies:

- SJVAPCD
- CDFW
- Native American Heritage Commission (NAHC)
- Center for Biological Diversity (CBD)

2.3.2 Scoping Meeting

The Fresno COG held a hybrid public scoping meeting (in-person at the Sequoia Room of the Fresno COG Offices at 2035 Tulare Street, Suite 201, Fresno, California, and online via Zoom) on May 28, 2025, to present the proposed project and solicit input from interested parties regarding environmental issues that should be addressed in this PEIR. No environmental issues or concerns were raised at the scoping meeting.

2.3.3 Areas of Controversy

Issues and concerns raised in response to the NOP or at the scoping meeting included:

- Comments from SJVAPCD regarding the following were received: transportation, land use planning, AB 617 compliance, project-related emissions, health impacts to surrounding receptors, ambient air quality analysis, Voluntary Emission Reduction Agreement (VERA), truck routing, vegetative barriers, on-site solar deployment, electric infrastructure, locomotive fleet transition, and applicable rules and regulations.

- Comments from CDFW regarding the following were received: special-status species, botanical surveys, CESA compliance, the California Natural Diversity Database (CNDDB), alternatives analysis, cumulative analysis, federally listed species, lake and streambed alteration, nesting birds, and filing fees.

- Comments from NAHC regarding the following were received: AB 52 compliance and Native American consultation procedures.

This is not an exhaustive list of areas of controversy, but rather key issues that were raised during the scoping process. This PEIR addresses each of these areas of concern or controversy in detail, examines project-related and cumulative environmental impacts, identifies significant adverse environmental impacts, and proposes mitigation measures and/or alternatives designed to reduce or eliminate potentially significant impacts. Appendix A to this PEIR includes the NOP and copies of the written comment letters received in response to the NOP.

2.3.4 PEIR Public Review Period

This PEIR is being distributed to numerous public agencies and other interested parties for review and comment. This PEIR is also available at the following locations and on the Fresno COG's website for the proposed project:

Fresno Council of Governments
2035 Tulare St, Suite 201
Fresno, CA 93721

Website: https://www.fresnocog.org/project/regional-transportation-plan/

All comments received from agencies and individuals on this PEIR will be accepted during the public comment period, which will not be less than 45 days, in compliance with CEQA and the *State CEQA Guidelines.* All comments on this PEIR should be sent to the following Fresno COG contact person:

Paul Herman, Deputy Director
Fresno Council of Governments
2035 Tulare Street, Suite 201
Fresno, California 93721
Phone: (559) 233-4148
Email: pherman@fresnocog.org

Following the close of the public comment period, the Fresno COG will prepare written responses to all written comments received during the public comment period and will compile these comments and responses, together with any text changes to this PEIR, into a Final PEIR that includes all the information required pursuant to *State CEQA Guidelines* Section 15132. The Final PEIR will be provided to all public agencies that submitted comments on this PEIR at least 10 days prior to certification of the Final PEIR. The Final PEIR shall consist of the PEIR or a revision of the draft; comments and recommendations received on the PEIR either verbatim or in summary; a list of persons, organizations, and public agencies commenting on the PEIR; the response of the Fresno COG to significant environmental points raised in the review and consultation process and in comments submitted on the Draft PEIR; and any other information added by the Fresno COG.

The Fresno COG will make findings regarding the extent and nature of the impacts as presented in the Final PEIR. The Final PEIR must be certified as complete by the Fresno COG prior to making a decision

on the proposed project. Public input is encouraged at all public hearings regarding the proposed project.

2.4 SCOPE OF THIS PEIR

As required by *State CEQA Guidelines* Section 15128, this PEIR must identify the effects of the proposed project that are determined to be significant. Consistent with Appendix G (Environmental Checklist Form) to the *State CEQA Guidelines*, the environmental topics addressed in this PEIR include aesthetics, agricultural resources, air quality, biological resources, cultural resources, energy, geology and soils, GHG emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation, tribal cultural resources, utilities and service system, and wildfire.

2.5 FORMAT OF THE PEIR

This PEIR contains the information and analysis required by CEQA and the *State CEQA Guidelines*, including Sections 15122–15131, and is generally organized as follows:

- **Chapter 1.0: Executive Summary.** Chapter 1.0 contains the Executive Summary of this PEIR, which introduces the proposed project and its alternatives, lists all significant project impacts, feasible mitigation measures that have been recommended to reduce any significant impacts of the proposed project, and the level of significance of each impact following feasible mitigation. The summary is presented in a table format.

- **Chapter 2.0: Introduction.** Chapter 2.0 contains a discussion of the purpose and intended use of this PEIR.

- **Chapter 3.0: Project Description.** Chapter 3.0 includes a discussion of the proposed project's geographical setting and its objectives, characteristics, components, and construction phases, as well as the anticipated discretionary and ministerial permits and approvals for the proposed project.

- **Chapter 4.0: Environmental Impact Analysis.** Chapter 4.0 includes an analysis of the proposed project's environmental impacts. It is organized into the topical sections stated above in Section 2.4.

  The environmental setting discussions describe the "existing conditions" of the environment in the Fresno COG Region as they pertain to the environmental issues being analyzed (*State CEQA Guidelines* Section 15125).

  The impact discussions identify and focus on the potentially significant environmental effects of the proposed project. The direct and indirect effects of the proposed project on the environment are identified and described, giving due consideration to both the short-term and long-term effects, as necessary (*State CEQA Guidelines* Section 15126.2[a]).

  Chapter 4.0 also includes within the analysis of each environmental topic a discussion of the cumulative effects of the proposed project when considered in combination with other projects

causing related impacts, as required by *State CEQA Guidelines* Section 15130. Cumulative impacts are based on the build out of the proposed project and the known relevant approved and proposed projects in the surrounding area.

Mitigation measures are identified, where warranted, to minimize or lessen potentially significant impacts for each significant environmental effect identified in this PEIR (*State CEQA Guidelines* Section 15126[e]). The levels of significance before and after mitigation are provided. Significant unavoidable adverse effects are identified where mitigation is not expected to reduce the effects to less than significant levels.

- **Chapter 5.0: Alternatives to the Proposed Project.** In accordance with CEQA, the alternatives discussion in Chapter 5.0 describes a reasonable range of alternatives that could feasibly attain the basic objectives of the proposed project and are capable of eliminating or substantially reducing any of the proposed project's significant unavoidable adverse environmental effects or reducing them to a less than significant level. The alternatives analyzed in Chapter 5.0 include a No Project Alternative.

- **Chapter 6.0: Other CEQA Considerations.** Chapter 6.0 contains discussions on the following topics as required by *State CEQA Guidelines* Section 15126: (1) growth-inducing impacts of the proposed project; and (2) whether there are any significant adverse environmental impacts associated with the proposed project for which either no mitigation or only partial mitigation is feasible.

- **Chapter 7.0: Mitigation Monitoring and Reporting Program (MMRP).** Chapter 7.0 contains the MMRP. As required per California PRC Section 21081.6, the MMRP will serve as the reporting and monitoring program for changes made to the project to mitigate or avoid significant effects on the environment. The reporting or monitoring program must be designed to ensure compliance during project implementation, and mitigation measures must be enforceable through permit conditions, agreements, or other measures.

- **Chapter 8.0: List of Preparers.** Chapter 8.0 provides the organizations and persons contacted during preparation of this PEIR, the PEIR preparers and technical report authors, and other experts involved in the preparation of this PEIR.

- **Chapter 9.0: References.** Chapter 9.0 provides the references used in this PEIR.

- **Appendices:** The appendices contain the NOP and comment letters on the NOP (Appendix A) and the AB 52 Consultation Record (Appendix B).

3.0 PROJECT DESCRIPTION

3.1 BACKGROUND

Consistent with Section 15124 of the *State California Environmental Quality Act (CEQA) Guidelines*, this chapter provides information regarding the proposed Fresno Council of Governments (COG) 2026 Regional Transportation Plan (RTP) and the Sustainable Communities Strategy (SCS) (proposed project). This chapter characterizes the existing setting within the region under the jurisdiction of the Fresno COG (Fresno COG Region), which is the same as the County of Fresno (County) boundary. This chapter also describes the components of the proposed 2026 RTP/SCS, lists the objectives of the proposed project, and explains the intended uses of this Draft Program Environmental Impact Report (PEIR).

This Project Description serves as the basis for the overall Draft PEIR, which provides a program-level analysis of potential environmental consequences from implementation of the proposed project. Under CEQA, a PEIR is an environmental document prepared for a series of actions that can be characterized as a single, unified program or project. This analysis discloses potential impacts to local decision makers and the public while increasing awareness and participation in the regional transportation planning process.

3.2 PROPOSED PROJECT

The proposed project, as defined under Public Resources Code (PRC) Section 21065, is the preparation and adoption of the 2026 update to the Fresno COG's RTP/SCS. The Fresno COG's current RTP/SCS was prepared in 2022 and was approved by the Fresno COG Policy Board on July 28, 2022 (herein referred to as "2022 RTP/SCS").

The RTP/SCS is a long-range comprehensive plan for the Fresno COG Region's multi-modal transportation system containing transportation policies and projects through the plan's horizon year of 2049. The RTP/SCS includes programs and policies for transportation management and finance as well as planned transit, bicycle and pedestrian, roadway, passenger rail, freight, and airport facilities. The primary use of the RTP is a regional long-range plan for transportation projects in the region. Further, as previously stated, Senate Bill (SB) 375 requires metropolitan planning organizations (MPOs) to include an SCS element as part of their RTP updates, with the purpose of identifying policies and strategies to reduce per-capita passenger vehicle-generated greenhouse gas (GHG) emissions.

The Fresno COG, as the federally designated MPO and State-designated Regional Transportation Planning Agency (RTPA) for the Fresno COG Region, is responsible for updating its RTP/SCS every 4 years in accordance with the federal and State planning mandates described in Chapter 2.0, Introduction.

3.2.1 Regional Location

The Fresno COG is one of 38 regional planning agencies in California and serves as the designated MPO for the Fresno COG Region. The Fresno COG Region encompasses all 5,963 square miles within

Fresno County, which is located in the central San Joaquin Valley approximately 120 miles south of Sacramento. As shown on Figure 3-1, the Fresno COG Region is bounded to the north by Merced and Madera counties, to the east by Mono and Inyo counties, to the south by Tulare and Kings counties, and to the west by Monterey and San Benito counties. The Fresno COG Region includes all 15 incorporated cities within the County, as listed below, as well as the unincorporated areas of the County.[1] The populations of each of the 15 incorporated cities and the unincorporated portion of the County are provided in Table 3.A, below.

Table 3.A: Fresno COG Region Population by Jurisdiction, 2025

Jurisdiction	Population
Clovis	129,121
Coalinga	17,608
Firebaugh	8,714
Fowler	7,667
Fresno	557,032
Huron	6,932
Kerman	17,535
Kingsburg	13,285
Mendota	12,710
Orange Cove	9,717
Parlier	14,649
Reedley	26,603
San Joaquin	3,654
Sanger	27,037
Selma	24,585
Unincorporated Fresno County	160,204
Total County	**1,037,053**

Source: State of California Department of Finance. 2025. Population and Housing Estimates for Cities, Counties, and the State, January 1, 2024 and 2025. May 1.

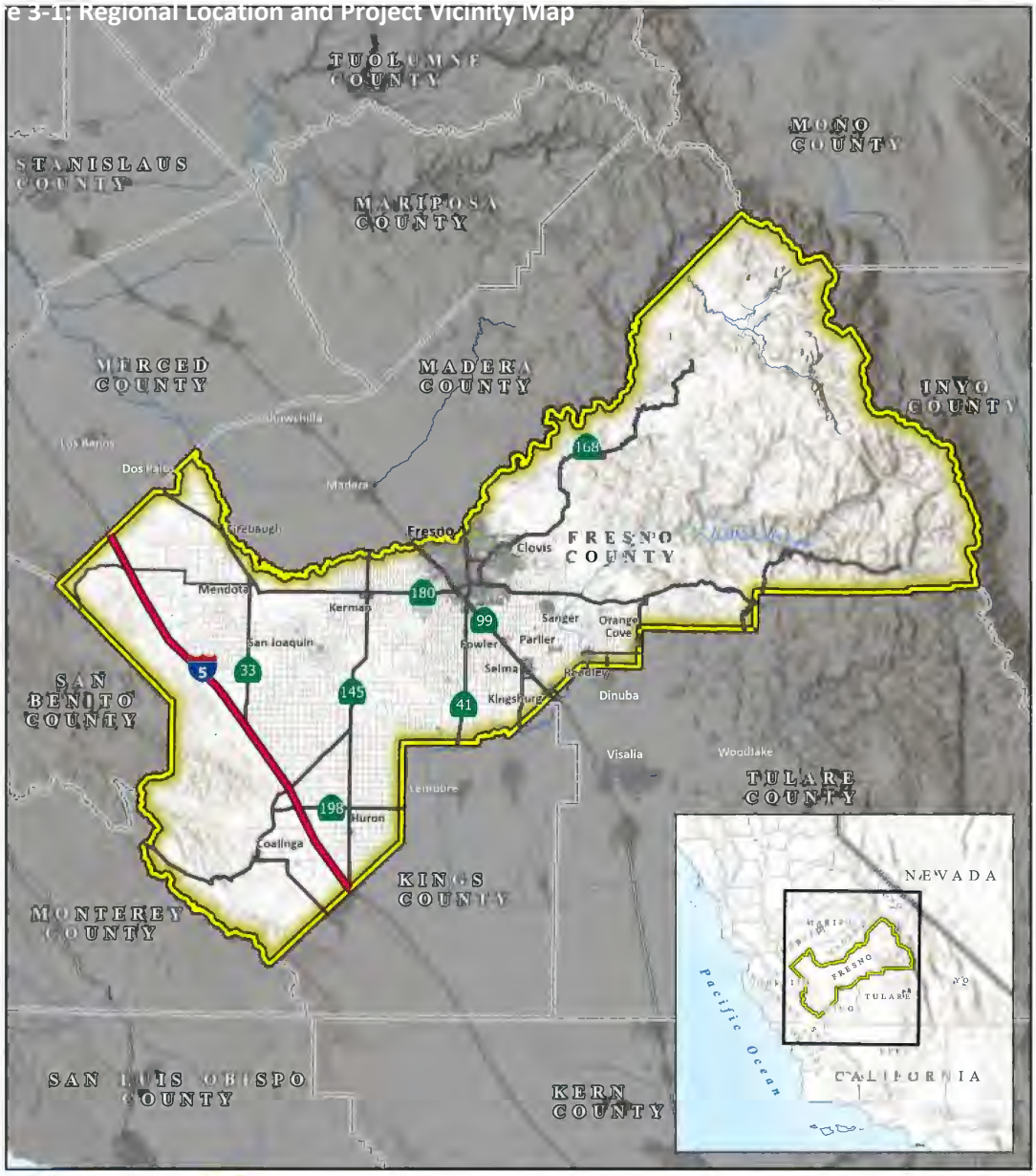
The Fresno COG's planning area also includes unincorporated areas under County jurisdiction, which comprise approximately 97 percent of the region's total land area.[2] The Fresno COG Region and all 15 incorporated cities within the region, as described above, make up the membership of the Fresno COG Policy Board and are commonly referred to as the Fresno COG's member agencies. Figure 3-2a provides an overview of all planning areas in the Fresno COG Region, while Figure 3-2b provides a view of each of the 15 incorporated cities within the region. [3]

1 State of California Department of Finance. 2025. Population and Housing Estimates for Cities, Counties, and the State, January 1, 2024 and 2025. May 1. Website: https://dof.ca.gov/media/docs/forecasting/Demographics/estimates-e1/E-1_2025_InternetVersion.xlsx (accessed November 19, 2025).

2 Ibid. Page 3-1.

3 It should be noted that the boundaries shown on Figure 3-2a and Figure 3-2b do not contain city Sphere of Influence or Urban Growth Boundary areas.

e 3-1: Regional Location and Project Vicinity Map



LSA

Fresno COG Region

FIGURE 3-1

N

0 10 20
Miles

SOURCE: Esri Terrain Basemap, USGS (2024)

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Regional Transportation Plan/Sustainable Communities Strategy
Regional Location and Project Vicinity Map

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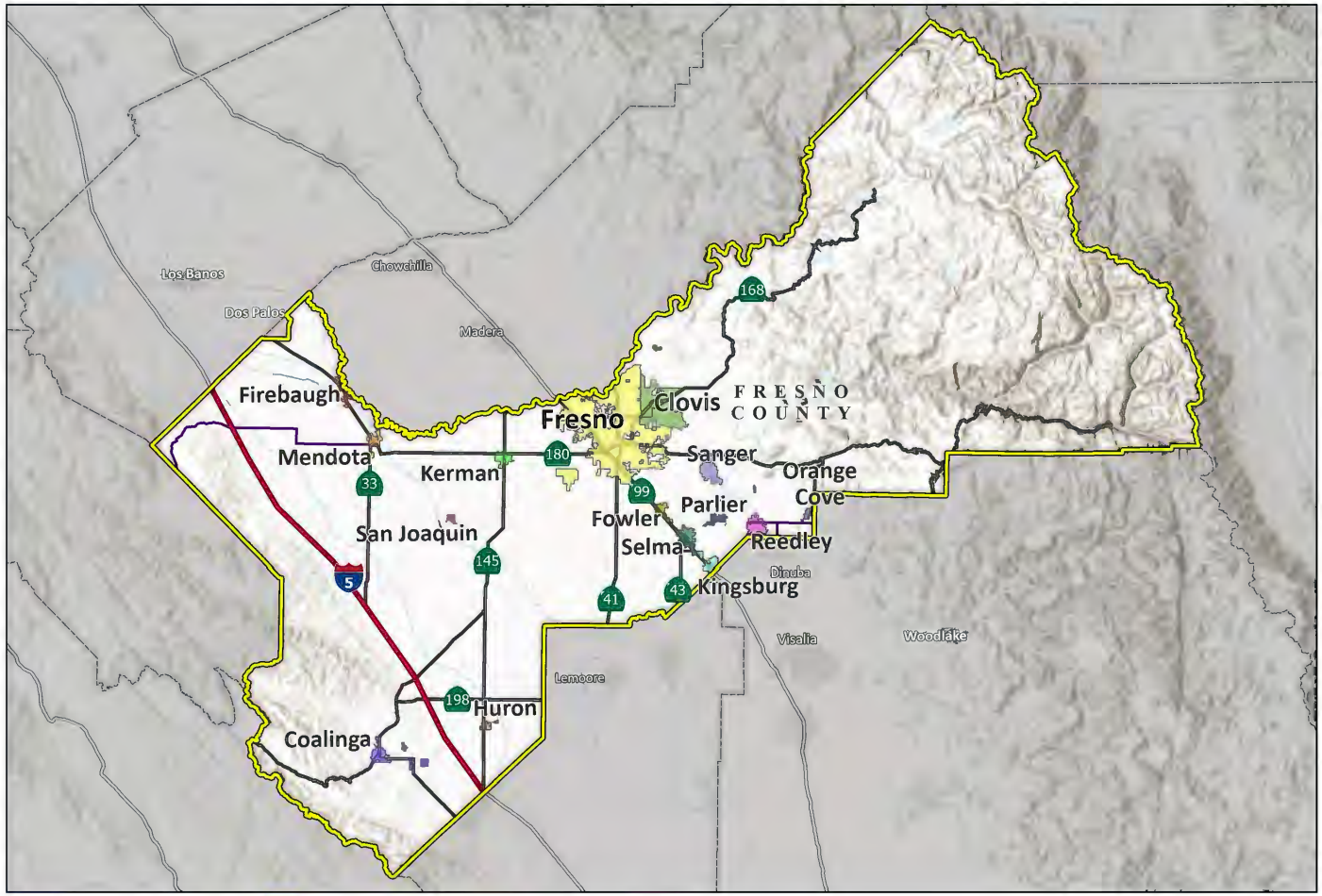
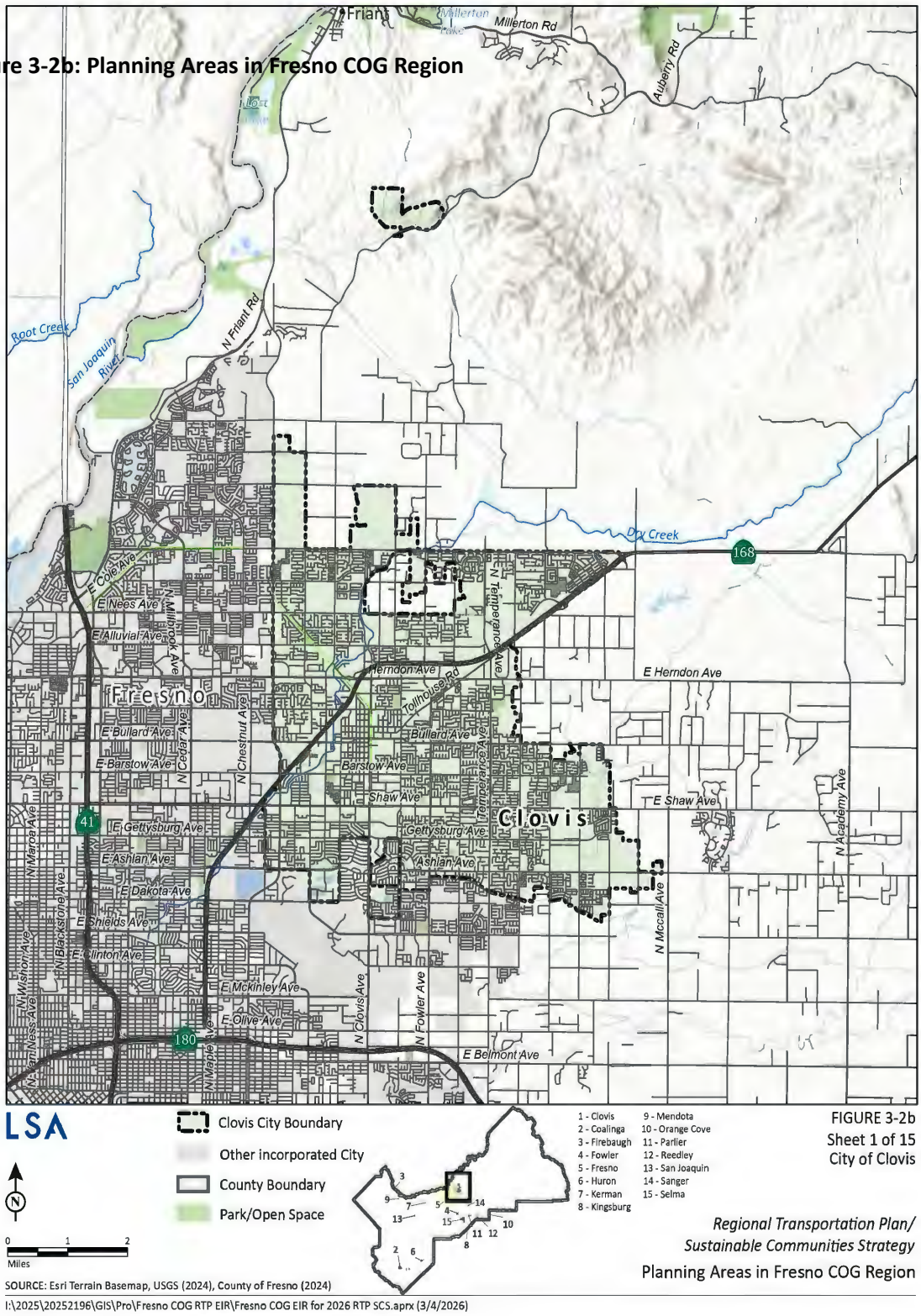


FIGURE 3-2a

Regional Transportation Plan/Sustainable Communities Strategy
COG Planning Area Overview

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Figure 3-2b: Planning Areas in Fresno COG Region



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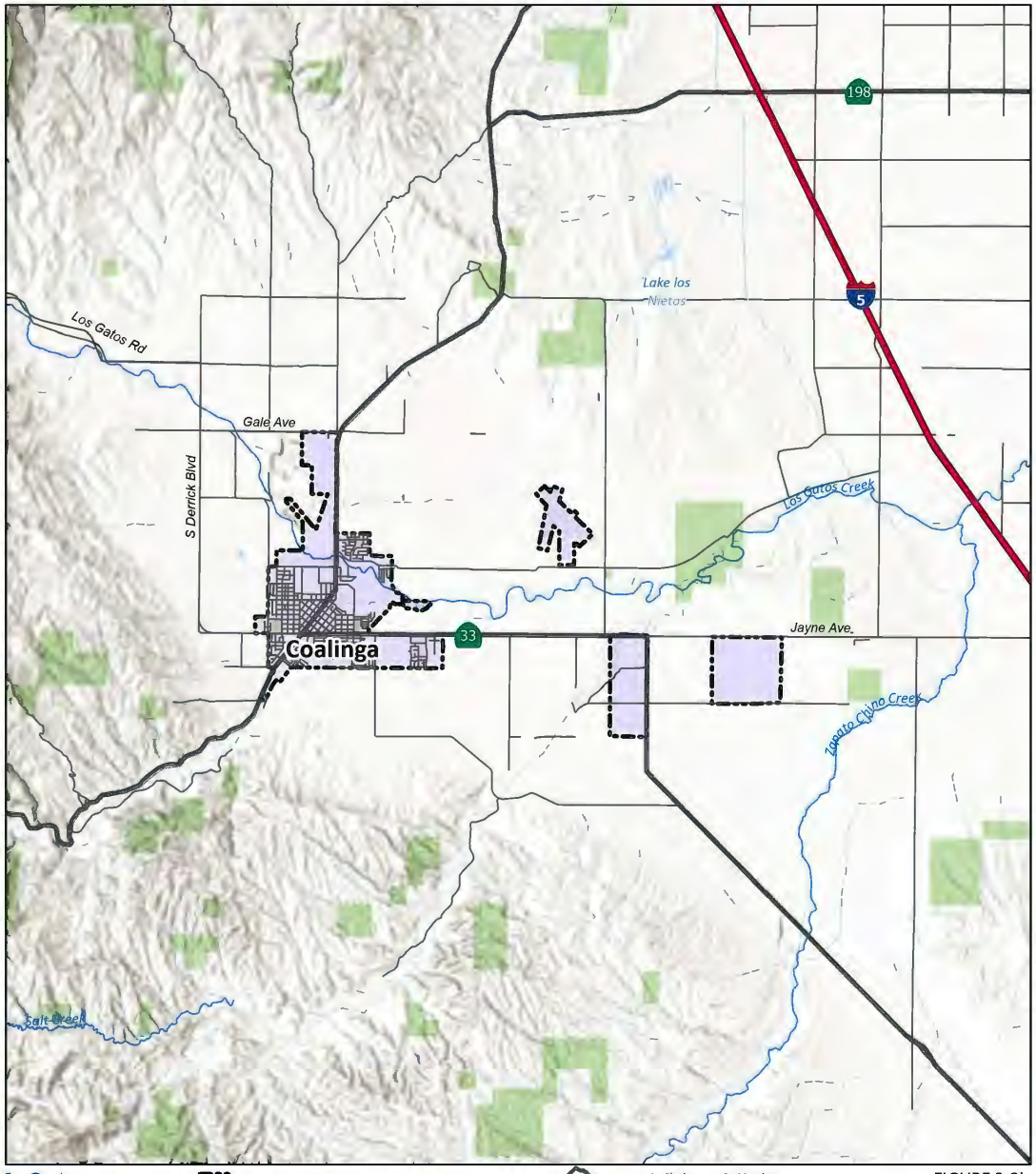
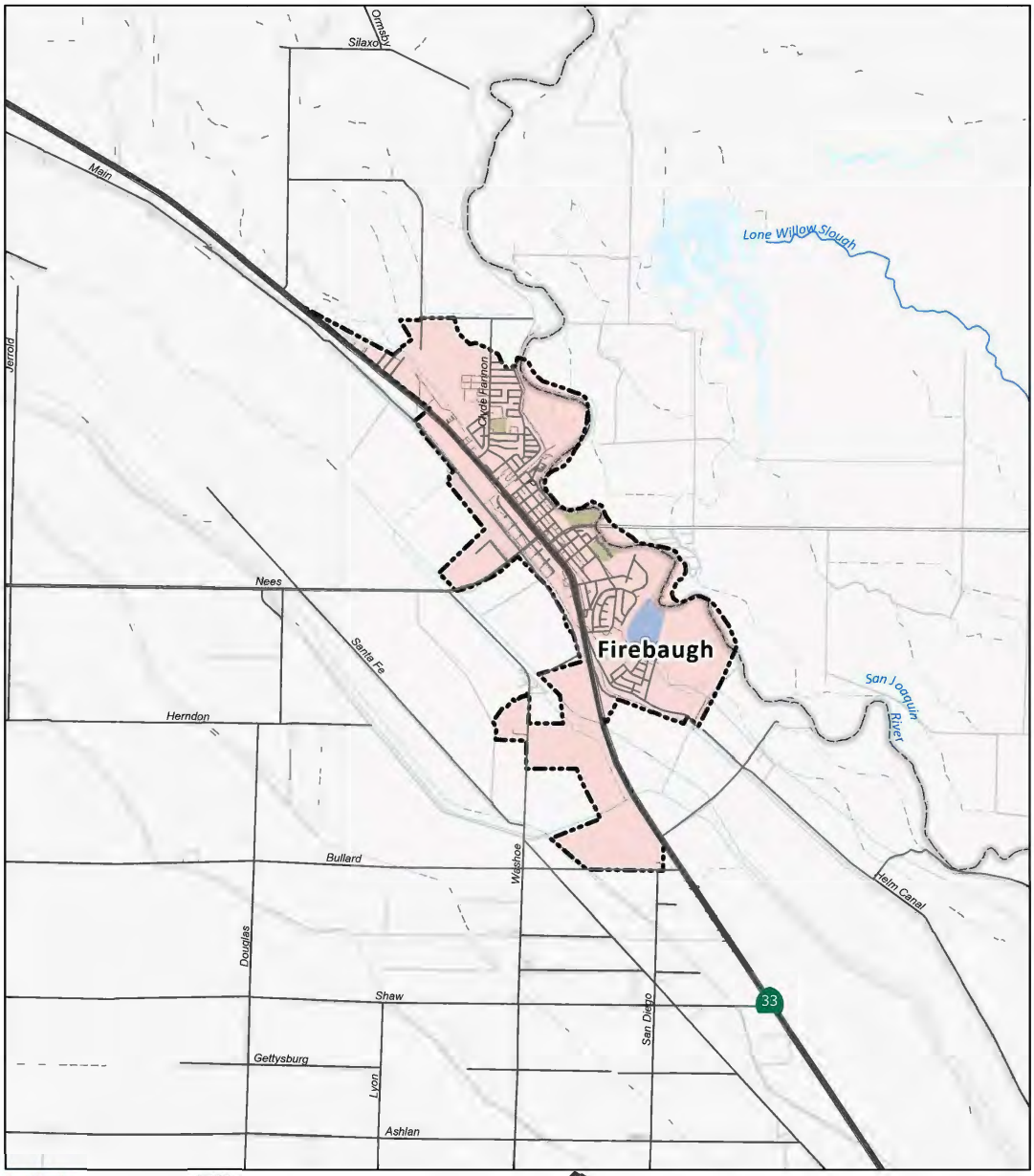


FIGURE 3-2b
Sheet 2 of 15
City of Coalinga

Regional Transportation Plan/ Sustainable Communities Strategy
Planning Areas in Fresno COG Region

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Ormsby
Silaxo
Main
Lone Willow Slough
Jerrold
Orchard Harmon
Nees
Santa Fe
Firebaugh
San Joaquin River
Herndon
Bullard
Walshoe
Helm Canal
Douglas
Shaw
33
San Diego
Gettysburg
Union
Ashlan
LSA
Firebaugh City Boundary
County Boundary
Park/Open Space
N
0
0.5
1
Miles
1 - Clovis
2 - Coalinga
3 - Firebaugh
4 - Fowler
5 - Fresno
6 - Huron
7 - Kerman
8 - Kingsburg
9 - Mendota
10 - Orange Cove
11 - Parlier
12 - Reedley
13 - San Joaquin
14 - Sanger
15 - Selma
FIGURE 3-2b
Sheet 3 of 15
City of Firebaugh
Regional Transportation Plan/
Sustainable Communities Strategy
Planning Areas in Fresno COG Region
SOURCE: Esri Terrain Basemap, USGS (2024), County of Fresno (2024)
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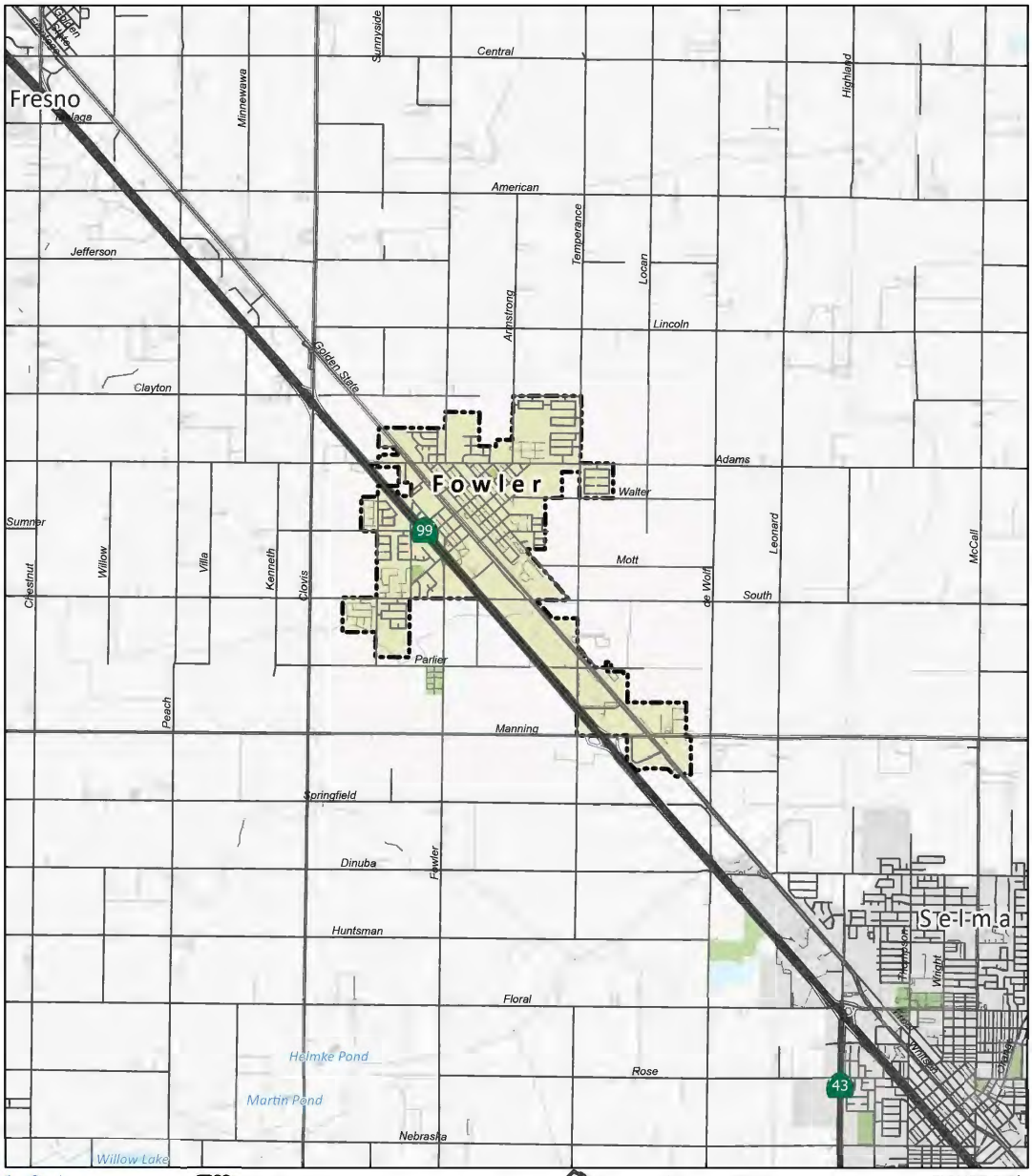


FIGURE 3-2b
Sheet 4 of 15
City of Fowler

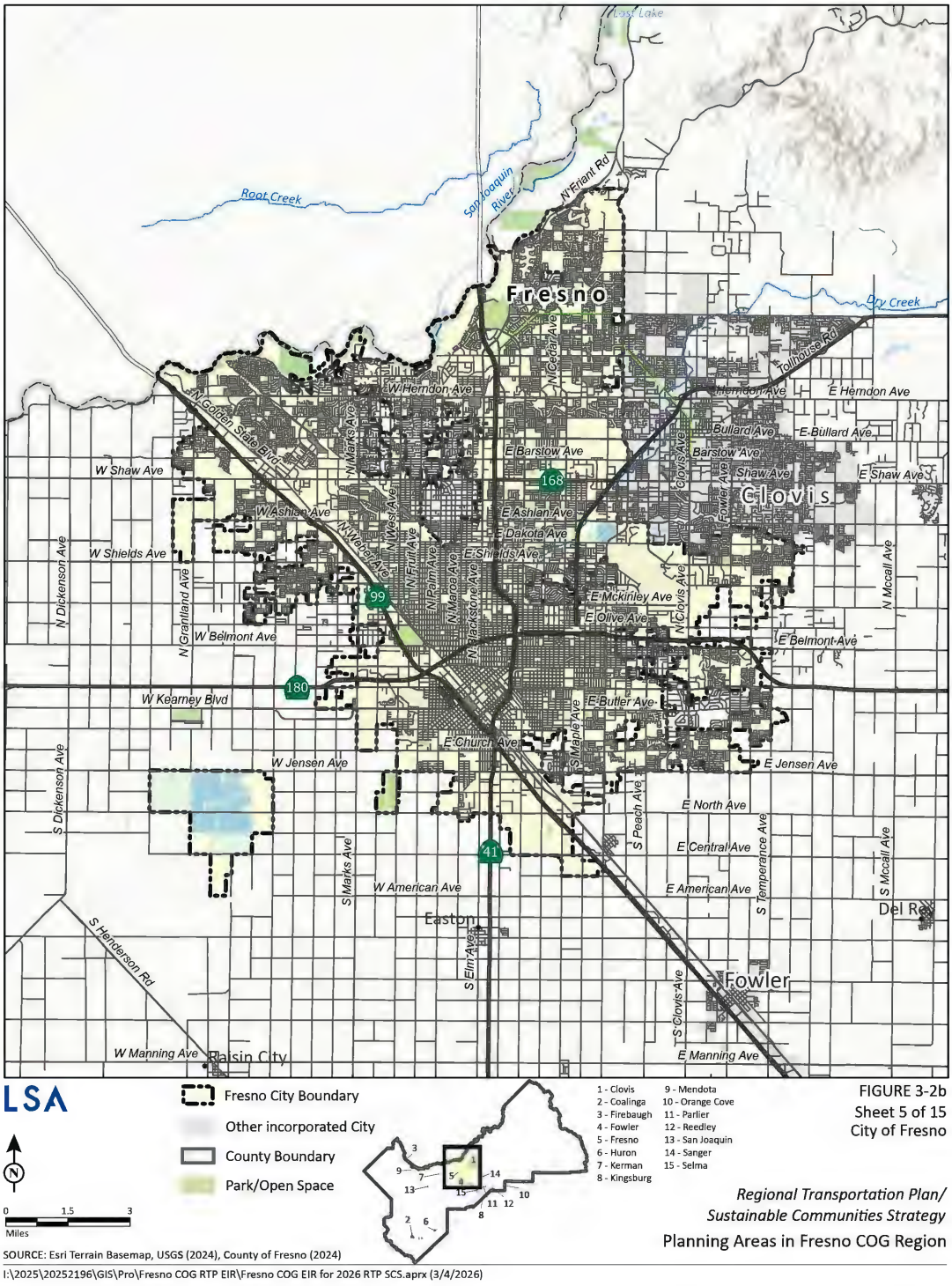
Regional Transportation Plan/ Sustainable Communities Strategy

Planning Areas in Fresno COG Region

SOURCE: Esri Terrain Basemap, USGS (2024), County of Fresno (2024)

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Fresno
Clovis
Easton
Fowler
Raisin City
Del Rey
Root Creek
San Joaquin River
Dry Creek
N Friant Rd
Tollhouse Rd
E Herndon Ave
W Herndon Ave
N Golden State Blvd
N Marks Ave
N Cedar Ave
E Bullard Ave
E Barstow Ave
Barstow Ave
E Shaw Ave
W Shaw Ave
Shaw Ave
N Clovis Ave
Fowler Ave
W Ashlan Ave
E Ashlan Ave
E Dakota Ave
W Shields Ave
E Shields Ave
N West Ave
N Fruit Ave
N Parkway Dr
N Maple Ave
N Blackstone Ave
N Dickenson Ave
N Grantland Ave
N Mccall Ave
E Mckinley Ave
E Olive Ave
E Belmont Ave
W Belmont Ave
W Kearney Blvd
E Butler Ave
E Church Ave
W Jensen Ave
E Jensen Ave
S Dickenson Ave
S Maple Ave
S Peach Ave
E North Ave
E Central Ave
E American Ave
W American Ave
S Marks Ave
S Temperance Ave
S Mccall Ave
S Elm Ave
S Henderson Rd
S Clovis Ave
W Manning Ave
E Manning Ave
99
168
180
41
LSA
Fresno City Boundary
Other incorporated City
County Boundary
Park/Open Space
0 1.5 3
Miles
1 - Clovis
2 - Coalinga
3 - Firebaugh
4 - Fowler
5 - Fresno
6 - Huron
7 - Kerman
8 - Kingsburg
9 - Mendota
10 - Orange Cove
11 - Parlier
12 - Reedley
13 - San Joaquin
14 - Sanger
15 - Selma
FIGURE 3-2b
Sheet 5 of 15
City of Fresno
Regional Transportation Plan/
Sustainable Communities Strategy
Planning Areas in Fresno COG Region
SOURCE: Esri Terrain Basemap, USGS (2024), County of Fresno (2024)
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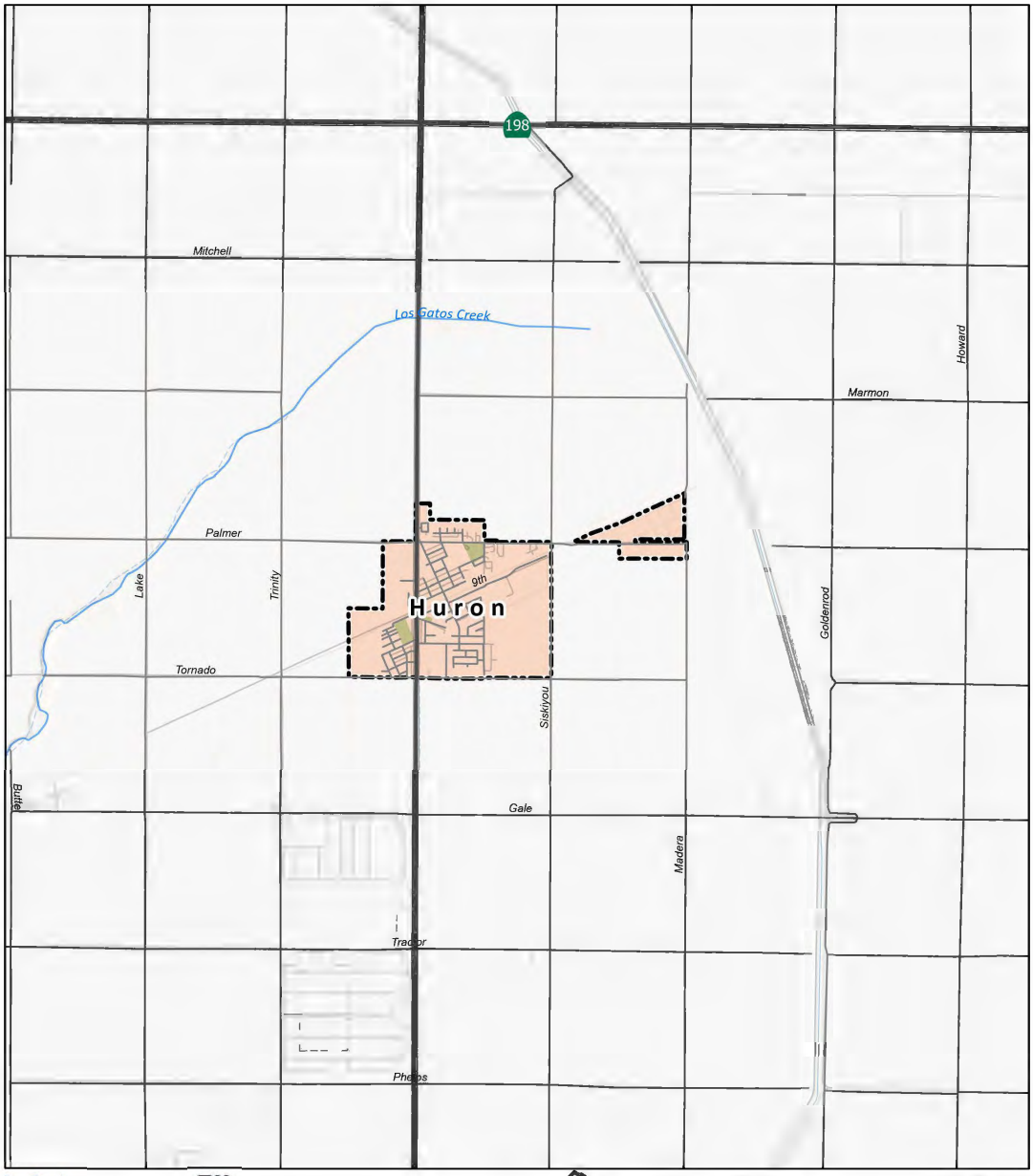


FIGURE 3-2b
Sheet 6 of 15
City of Huron

Regional Transportation Plan/ Sustainable Communities Strategy
Planning Areas in Fresno COG Region

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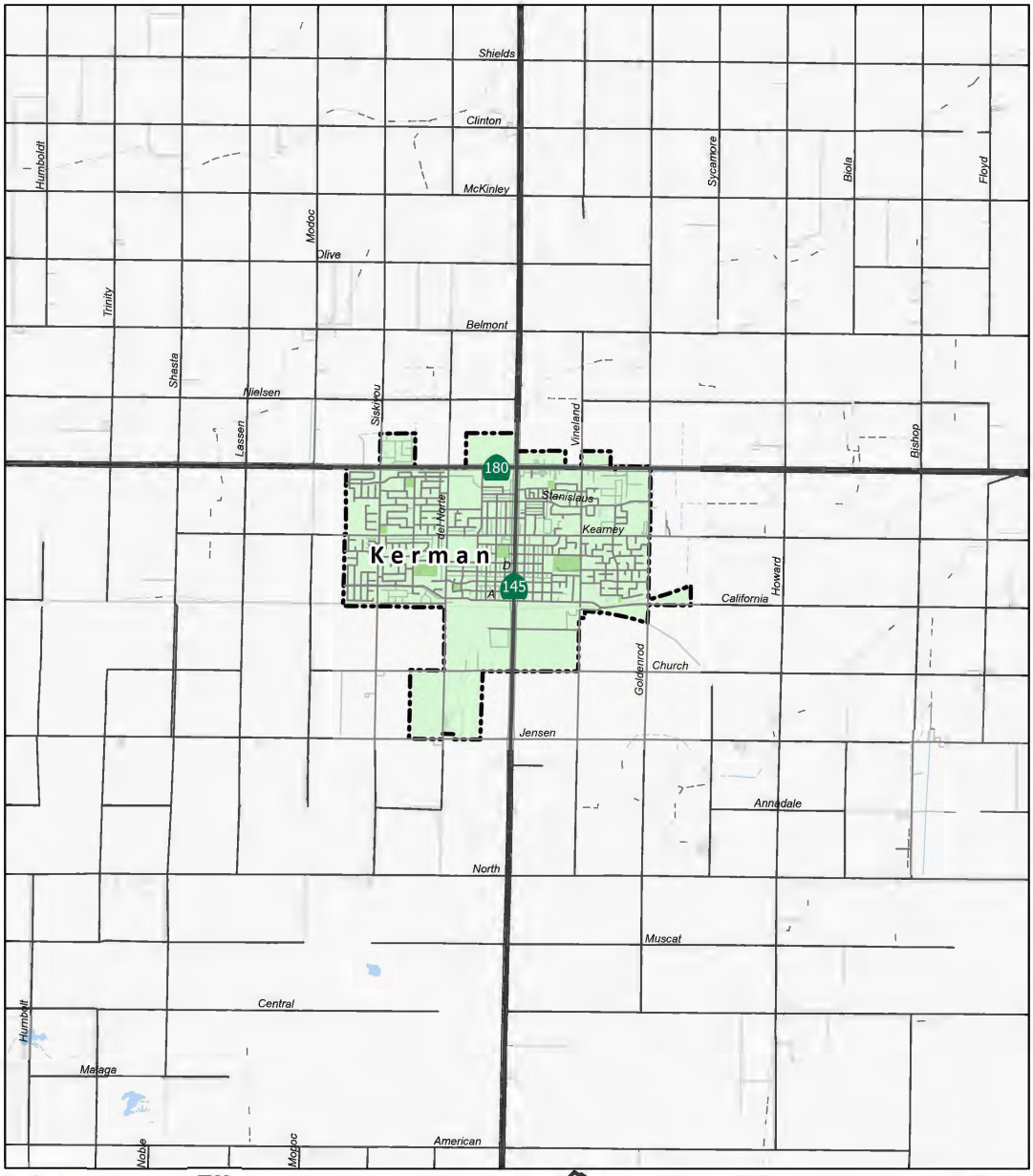
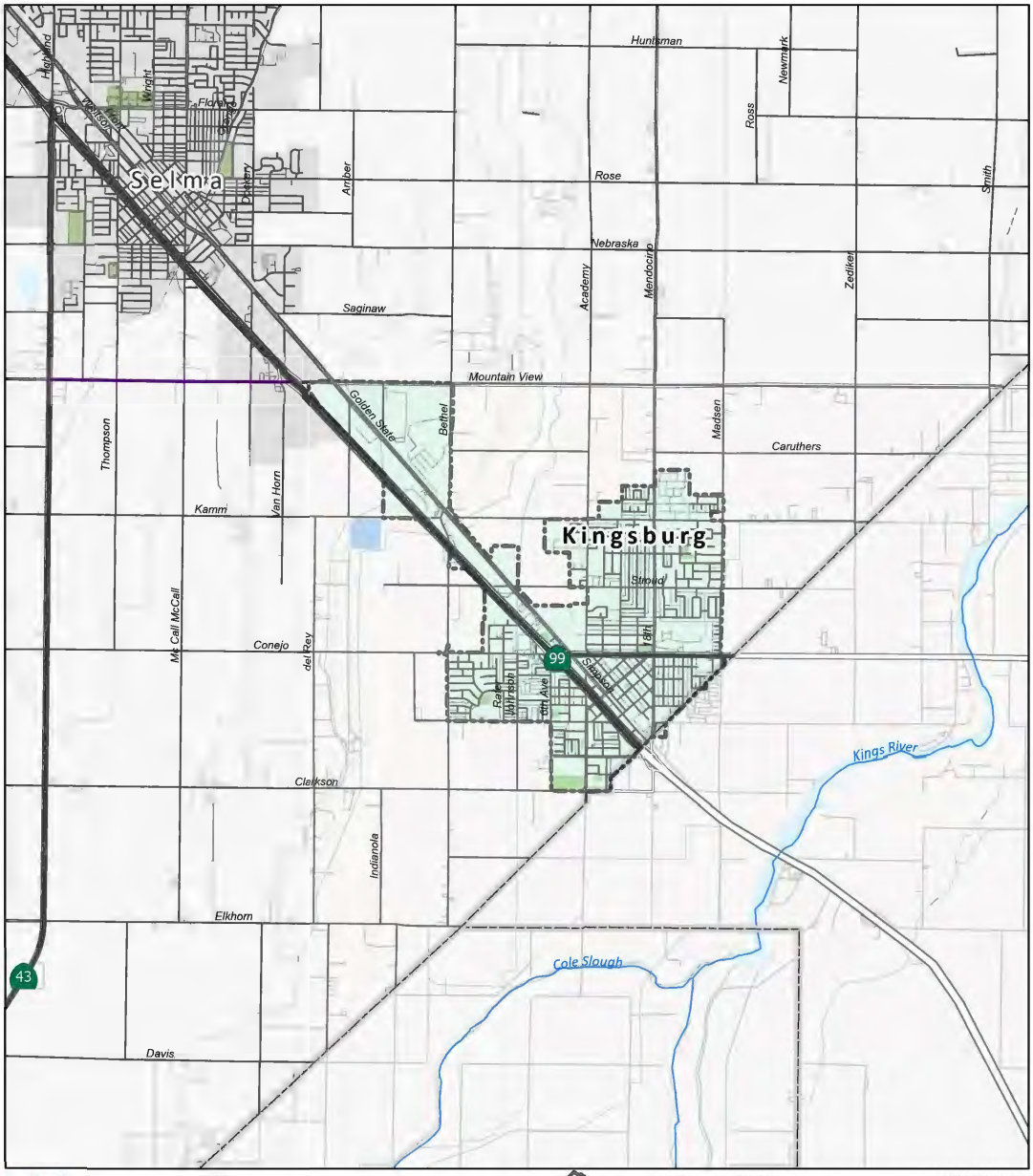


FIGURE 3-2b
Sheet 7 of 15
City of Kerman

Regional Transportation Plan/
Sustainable Communities Strategy
Planning Areas in Fresno COG Region

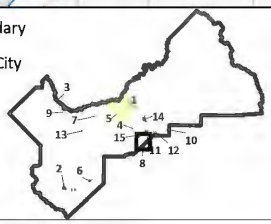
SOURCE: Esri Terrain Basemap, USGS (2024), County of Fresno (2024)
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LSA

Kingsburg City Boundary
Other incorporated City
County Boundary
Park/Open Space



1 - Clovis
2 - Coalinga
3 - Firebaugh
4 - Fowler
5 - Fresno
6 - Huron
7 - Kerman
8 - Kingsburg
9 - Mendota
10 - Orange Cove
11 - Parlier
12 - Reedley
13 - San Joaquin
14 - Sanger
15 - Selma

0 0.5 1
Miles

SOURCE: Esri Terrain Basemap, USGS (2024), County of Fresno (2024)
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FIGURE 3-2b
Sheet 8 of 15
City of Kingsburg

Regional Transportation Plan/
Sustainable Communities Strategy
Planning Areas in Fresno COG Region

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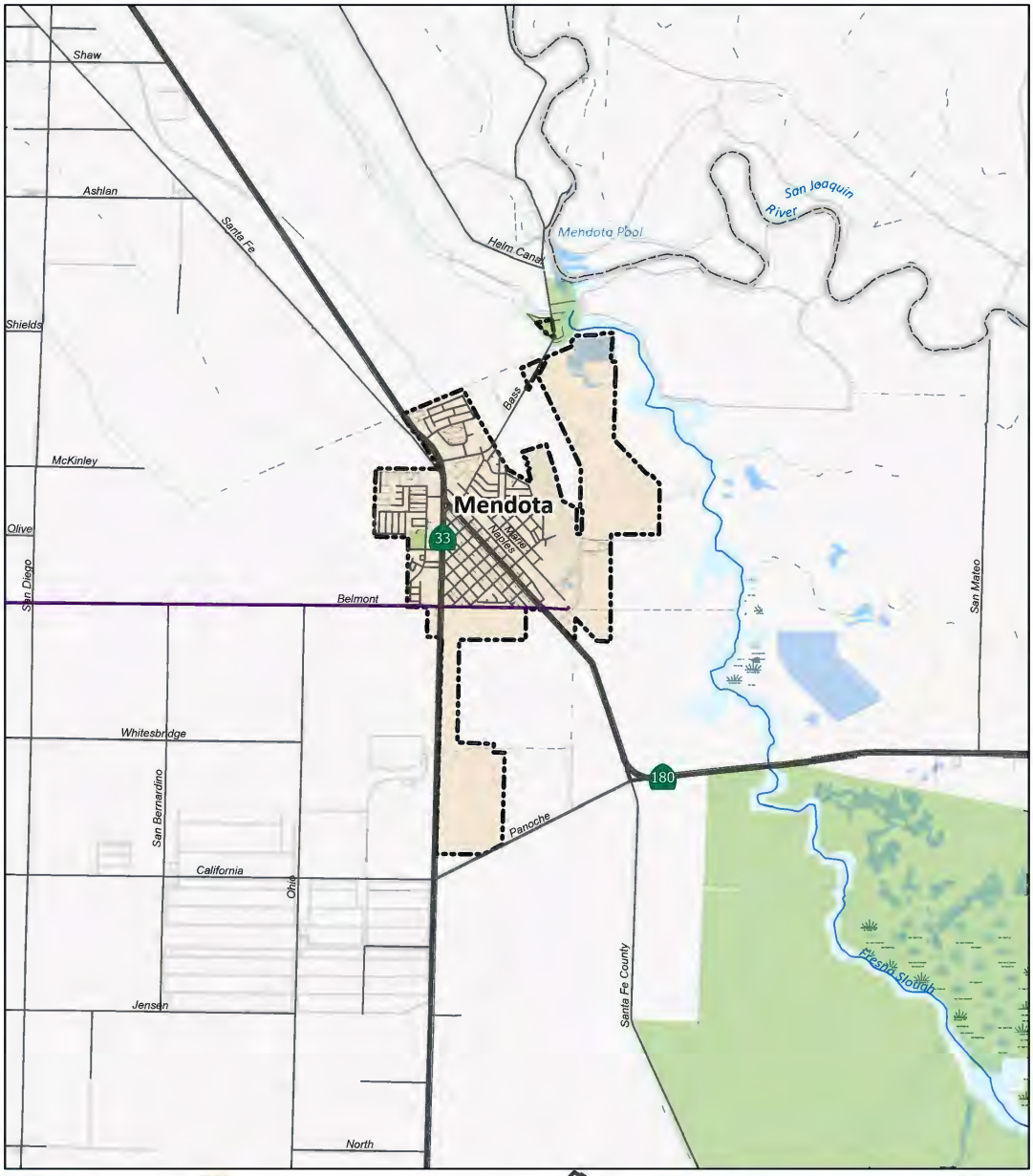
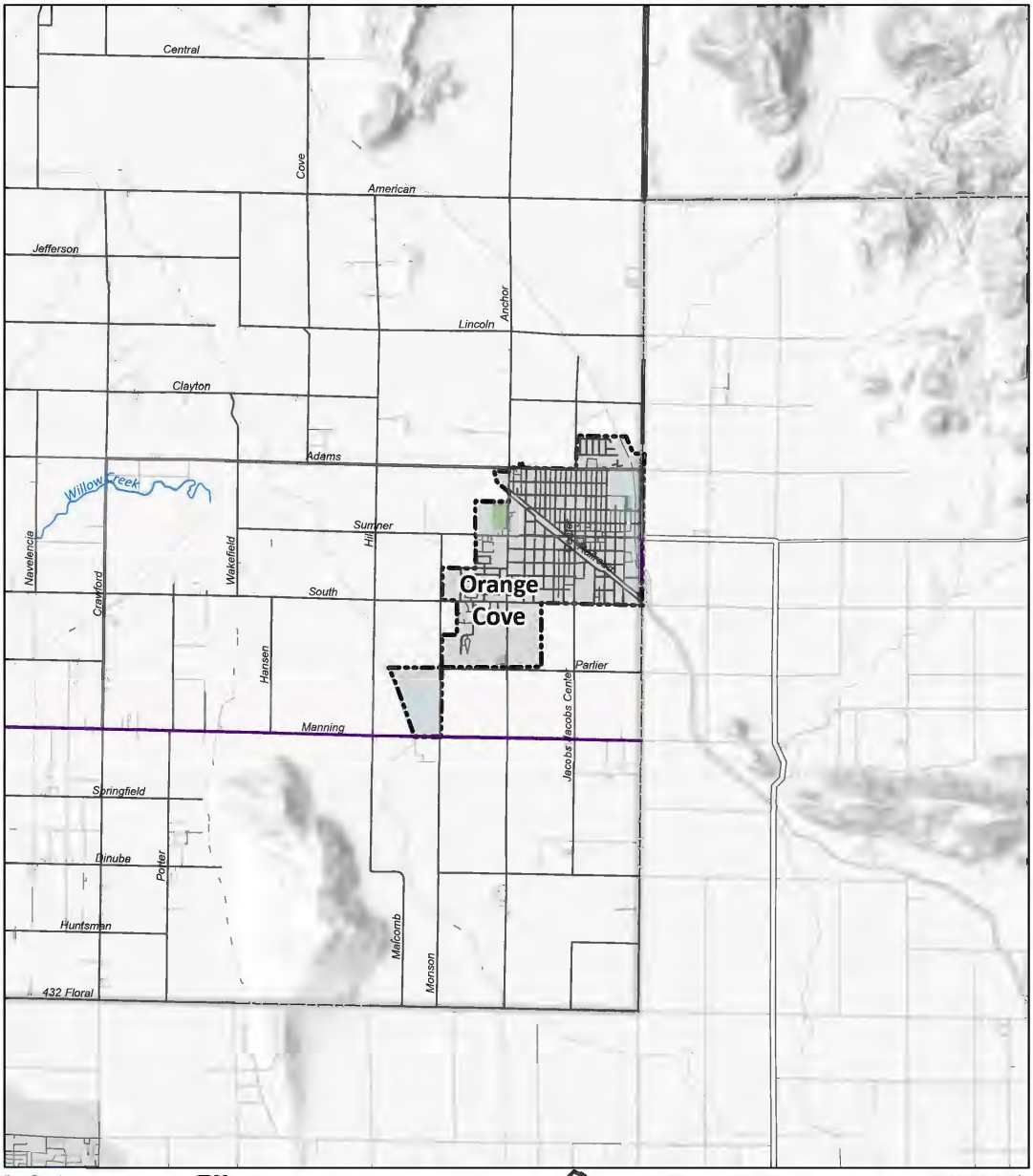


FIGURE 3-2b
Sheet 9 of 15
City of Mendota

Regional Transportation Plan/ Sustainable Communities Strategy
Planning Areas in Fresno COG Region

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Central
Cove
American
Jefferson
Anchor
Lincoln
Clayton
Adams
Willow Creek
Navelencia
Wakefield
Sumner
Hill
Crawford
South
Orange Cove
Hansen
Parlier
Jacobs Jacobs Center
Manning
Springfield
Dinuba
Porter
Huntsman
Malcomb
Monson
432 Floral
LSA
Orange Cove City Boundary
County Boundary
Park/Open Space
N
0 0.5 1
Miles
1 - Clovis
2 - Coalinga
3 - Firebaugh
4 - Fowler
5 - Fresno
6 - Huron
7 - Kerman
8 - Kingsburg
9 - Mendota
10 - Orange Cove
11 - Parlier
12 - Reedley
13 - San Joaquin
14 - Sanger
15 - Selma
FIGURE 3-2b
Sheet 10 of 15
City of Orange Cove
Regional Transportation Plan/
Sustainable Communities Strategy
Planning Areas in Fresno COG Region
SOURCE: Esri Terrain Basemap, USGS (2024), County of Fresno (2024)
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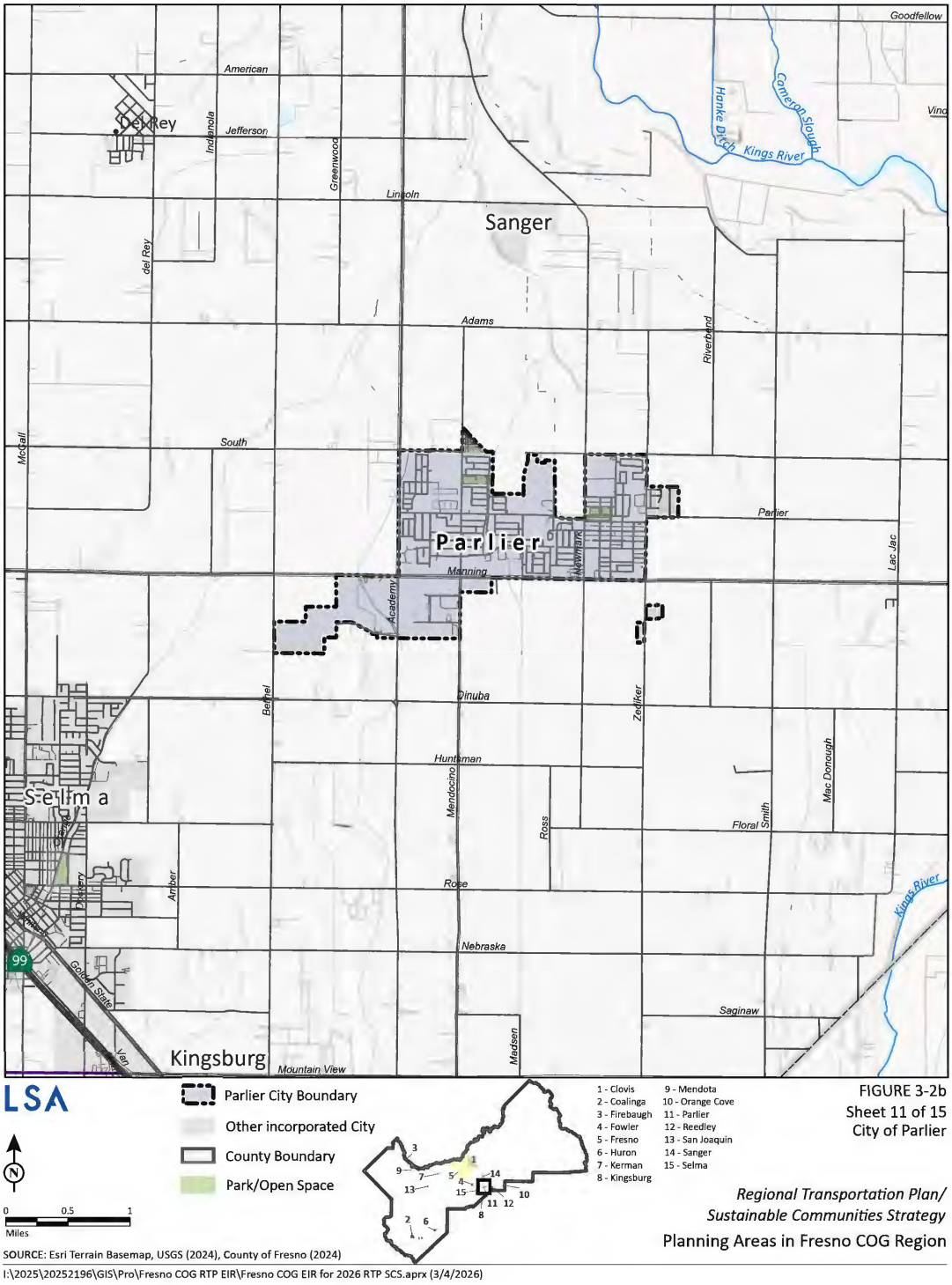
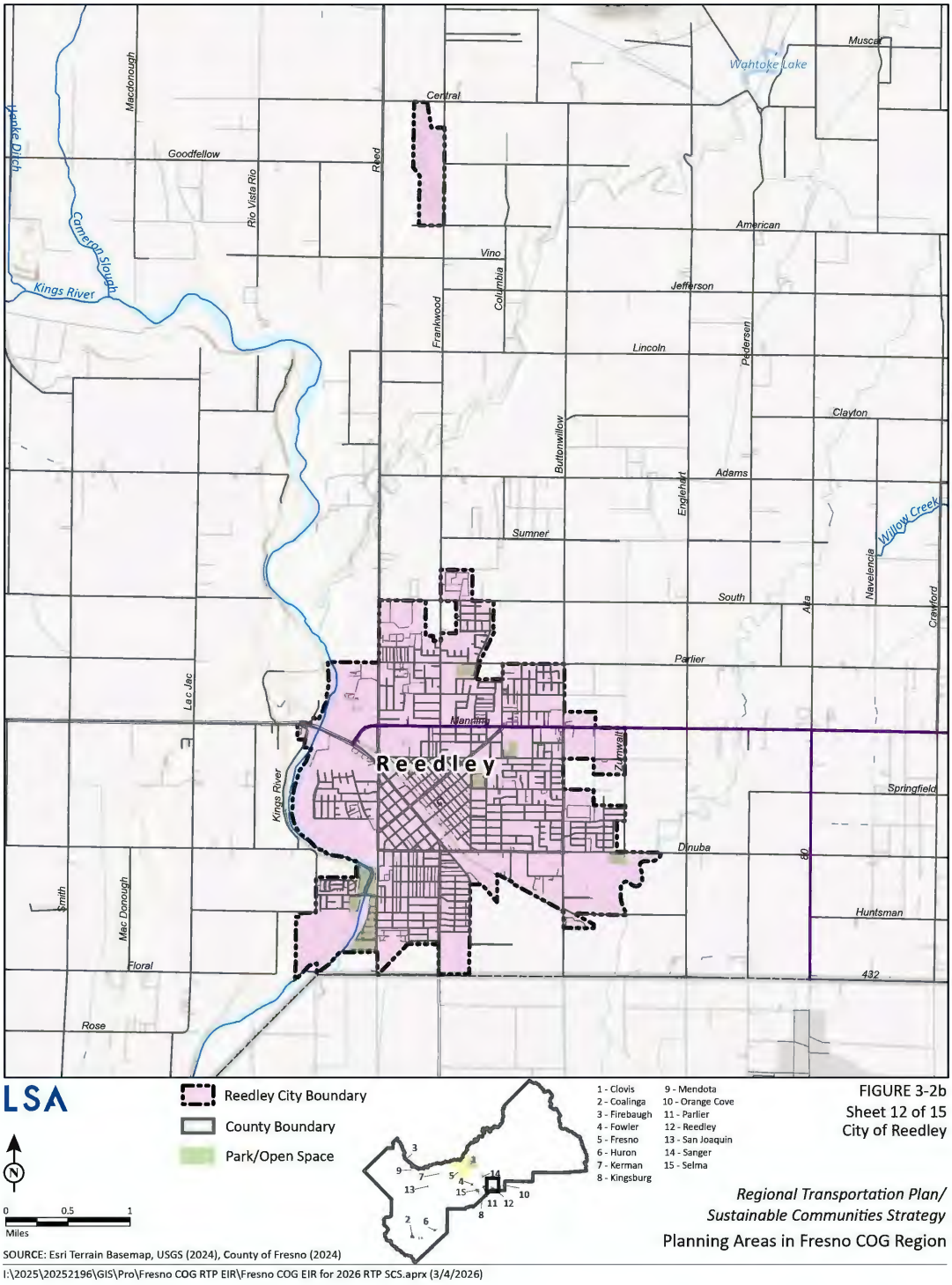


FIGURE 3-2b
Sheet 11 of 15
City of Parlier

Regional Transportation Plan/ Sustainable Communities Strategy
Planning Areas in Fresno COG Region

SOURCE: Esri Terrain Basemap, USGS (2024), County of Fresno (2024)
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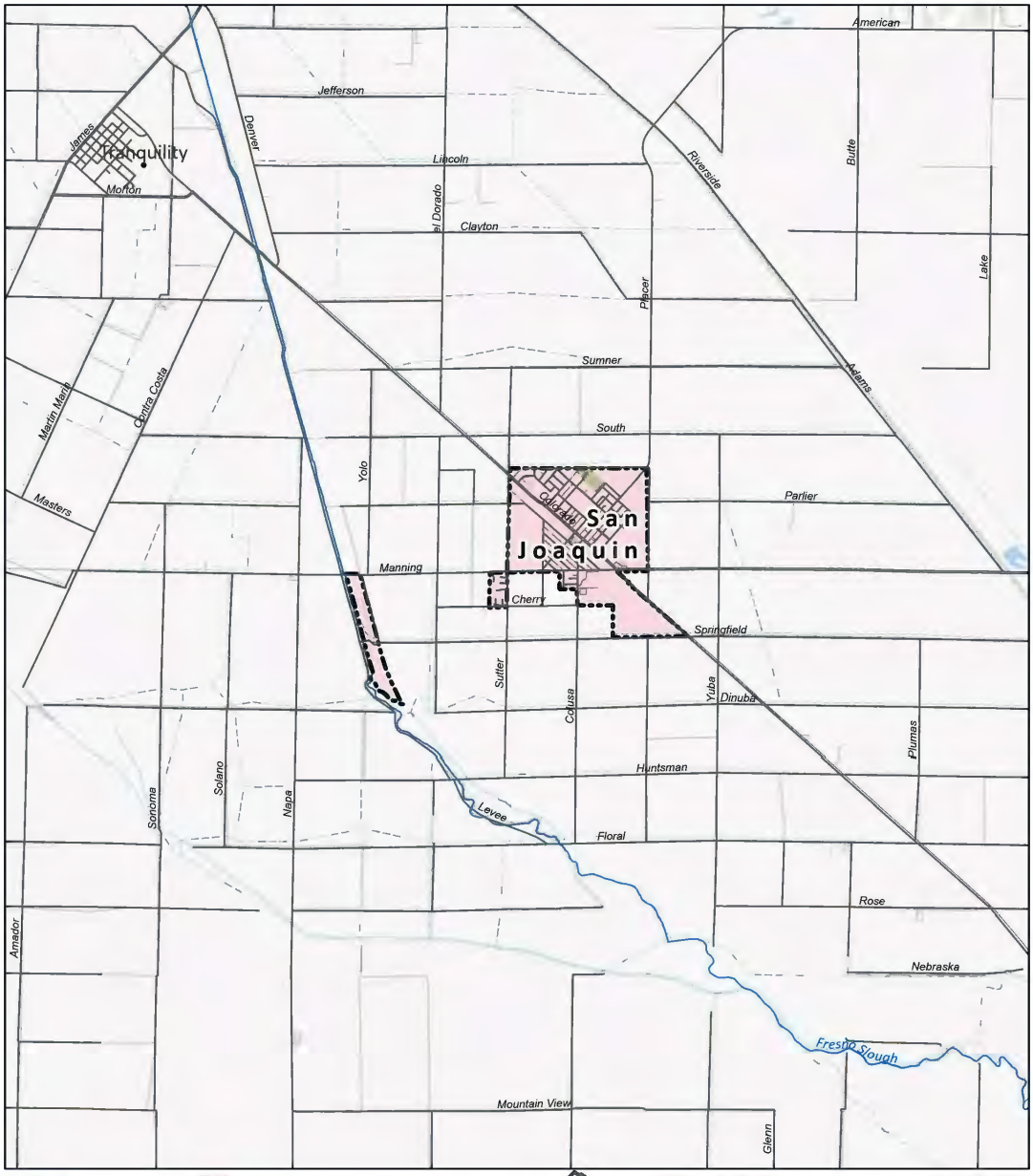


SOURCE: Esri Terrain Basemap, USGS (2024), County of Fresno (2024)
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FIGURE 3-2b
Sheet 12 of 15
City of Reedley

Regional Transportation Plan/
Sustainable Communities Strategy
Planning Areas in Fresno COG Region

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American
Jefferson
James
Tranquility
Denver
Lincoln
Riverside
Butte
Motion
El Dorado
Clayton
Placer
Lake
Sumner
Adams
Marin
Contra Costa
South
Yolo
Masters
Parlier
San Joaquin
Manning
Cherry
Springfield
Sutter
Colusa
Yuba
Dinuba
Plumas
Huntsman
Sonoma
Solano
Napa
Levee
Floral
Rose
Amador
Nebraska
Fresno Slough
Mountain View
Glenn
LSA
San Joaquin City Boundary
County Boundary
Park/Open Space
N
0
0.5
1
Miles
1 - Clovis
2 - Coalinga
3 - Firebaugh
4 - Fowler
5 - Fresno
6 - Huron
7 - Kerman
8 - Kingsburg
9 - Mendota
10 - Orange Cove
11 - Parlier
12 - Reedley
13 - San Joaquin
14 - Sanger
15 - Selma
FIGURE 3-2b
Sheet 13 of 15
City of San Joaquin
Regional Transportation Plan/
Sustainable Communities Strategy
Planning Areas in Fresno COG Region
SOURCE: Esri Terrain Basemap, USGS (2024), County of Fresno (2024)
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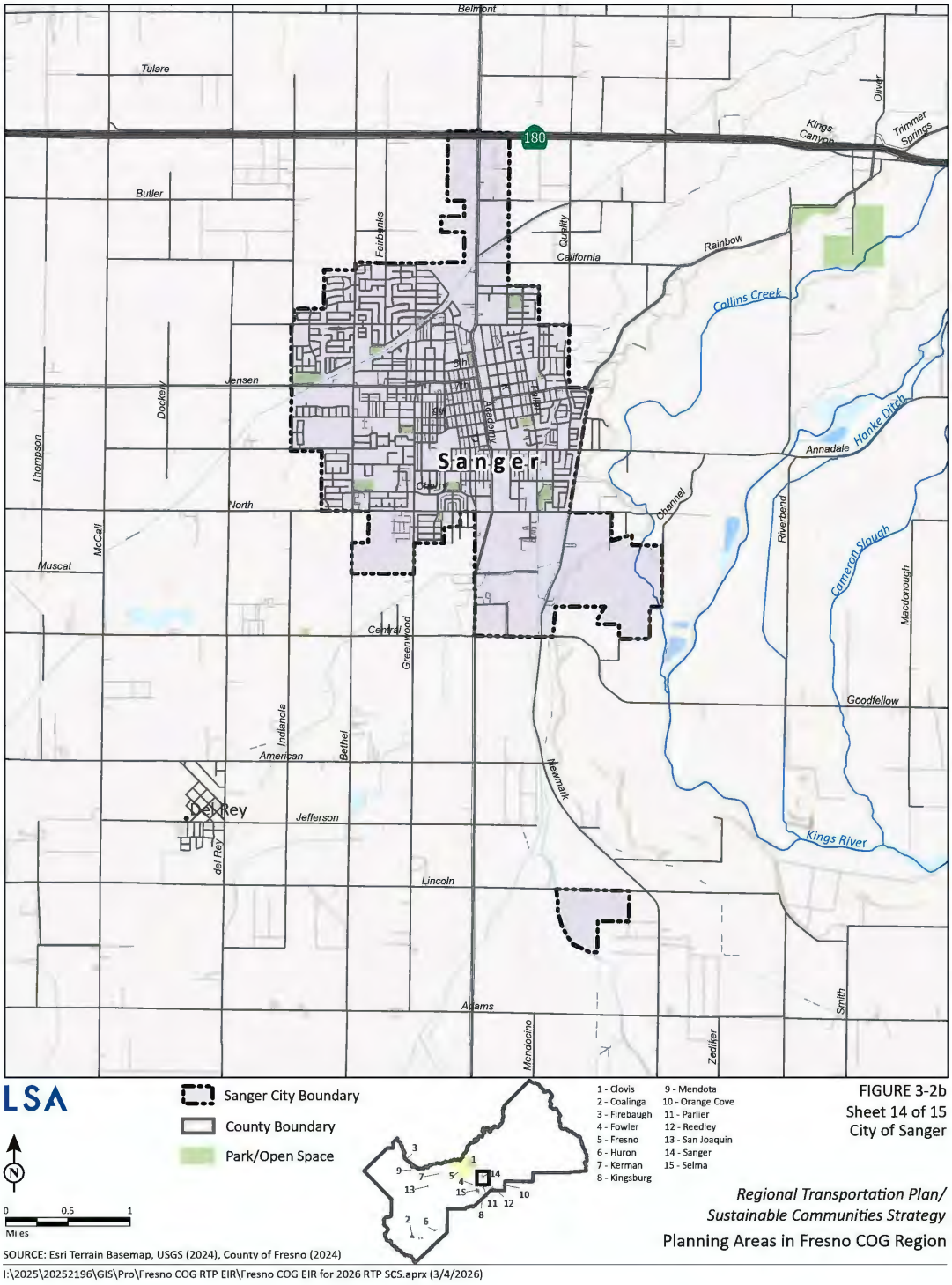
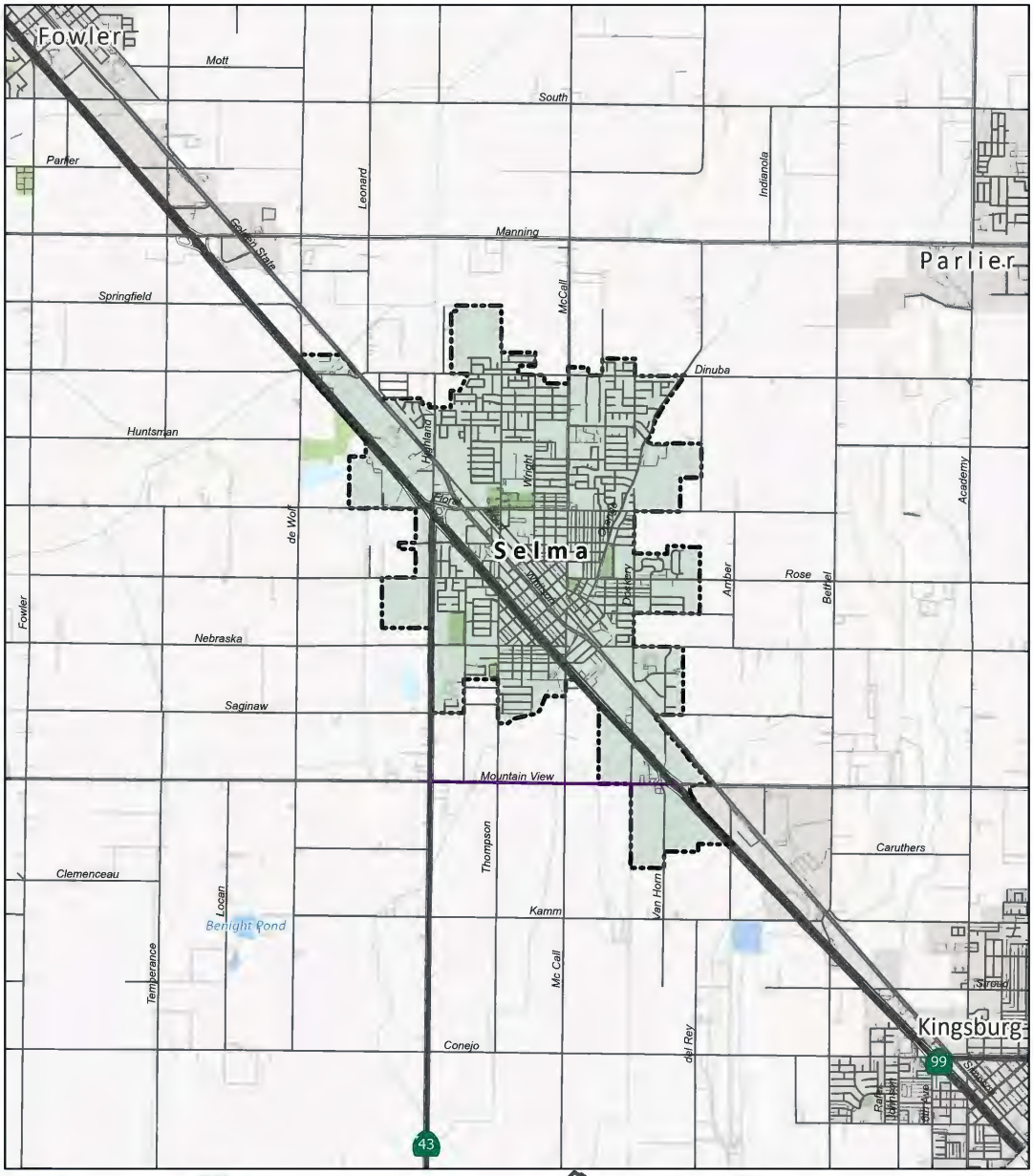


FIGURE 3-2b
Sheet 14 of 15
City of Sanger

Regional Transportation Plan/ Sustainable Communities Strategy
Planning Areas in Fresno COG Region

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Fowler
Mott
South
Parlier
Leonard
Indianola
Manning
Golden State
Springfield
McCall
Dinuba
Huntsman
Highland
Wright
Academy
de Wolf
Selma
Orange
Rose
Bethel
Amber
Fowler
Nebraska
Saginaw
Mountain View
Caruthers
Clemenceau
Thompson
Van Horn
Logan
Kamm
Bernight Pond
Temperance
Mc Call
del Rey
Conejo
Kingsburg
99
43
LSA
Selma City Boundary
Other incorporated City
County Boundary
Park/Open Space
N
0 0.5 1
Miles
1 - Clovis
2 - Coalinga
3 - Firebaugh
4 - Fowler
5 - Fresno
6 - Huron
7 - Kerman
8 - Kingsburg
9 - Mendota
10 - Orange Cove
11 - Parlier
12 - Reedley
13 - San Joaquin
14 - Sanger
15 - Selma
FIGURE 3-2b
Sheet 15 of 15
City of Selma
Regional Transportation Plan/
Sustainable Communities Strategy
Planning Areas in Fresno COG Region
SOURCE: Esri Terrain Basemap, USGS (2024), County of Fresno (2024)
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The Fresno COG works in partnership with its member agencies, the California Department of Transportation (Caltrans), and other agencies with land use authority to plan the future transportation system, taking into consideration future growth estimates and potential development and land use patterns outlined in each of the adopted or draft general plans prepared.by the local governments. Member agencies are also referred to throughout this PEIR as implementing agencies, as they have land use authority, and/or legal standing to plan, design, implement, build, operate, and maintain transportation infrastructure, including those projects referred to in the RTP/SCS. It will be these and other implementing agencies that will plan for, approve, design, construct, and implement the transportation improvement projects referenced in the RTP/SCS. The member agencies will also plan for, review, and approve the individual land use developments proposed within their individual jurisdictions over the duration of the planning period that were considered to develop the RTP/SCS.

3.2.2 Existing Conditions

3.2.2.1 Regional Overview

Fresno County was established in 1856 and began as a cluster of small agricultural centers that grew as the agricultural industry advanced and the population continued to expand into metropolitan areas.[4] To date, Fresno County is the highest-ranked county in the State for agricultural production, and agriculture forms the basis of the Fresno COG Region's economy.[5]

According to the United States Census Bureau, Fresno County is the second-largest county in the San Joaquin Valley region of California by land area, encompassing approximately 5,963 square miles.[6] Fresno County is the tenth most populous county in California, with an estimated population of 1,017,950 in 2025.[7] The County's population is projected to grow to 1,128,530 by 2060.[8] Within the County, the City of Fresno is the fifth-largest city in the State, with a population of 557,032.[9]

3.2.2.2 Existing Land Uses within the Fresno COG Region

Primary land uses in the Fresno COG Region include agriculture, residential, commercial, industrial, and recreation/open space. Agriculture and agricultural processing are the main economic drivers in

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4 County of Fresno. 2024. General Plan Background Report. February. Page 7-132. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/planning-and-land-use/general-plan/background-report-2024.pdf (accessed November 12, 2025).

5 County of Fresno. 2024. Fresno County General Plan Policy Document. February. Page 3. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/planning-and-land-use/general-plan/fcgpr_general-plan_county_final_2024_02.pdf (accessed November 12, 2025).

6 United States Census Bureau. 2020. Fresno County, California. Website: https://data.census.gov/profile/Fresno_County,_California?g=050XX00US06019 (accessed April 2025).

7 Fresno Council of Governments; Applied Development Economics, Inc. 2024. Fresno County 2023-2060 Growth Projections. October 17.

8 Ibid.

9 State of California Department of Finance. 2025. Population and Housing Estimates for Cities, Counties, and the State, January 1, 2024 and 2025. May 1. Website: https://dof.ca.gov/media/docs/forecasting/Demographics/estimates-e1/E-1_2025_InternetVersion.xlsx (accessed November 19, 2025).

the region, with approximately 50 percent of land used for agricultural purposes. The Sierra Nevada mountains take up much of the eastern half of the region. The eastern portion of the Fresno COG Region consists mostly of public lands, including the Sierra and Sequoia national forests and Kings Canyon National Park. The central and western portions of the region are dominated by agriculture and open space, with the largest city, Fresno, located near the region's east-west center and adjacent to the San Joaquin River, which lies to the north.[10] In addition, land uses throughout the Fresno COG Region, as adopted by local cities and counties, are depicted in the various General Plan Land Use Maps prepared, adopted, and on file with the cities and the County and incorporated by reference.

Agricultural. The most common land use within the Fresno COG Region is agricultural land, which comprises approximately 1.8 million acres (approximately half) of the region's total land area.[11] Agricultural land uses within the Fresno COG Region include irrigated row crop production, dry land farming, orchards and vineyards, and livestock grazing.

Residential. Residential land uses within the Fresno COG Region consist of a variety of dwelling types, including rural residential, detached single-family, multi-family (duplexes, apartments, etc.), planned unit developments, condominiums, and mobile homes. Residential densities are greater in the Fresno COG Region's incorporated cities, particularly in the urban core of Fresno.

Commercial. Commercial land uses within the Fresno COG Region include offices, retail establishments, and outdoor uses such as car sales, lumber yards, and plant nurseries. Commercial businesses in the unincorporated portions of the County are distributed along major transportation corridors (Interstate [I-]5 and State Route [SR-]99), and near incorporated cities. Limited commercial land uses are also located within the small, rural communities on the valley floor as well as in the Sierra Nevada foothills. The majority of commercial enterprises are retail establishments, followed by outdoor sales and golf courses. Commercial businesses in incorporated cities in the Fresno COG Region are distributed throughout city boundaries but are most common in urban centers.

Industrial. Industrial land uses within the Fresno COG Region consist of both light and heavy industrial uses. Light industrial uses include warehouses and mini-storage businesses, while heavy industrial uses involve the manufacturing of large items and/or using large manufacturing equipment. Industrial uses are generally located along the SR-99 corridor, particularly south of Fresno, as well as along the I-5 corridor.

3.2.2.3 Existing Transportation Facilities

The region's existing intermodal transportation network consists of Interstate and State Routes, arterials, local roads, bike lanes and pedestrian facilities, transit services, railways, and airports (refer to Figure 3-3 for an exhibit showing the regional roadway system), as described in the overview provided below.

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[10] County of Fresno. 2024. Fresno County General Plan Policy Document. *General Plan Review*. February.

[11] County of Fresno. 2023. *General Plan Review and Zoning Ordinance Update Program Environmental Impact Report Public Review Draft.* April. Page 4.1-17. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/environmental-impact-reports/1_draft-program-environmen.pdf (accessed November 12, 2025).

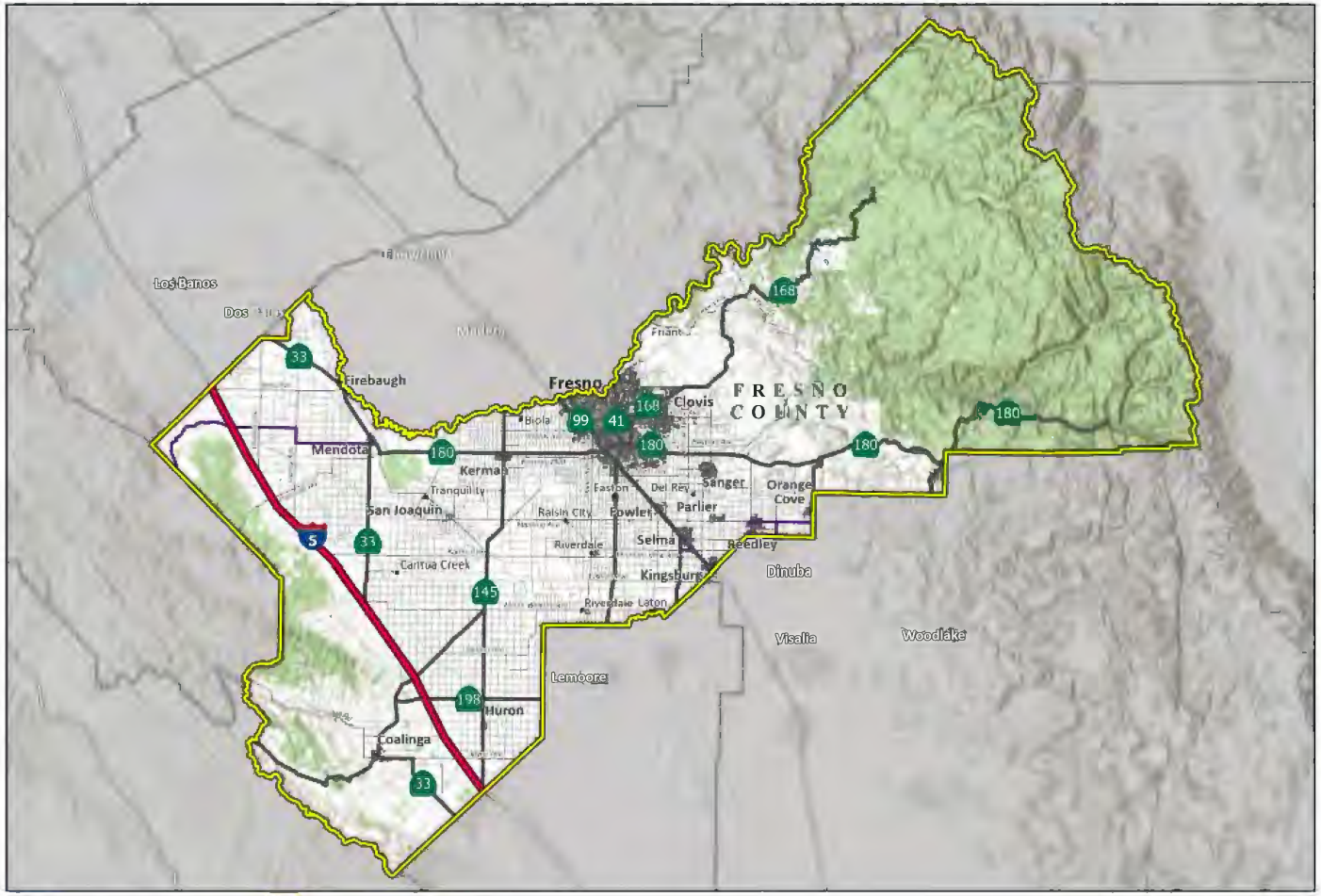


FIGURE 3-3

Regional Transportation Plan/Sustainable Communities Strategy
Regional Roadway System

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Roadway System. The highway system forms the primary backbone of the Fresno COG Region transportation system.[12] The following highways are located within or partially within the Fresno COG Region:

- **I-5:** North-south highway originating near the border between the United States and Canada and terminating near the border between the United States and Mexico.
- **SR-99:** North-south highway originating near the City of Red Bluff in the northern portion of the San Joaquin Valley and terminating near the Wheeler Ridge community in the southern portion of the San Joaquin Valley.
- **SR-41:** North-south highway originating in Yosemite National Park and terminating near the coastal city of Morro Bay.
- **SR-33:** North-south highway originating near the City of Tracy, near the middle of the San Joaquin Valley, and terminating near the coastal City of Ventura.
- **SR-43:** North-south highway originating near the City of Selma in the southern portion of the San Joaquin Valley and terminating near the City of Taft in the southern portion of the San Joaquin Valley.
- **SR-63:** North-south highway originating near the City of Orange Cove in the southern portion of the San Joaquin Valley and terminating near the City of Tulare in the southern portion of the San Joaquin Valley.
- **SR-145:** North-south highway originating near the community of Friant between the San Joaquin Valley and the Sierra Nevada mountains and terminating near the City of Coalinga in the southern portion of the San Joaquin Valley.
- **SR-168:** East-west highway originating in the Sierra Nevada mountains and terminating near the City of Fresno in the southern portion of the San Joaquin Valley.
- **SR-180:** East-west highway originating in Kings Canyon National Park and terminating near the City of Mendota in the southern portion of the San Joaquin Valley.
- **SR-198:** East-west highway originating in Sequoia National Park and terminating near King City in Monterey County.

[12] County of Fresno. 2023. *General Plan Review and Zoning Ordinance Update Program Environmental Impact Report Public Review Draft. April.* Page 4.15-1. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/environmental-impact-reports/1_draft-program-environmen.pdf (accessed November 19, 2025).

- **SR-201:** East-west highway originating near the City of Elderwood at the foothills of the Sierra Nevada mountains and terminating near the City of Kingsburg in the southern portion of the San Joaquin Valley.

- **SR-269:** North-south highway originating near the community of Five Points in the southern portion of the San Joaquin Valley and terminating near the City of Avenal in the southern portion of the San Joaquin Valley.

The Fresno COG Region also contains an arterial street network consisting of both urban and rural arterials. Urban arterials are typically four-lane, divided roadways with moderate to high access control. Rural arterials are typically two-lane roadways or four-lane divided roadways with low to moderate access control.

Transit System. Transit needs in rural portions of the Fresno COG Region are primarily served by Fresno County Rural Transportation Authority (FRCTA).[13] This agency serves rural public transit services in the Spheres of Influence for the 13 small incorporated cities in the Fresno COG Region. Other local transit providers in more urbanized portions of the Fresno COG Region include the following:

- **Fresno Area Express:** Serves the City of Fresno and adjacent communities.

- **Clovis Transit:** Serves the City of Clovis and adjacent communities.

- **Kings Area Rural Transit:** Provides a connection between Hanford and the Fresno-Clovis Metropolitan Area, including stops in Laton and Selma.

- **Dinuba Connection:** Serves the City of Reedley and provides a connection to Dinuba in neighboring Tulare County.

In addition, the Fresno COG Region contains two main railroad lines, both of which operate in the north-south direction. The BNSF Railway line connects the Fresno COG Region, via a stop in Laton, with Bakersfield to the south and the San Francisco Bay Area to the north. Union Pacific Railroad also connects the Fresno COG Region, via a stop in Kingsburg, with Bakersfield to the south and the San Francisco Bay Area to the north. Both lines pass through the City of Fresno.

California's High-Speed Rail (HSR) Project, which is planned to provide HSR service between Southern California and Northern California, is currently under construction in the San Joaquin Valley. The HSR system will traverse the Fresno COG Region in a north-south orientation and will provide HSR access via a planned station in downtown Fresno. It is anticipated that passenger

[13] County of Fresno. 2023. General Plan Review and Zoning Ordinance Update Program Environmental Impact Report Public Review Draft. April. Page 4.15-5. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/environmental-impact-reports/1_draft-program-environmen.pdf (accessed November 19, 2025).

service from Merced to Bakersfield (the "initial operating segment") would begin between 2030 and 2033.[14]

Aviation System. The Fresno COG Region contains a total of 9 publicly owned airports, 24 privately owned airports (3 of which allow public use), and 1 military airfield that does not allow public use. The busiest airport in the County is the publicly owned Fresno Yosemite International Airport, which serves over 1 million passengers per year based on the latest data available.[15]

Active Transportation. The Fresno COG, in partnership with its member agencies, developed the Fresno County Regional Active Transportation Plan (ATP),[16] which is a comprehensive guide outlining the vision for biking, walking, and other human-powered transportation in the Fresno COG Region. Amended in 2024, the Regional ATP provides for a network of safe and attractive trails, sidewalks, and bikeways that connect Fresno County residents to key destinations, especially local schools, parks, and transit, and creates a network of regional bikeways that allows bicyclists to safely ride among cities and other regional destinations. According to the ATP, the City of Fresno has 38 miles of Class I bike paths, 431 miles (one direction) of Class II bike lanes and 22 miles (one direction) of Class III bike routes. The City of Clovis has 13 miles of Class I bike paths and 113 miles of Class II bike lanes. The ATP was developed to, among other things, offer the citizens of Fresno County opportunities to increase bicycle ridership through awareness and participation and encourage community members to commute to work and school on a bicycle or pedestrian trail instead of via motor vehicle. The 2021 Fresno County Regional Trails Plan[17] was completed in 2021. This plan created a vision and recommendations for the ongoing development of new trail connections that create a safe, comfortable, and connected network for walking/hiking, off-road biking, and horseback riding in the Fresno COG Region.

3.2.3 Changes Since Adoption of the 2022 RTP/SCS

While the 2026 RTP/SCS utilizes strategies and information presented in the 2022 RTP/SCS to the extent they remain applicable, Chapter 1, About the Plan, of the 2026 RTP/SCS notes changing circumstances and trends that have occurred in the region that had an effect on the contents of the 2026 RTP/SCS. Key changes in the region are discussed in greater detail below.

3.2.3.1 New California Air Resources Board Requirements

In May 2024, the Fresno COG received feedback from the California Air Resources Board (CARB) on the 2022 RTP/SCS, with 10 recommendations for the upcoming 2026 RTP/SCS. The recommendations ranged from requesting improved modeling and data to the development of entirely new implementation and monitoring plans. Accommodating these recommendations and requests from CARB presented new challenges for the Fresno COG and involved coordination with

14 California High-Speed Rail Authority. 2024. *2024 Business Plan,* Page XII. Website: https://hsr.ca.gov/wp-content/uploads/2024/05/2024-Business-Plan-FINAL.pdf (accessed February 25, 2026).

15 Fresno Yosemite Airport. Statistics for Fresno Yosemite Airport. Website: https://fresnoyosemiteinternationalairport.com/statistics/ (accessed November 19, 2025).

16 County of Fresno. 2024. *Fresno County Regional Active Transportation Plan.* May.

17 County of Fresno. 2021. *Fresno County Regional Trails Plan*. April.

CARB to align priorities for the 2026 RTP/SCS cycle and see which recommendations could be met on a longer time horizon given that preparation of the 2026 RTP/SCS was already underway in May 2024.

3.2.3.2 Telecommuting Assumptions for Future Horizon Years

Since the COVID-19 pandemic, telecommuting has become an established work model for several job sectors nationwide and around the world. Since the pandemic, telecommuting patterns have fluctuated amongst different companies, job sectors, and within government agencies. In the 2022 RTP/SCS, telecommuting was identified as an off-model strategy to help the Fresno COG Region meet its vehicle miles traveled (VMT) and GHG reduction targets. Chapter 5, Sustainable Communities Strategies, of the 2026 RTP/SCS addresses the long-term prospects of telecommuting in the Fresno COG Region and reasonable assumptions for future telecommuting targets as a means for helping reduce VMT and GHG in the region. The 2026 RTP/SCS includes telecommuting as an on-model SCS strategy.

3.2.3.3 Reduced Population Growth Forecasts

The Fresno COG Region's forecasted population growth is slowing. This slower growth of the region's population has consequences for the region's ability to meet future VMT and GHG reduction targets. Previously, the Fresno COG was able to assign future population growth to higher-density households, reducing the per-capita VMT and GHG of the region. With the population growth slowing and the region's GHG reduction targets remaining unchanged, a challenge has arisen in meeting these targets with the reduced population forecast.

3.2.3.4 Land Use Challenges Throughout the Fresno COG Region

The 2026 RTP/SCS identifies land use related issues that have emerged in recent years that present new challenges and uncertainty for the Fresno COG as the 2026 RTP/SCS is being developed. The requirement for the Fresno COG to make long-term land use assumptions affects modeling and performance indicators associated with the five SCS scenarios. As such, the Fresno COG worked with member agencies to plan for future housing and commercial land uses.

3.2.4 Project Components

The proposed 2026 RTP/SCS is an update to the Fresno COG's 2022 RTP/SCS, which was approved by the Fresno COG Policy Board on July 28, 2022. Building upon the progress made since the 2022 RTP/SCS, the proposed 2026 RTP/SCS is a long-range visioning plan for the region, highlighting existing land use and transportation conditions and forecasting solutions for the region's transportation needs. The proposed 2026 RTP/SCS also identifies anticipated funding allocations for transportation projects and demonstrates how the Fresno COG will achieve its targets for GHG emission reductions, consistent with SB 375 and other regional goals. Each mode of transportation is presented in a separate section of the proposed 2026 RTP/SCS, which includes an inventory of the existing system, accomplishments, needs, and proposed actions.

3.2.4.1 Regional Transportation Plan

The 2026 RTP/SCS addresses all transportation modes, including motor vehicles, transit (commuter and local), rail (commuter and interregional), goods movement (rail freight and trucking), bicycle and pedestrian facilities, aviation systems, and transportation systems management (TSM) programs and projects with a horizon year of 2049. In addition, the 2026 RTP/SCS:

- Identifies the region's transportation goals and policies.
- Integrates results reflected in the Congestion Management Program (CMP).
- Documents the financial resources needed to implement the plan.
- Reflects results of the Transportation Conformity Analysis.
- Highlights the 2026 RTP/SCS PEIR process and results.
- Details the RTP/SCS public outreach process.
- Includes the environmental justice analysis process.[18]
- Sets forth an action plan of projects and programs to address the needs consistent with the Policy Element, such as:
    - Allocating growth along transportation corridors in support of high-capacity transit systems.
    - Facilitating the development of mixed land use districts, which promote living, working, shopping, and recreation accessible by foot or bicycle, and which are served by centrally located transit routes (the Tower District in Fresno, Clovis' Old Town, and many of the Fresno COG Region's small cities serve as examples built more than 40 years ago).
    - Maintaining and improving the regional street system, connecting local jurisdictions within the Fresno COG Region, and connecting the Fresno COG Region to adjacent counties, consistent with Measure C and its renewal (expected by 2027).[19]
    - Enhancing and maintaining existing transit systems and the frequency of current services.
    - Developing connecting bikeway systems and facilitating and encouraging their use.
    - Improving connectivity between highways, streets and roads, transit and rail, transit and air travel, cycling and transit, etc.

[18] Due to regulatory changes at the federal level that have occurred since adoption of the 2022 RTP/SCS, environmental justice will be addressed in the SCS portion of the RTP/SCS only.

[19] Fresno Council of Governments (COG). 2025. *Regional Transportation Plan and Sustainable Communities Strategy Roundtable.* May 28.

- Reserving future park-and-ride opportunities.
- Providing an organized public education effort.
- Assigning appropriate financing, including both operations and capital investment.

The proposed 2026 RTP will be in effect upon its adoption. The RTP is used to guide the development of the Regional Transportation Improvement Program (RTIP). The RTIP is the programming document used to plan the construction of regional transportation projects and requires Caltrans approval. The RTP is also used as a transportation planning document by each of the 16 Fresno COG member agencies.

Chapter 4, Implementing the Plan, of the RTP/SCS sets forth plans of action for the region to pursue and meet identified transportation needs and issues. Federal transportation legislation[20] requires that long-range transportation plans include only those projects that are financially constrained (meaning that funding is reasonably available based on the revenue forecast). The RTP/SCS contains a list of financially constrained projects in the Constrained Program of Projects (refer to Appendix B of the RTP/SCS).

The RTP/SCS also defines unconstrained projects, or projects submitted by Caltrans and the member agencies to the Fresno COG for incorporation into the RTP/SCS but that were not funded due to lack of available funding. This provides a complete picture of transportation systems that are needed for the future vitality of the region. The Unconstrained Program of Projects incorporates the region's unbudgeted vision. These projects represent alternatives that could be moved to the constrained program if support for an individual project remains strong and if project funding is identified. Status as an unconstrained project does not imply that the project is not needed; rather, it simply cannot be accomplished under the current fiscal constraints facing the Fresno COG Region.

Unconstrained projects are not included in the air quality conformity analysis and are not analyzed as part of this PEIR. In the future, as the funding picture changes and community values and priorities for transportation projects are redefined and honed, unconstrained projects may be moved to the constrained program. Should this occur, the 2026 RTP/SCS would be amended and a new assessment of the RTP/SCS's conformity with State and federal air quality rules and standards would be undertaken. Only transportation improvement projects in the constrained project list in the RTP/SCS are analyzed in the associated conformity finding. Each element in the RTP addresses proposed actions to implement goals and policies identified in Chapter 4, Implementing the Plan, of the RTP/SCS. These actions outline specifically how the goals of the RTP/SCS will be accomplished.

Within each element of the RTP, assumptions are made that guide the goals, policies, and actions. Those assumptions include demographic projections, land use forecasts, air quality models, performance indicators, capital and operations costs, cost of alternatives, timeframe (short- and

[20] United States Department of Transportation and Federal Highway Administration (USDOT and FHWA). 2017. *Code of Federal Regulations Title 23 Volume 1 Section 450.322.* Website: https://www.govinfo.gov/content/pkg/CFR-2017-title23-vol1/pdf/CFR-2017-title23-vol1-sec450-322.pdf (accessed May 2025).

long-term), environmental resources and methodology. Forecasting methods in the RTP/SCS primarily use the market-based approach based on demographic data and economic trends.

The 2026 RTP is similar to the 2022 RTP in that it also includes an SCS that applies an integrated land use and transportation planning approach for meeting GHG emission reduction targets set forth by CARB, as required by SB 375. The SCS, found in Chapter 5 of the RTP/SCS, is further described below, and is incorporated by reference.

3.2.4.2 Sustainable Communities Strategy

SB 375, which went into effect in 2009, added statutes to the California Government Code to encourage planning practices that create sustainable communities. It calls for each MPO to prepare an SCS as an integrated component of the RTP. The 2026 RTP contains the SCS, which is intended to identify integrated land-use and transportation strategies that lower per-capita GHG emissions from cars and light-duty trucks, and foster communities that are more equitable, healthy, and sustainable (reference Chapter 5, Sustainable Communities Strategy, of the 2026 RTP/SCS for the Fresno COG SCS Development Process).

Pursuant to California Government Code Section 65080(b)(2)(B), the SCS is required to:

1. Identify the general location of land uses, residential densities, and building intensities within the region;

2. Identify areas within the region sufficient to house all the population of the region over the plan horizon;

3. Identify areas within the region sufficient to house an 8-year projection of the regional housing need (per Government Code Section 65584.01(et al.);

4. Identify a transportation network to service the regional transportation needs;

5. Gather and consider the best practically available scientific information regarding resources areas and farmland in the region;

6. Consider the State housing goals;

7. Set forth a Forecasted Regional Development Pattern for the region; and

8. Allow the RTP to comply with the federal Clean Air Act (CAA) of 1970 (42 USC 7401 et seq.), such that when the SCS is integrated with the transportation network, and other transportation measures and policies, GHG emissions from automobiles and light-duty trucks will achieve, if there is a reasonable way to do so, the GHG emission reduction targets approved by CARB. If the SCS does not achieve the GHG emission targets set by CARB, an Alternative Planning Strategy (APS) must be developed to demonstrate how the targets could be achieved.

The SCS encourages improved accessibility to transit and more compact development, thereby yielding transportation benefits to the region. These benefits include reduced VMT, vehicle hours

traveled (VHT), and vehicle hours of delay (VHD). Concurrently, the SCS supports increased transit use and mode share, which lead to mobility and air quality improvements.

The SCS only shows how future growth and development could be allocated to planned growth areas consistent with the general plans of the cities and the County. As growth and development occurs, the cities and the County will review and approve development proposals and determine consistency with their plans, programs, and policies. The Fresno COG has no land use authority to approve future growth development. Urbanization in the region is anticipated to increase significantly by 2049 regardless of whether the 2026 RTP/SCS is implemented. As a result, Chapter 5.0, Alternatives, of this Draft PEIR includes a comparison between the expected future conditions with implementation of the RTP/SCS and the expected future conditions assuming the 2026 RTP/SCS is not adopted (or a comparison to the No Project Alternative). This evaluation is not included in the determination of significant impacts in the Draft PEIR, but it provides a perspective regarding the effects of implementing the 2026 RTP/SCS.

Three demographic measures form the primary SCS for future-year forecasts: population, employment, and households. The forecasts for the Fresno COG Region, which consists of the entire Fresno COG Region, are shown in Table 3.B, below. It is important to note that the population and employment forecasts were held constant for each SCS scenario and were the basis for the spatial distribution of land use in each scenario.

Table 3.B: Fresno COG Region Demographic Forecasts, 2022–2060

Year	Population	Employment	Households
2022	1,010,550	414,750	327,027
2025	1,017,950	421,140	331,896
2030	1,041,670	432,740	343,198
2035	1,066,610	442,600	351,580
2040	1,090,820	454,800	357,305
2045	1,111,570	466,150	362,973
2050	1,125,490	476,330	367,576
2055	1,131,120	484,780	370,674
2060	1,128,530	491,920	369,819

Source: Fresno Council of Governments and Applied Development Economics, Inc. 2024. Fresno County 2023-2060 Growth Projections. October 17.

SCS Scenario Alternatives. The 2026 RTP/SCS seeks to guide the Fresno COG Region toward a more sustainable future by coordinating land use, housing, and transportation planning to create communities that are more compact, walkable, and transit oriented. To achieve this aim, five SCS scenarios were developed during preparation of the SCS through an open and engaging public process, in addition to the No Project scenario as required under *State CEQA Guidelines* Section 15126.6(e). The five alternative scenarios considered included:

- **Scenario A: Connectivity and Mobility.** This scenario supports connectivity and community access through transportation capacity enhancements while maintaining current growth patterns. Strategies and priorities identified under this scenario include the following:

- Highest investment in road capacity;
- Strong funding for road maintenance and operations;
- Providing a variety of housing options;
- Growth across urban centers and suburbs; and
- Maintaining current development trends.

- **Scenario B: Resilient Roadways.** This scenario focuses on maintaining and operating existing roads, with some transportation capacity improvements. This scenario also focuses on maintaining urban density and some redevelopment. Strategies and priorities identified under this scenario include the following:

  - Highest investment in maintenance and operation;
  - Strong funding for capacity improvements;
  - Considering redevelopment and efficient land use; and
  - Growth distributed from centers to suburbs.

- **Scenario C: Enhanced Transit and Smart Growth.** This scenario combines efficient mobility with smart, sustainable urban growth focused on existing centers and established areas. Strategies and priorities identified under this scenario include the following:

  - Focus on transit system upgrades/improvements;
  - Moderate investment in road maintenance and operation;
  - Supporting higher-density growth with mixed-use development;
  - Additional growth in urban centers and established areas; and
  - Considering preservation of resource land.

- **Scenario D: Urban Rail and Transit-Oriented Growth**. This scenario links activity centers to the planned high-speed rail station and existing airports with light rail, targeting growth along transit corridors and infill areas. Strategies and priorities identified under this scenario include the following:

  - Significant investment in transit improvements;
  - Introduction of light rail connections between major corridors and centers;
  - Prioritizing transit-oriented development and efficient land uses; and
  - Promoting redevelopment for increasing urban density.

- **Scenario E: Regional Rail and Connected Communities.** This scenario connects cities with commuter rail, encouraging infill development and strong regional connectivity. Strategies and priorities identified under this scenario include the following:

  - Highest investment in transit;
  - Least focus on road capacity expansion;
  - Dense core growth by maximizing infill development; and
  - High-density transit-oriented development.

These SCS scenarios were designed to:

- Explore and clearly convey the impact of where the region grows over the next 20+ years (through 2049).
- Determine the extent to which growth is focused within existing urban areas (i.e., cities and towns).
- Determine how growth occurs or the shape and style of the neighborhoods and transportation systems that will shape growth over the period between the base year (2023) and 2049 (horizon year).

Preferred Project Alternative. The 2026 RTP/SCS only recommends one alternative scenario, which is the preferred project alternative. Although all five scenarios meet the GHG emission reduction targets set by CARB (refer to Appendix C, Transportation and Land Use Appendix, of the RTP/SCS document), Scenario C represents a growth scenario that is both ambitious and achievable for the region.

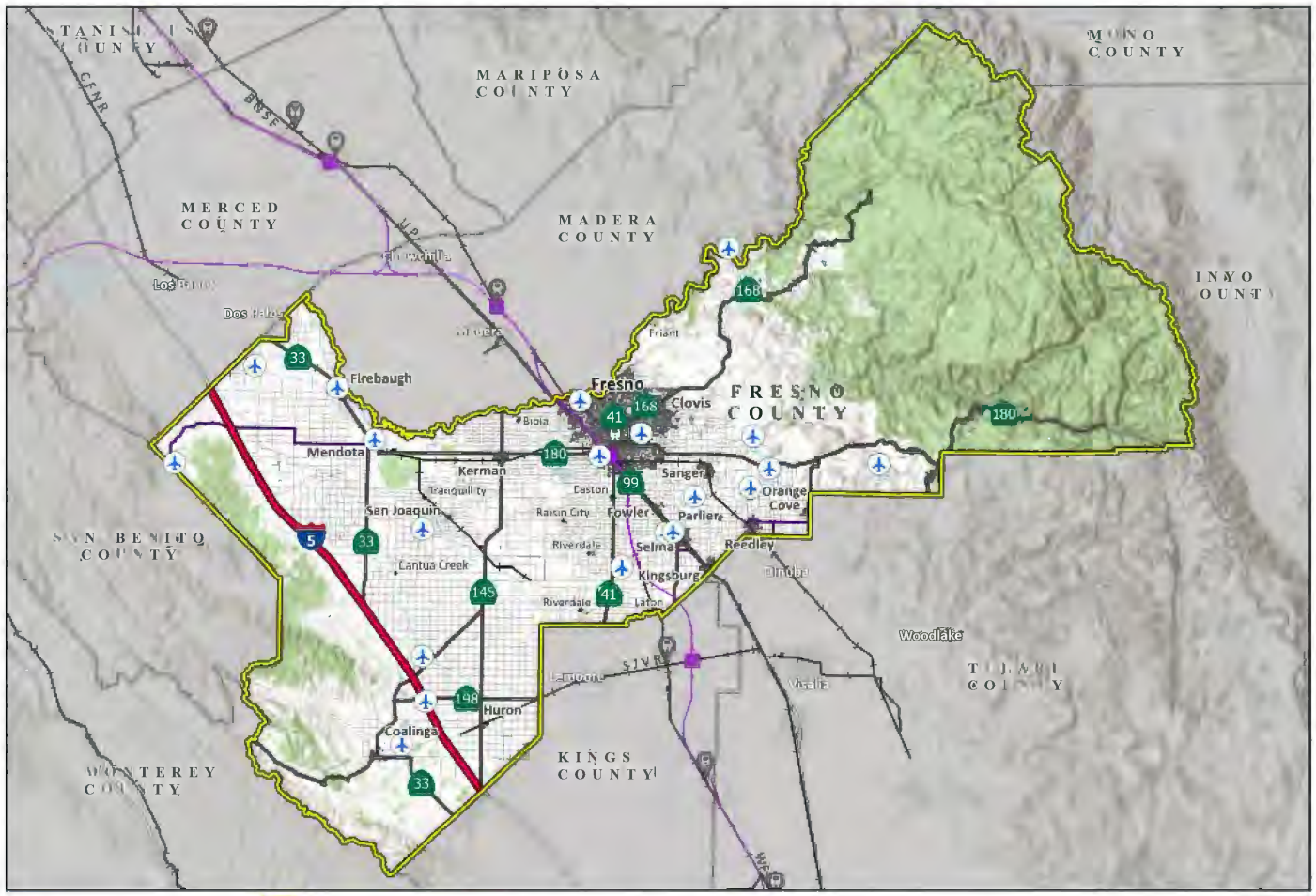
The Fresno COG's Policy Board adopted Scenario C as the preferred SCS scenario in March 2026. Scenario C represents a growth scenario that is both ambitious and achievable and provides transit improvements, mixed-use development, and increased density that helps to conserve the region's farmland and other natural resources.

Major features and benefits of Scenario C include:

- Offers the best climate protection (GHG emissions reduction).
- Provides the most public health benefits.
- Provides the most efficient travel.
- Preserves the most agricultural land.
- Results in the lowest VMT per capita.
- Preserves the most critical environmental resources.
- Is the most sustainable in land use development.

As a result, the 2026 RTP/SCS and this Draft PEIR contain and reflect Scenario C as the preferred SCS scenario for planning purposes. As such, this PEIR describes the proposed project as the 2026 RTP/SCS (Scenario C) reflective of the planned transportation system described in the RTP document and the SCS, which is documented in Chapter 4, Implementing the Plan, of the RTP/SCS, which is incorporated by reference. For purposes of this Draft PEIR, Scenarios A, B, D, and E were identified as Project Alternatives to the Preferred Project Alternative [2026 RTP/SCS (Scenario C)]. Each of these alternatives, along with the No Project Alternative, has been reviewed, and findings are included in Chapter 5.0, Alternatives, of this Draft PEIR.

The proposed project, for purposes of this Draft PEIR, is also known as the Preferred Project Alternative or the 2026 RTP/SCS Scenario C (refer to Figure 3-4). Major strategies of Scenario C include:



LSA

Fresno COG Region
Incorporated Area
Parks/Open Space
Airport
Amtrak Stations

Interstate Highway
State Route
County Road
Arterial
Local Road

Existing North American Rail Network Lines
California High-Speed Rail Statewide Alignments
California High-Speed Rail Station

0 9 18
Miles

SOURCE: Esri Terrain Basemap, USGS (2024), County of Fresno (2025), CDT (2019), USDOT (2025)
I:\2025\20252196\GIS\Pro\Fresno COG RTP EIR\Fresno COG EIR for 2026 RTP SCS.aprx (5/26/2026)

FIGURE 3-4

Regional Transportation Plan/Sustainable Communities Strategy
Intermodal Transportation Network

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- **Highest-Priority Strategies:**
  - Maintain existing streets and roads;
  - Improve bus transportation and ridesharing options;
  - Improve access and connection between cities/towns;
  - Limit the growth "footprint"; and
  - Encourage shifts away from the single-occupant vehicle.

- **Medium-Priority Strategies:**
  - Enhance operational efficiency and transportation demand management strategies;
  - Improve bikeways, trails, walking paths and sidewalks;
  - Modernize transportation options and infrastructure;
  - Improve traffic safety; and
  - Provide an efficient, reliable, and safe roadway system for transporting goods.

- **Low-Priority Strategies:**
  - Decrease congestion;
  - Provide a variety of housing options for all income levels; and
  - Support working from home.

Through the combined vision and efforts of the local agencies in the Fresno COG Region, significant strides are being made toward sustainable growth, walkable communities, and mixed-use development, values that are evident in their current planning assumptions and reflected in the RTP/SCS.

Greenhouse Gas Modeling. As part of its mandate under SB 375, CARB first adopted GHG emission reduction targets in September 2010, which were then updated in March 2018 for each of the State's 18 MPOs, including the Fresno COG. These targets, based on a 2005 baseline, required a 6 percent per-capita reduction in GHG emissions by 2020 and a 13 percent per-capita reduction by 2035 for the Fresno COG, as detailed in CARB's Notice of Decision Report.[21] Pursuant to SB 375, CARB staff initiated the target update process in 2024 with a public workshop, followed by another public workshop in 2025, and plan to conclude the process in 2026 with Board approval of the new targets. However, as of the date this PEIR was prepared, updated regional targets have yet to be adopted. Therefore, the 2018 regional targets remain applicable for the 2026 RTP/SCS.

The Fresno COG used both traffic modeling and off-model tools to quantify the GHG reductions from each potential SCS strategy.

As of October 1, 2018, applicable CARB emission reductions targets for the Fresno COG Region are 6% for 2020 and 13% for 2035.[22] SB 375 requires that the Fresno COG demonstrate in its SCS that

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21 California Air Resources Board (CARB). 2018. Notice of Decision: SB 375 GHG Emission Reduction Target Update (SCH #2017032003). March 22. Website: https://ww2.arb.ca.gov/sites/default/files/2020-06/SB375_Final_Target_Staff_Report_2018_Notice_of_Decision.pdf (accessed February 26, 2026).

22 California Air Resources Board. SB 375 Regional Targets. Website: https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-program/sb-375-regional-targets (accessed March 20, 2026).

GHG emission reduction targets will be met for 2035. If not, then an APS shall be prepared to demonstrate how the targets can be met through the alternative strategies in the APS.

In order to quantify the GHG reductions from each potential SCS strategy, including Scenario C, the Fresno COG used modeling tools capable of forecasting future land use, travel patterns, and economic conditions through 2035. Additional detail regarding SCS modeling is provided in Appendix C to the RTP/SCS document, which is incorporated by reference. This analysis concluded that implementation of Scenario C would result in a 13.56 percent reduction in CO_2 emissions from 2005 levels in 2035 (refer to Table 3.C below). It should be noted that CARB has not yet established GHG emission reduction targets for the 2026 RTP/SCS horizon year of 2049. Nevertheless, the Fresno COG modeling included this metric and determined that implementation of Scenario C would result in a 16.87 percent reduction in CO_2 emissions from 2005 levels in 2035.

Table 3.C: Demonstration of GHG Emission Reduction Targets

Year	Fresno COG Target Set by CARB	Scenario C
2035	13%	13.56%
2049	TBD	16.87%

Source: Fresno Council of Governments (COG). 2026.
CARB = California Air Resources Board
Fresno COG = Fresno Council of Governments
GHG = greenhouse gas

Expectations for meeting GHG targets are based on the modeling methodology utilized in support of the proposed 2026 RTP/SCS. Specifically, simulation models were used to determine if the SCS will meet the GHG reduction targets and measure outcomes from a set of indicators. The simulation models forecast future land use, travel patterns, and economic conditions through 2035. The Fresno COG developed an updated activity-based model (ABM) used for the 2026 RTP/SCS. The ABM uses micro-zones, which are based on census blocks, as the fundamental spatial unit for generating travel demand. Updates to the model in support of the 2026 RTP/SCS include the inclusion of paid ride-share mode sub-models and of a telecommute sub-model that allows resident workers to make the choice to telecommute (different from working from home and having no out-of-home work location).

Additional details on how the GHG emission reductions were calculated are provided in the Transportation and Land Use Appendix (Appendix C) of the RTP/SCS document, which is incorporated by reference.

The Fresno COG will continually update modeling tools and planning assumptions to reflect the latest information available. Should the likely future development pattern change, this would be reflected in the next regional growth forecast, SCS land use pattern, and RTP Update. The Fresno COG will also continue to improve modeling capabilities and update modeling assumptions to reflect the most recent published and accepted data regarding changes in travel behavior and technological advances.

It is important to note that the 2026 RTP/SCS addresses VMT from a broader range of vehicles than those addressed in SB 375, such as public transit buses, heavy-duty trucks, and school buses. The SCS focuses only on the requirements of SB 375, which call for travel-related GHG reductions for the specific vehicle classes of cars and light trucks. Other performance metrics related to GHG emissions are addressed in the balance of the 2026 RTP chapters where appropriate. In terms of cars and light trucks, there are three primary GHG emissions reduction strategies developed by the State. The SB 375 SCS requirements address regional land use and housing accommodation in the context of transportation investments. In future years, the State will also require increased use of lower-carbon fuels and increased fuel efficiency in vehicles. Transportation strategies contained in the RTP/SCS, such as investing in public transit systems, managing transportation demand, making transportation system improvements, and continuing to expand and improve bike and pedestrian facilities, are major components of the SCS. However, the SCS also focuses on the general land use growth pattern for the region because geographical relationships between land uses, including density and intensity, help determine the need for travel.

In summary, under SB 375, an SCS must:

- Identify future land use patterns
- Identify areas to accommodate long-term housing needs as well as 8-year housing needs
- Consider resource areas and farmland
- Identify transportation needs and the planned transportation network
- Set forth a future land use pattern to meet GHG emission reduction targets

SCS requirements do not create a mandate for certain land use policies at the local level. SB 375 specifically states, “Neither a sustainable communities strategy nor an alternative planning strategy regulates the use of land, nor, except as provided by subparagraph (J), shall either one be subject to any state approval. Nothing in an SCS shall be interpreted as superseding the exercise of land use authority of cities and counties within the region,” pursuant to Government Code Section 65080(b)(2)(K).[23] Rather, the SCS provides a regional policy foundation that local governments may build upon as they choose. Thus, local jurisdictions maintain the discretion and will be solely responsible for determining consistency of any future projects with the SCS, including discretion in certifying the environmental review for a project, regardless of eligibility for streamlining.

The Fresno COG member agencies have been and will continue to be involved in the SCS planning process and will be encouraged by the Fresno COG to recognize the land use and transportation policies developed in the SCS. Federal and State transportation funds go through the MPOs to the jurisdictions, thereby encouraging collaboration. However, it will be the cities and the County that review and approve development proposals and determine consistency with their plans, programs, and policies. The Fresno COG has no land use authority to approve future growth development as it occurs through the horizon year of the RTP/SCS (2049).

[23] Government Code Section 65080(b)(2)(K)). Website: https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=65080.&lawCode=GOV (accessed April 2025).

3.2.5 Overall RTP/SCS Themes

The following themes appear throughout the RTP/SCS as transportation characteristics specific to the Fresno COG Region.

3.2.5.1 Multimodal Travel

Transportation planning has relied heavily on analyzing separate and discrete transportation modes; however, as planners address congestion and air pollution, there is a growing awareness that solutions must be evaluated within the context of an integrated system rather than by individual mode only. This approach considers the Fresno COG Region's specific characteristics that may affect travel demands, which include, but are not limited to, the following:

- Fresno is the major population center for the San Joaquin Valley.
- The Fresno COG Region contains Kings Canyon National Park, as well as the Sierra and Sequoia national forests.
- SR-41 is the primary corridor to Yosemite, one of the two most visited national parks in the nation. More than four million people visited Yosemite National Park in 2024,[24] many of whom travel by automobile.
- As the highest-ranked county in the State for agricultural production, the Fresno COG Region has a strong farm-to-market travel demand affecting local roads and the State highway system. Freight movement occurs throughout the region, as farm agricultural and other commodities are brought to market and onto interregional routes.
- The region is crossed by two north-south corridors, SR-99 and I-5, each of which is vital to the statewide transportation network.
- Recreational trips are served by several State highways: SR-33, SR-41, SR-168, SR-180, SR-99, and I-5.
- While the distances between destinations and low housing densities have encouraged automobile travel, there are still both urban and rural populations that rely on public transit service. The transit systems are responsible for meeting State and federal farebox and ridership requirements.
- Fresno-Yosemite International Airport serves as the primary airport within the San Joaquin Valley.

[24] United States National Park Service. Annual Park Recreation Visits (1906 – Last Calendar Year). Website: https://irma.nps.gov/Stats/SSRSReports/Park%20Specific%20Reports/Annual%20Park%20Recreation%20Visitation%20(1904%20-%20Last%20Calendar%20Year)?Park=YOSE (accessed February 26, 2026).

- The climate and terrain are compatible with bicycle ridership for short commutes and recreational trips.

- Existing rail lines offer potential for expanding goods movement.

Any ultimate state of multimodal transportation service would be a system in which a traveler could make a "seamless" journey with connections between modes, taking minimum effort and involving little delay. Currently, such an ideal state can be reached only in the country's largest and densest cities with high land use densities and a variety of transit options. In the Central Valley, where cities have experienced much of their growth since the automobile's debut, residential densities tend to be comparatively low, with streets and land uses designed to encourage automobile use and storage.

It will require a strong commitment to air quality and quality-of-life goals in the Fresno COG Region to make the changes needed to implement the "seamless" multimodal system. This will involve people making conscious choices to use alternative transportation modes and providing those alternate systems in a manner that encourages their use. To succeed, those efforts would have to focus on long-term changes:

- Increasing land use intensity and residential densities, particularly along corridors used for transit.

- Facilitating mixed land use districts that promote living, working, shopping and recreation accessible by foot or bicycle, and that are served by centrally located transit routes (the Tower District in Fresno, downtown Fresno, Clovis' Old Town and many of the region's small cities serve as examples built more than 40 years ago).

- Expanding transit systems and service frequency.

- Developing connecting bikeway systems and encouraging their use.

- Improving connectivity between transit and other modes (air travel, biking, cycling etc.)

- Reserving future "park-and-ride" opportunities.

- An organized public education effort.

- Appropriate financing, including both operational and capital investment.

Although transportation systems planning encourages considering the many ways in which trips can be made, only a select group of Californians' trips are truly multimodal in the sense that they use more than one mode for a particular journey. These could include park-and-ride commuting trips where a private automobile or bicycle is taken to a vanpool site, or taking a car, bus, or shuttle to the airport or train. Transportation corridors where rights-of-way can be preserved and developed to accommodate more than one form of travel are also being evaluated. Most commonly, efforts are directed to improve existing facilities, maintain those options, and work to create the potential to

make connections among systems in a manner that allows and encourages a gradual shift to more environmentally favorable travel patterns.

Figure 3-5 shows the intermodal network, illustrating mode options that frequently exist over the same corridor, as with transit and the regional roads, or along the SR-99 corridor, which has adjacent rail lines. The regional transportation system has further developed (including improvements included in the 2022 RTP/SCS) due largely to additional resources from local sales tax Measure C and its reauthorization.

3.2.5.2 Corridor Preservation

Local jurisdictions, the Fresno COG, Caltrans, and private landowners will need to coordinate closely to set aside rights-of-way for planned corridors of State highways, including interchanges, as well as major local arterial and collector streets. Future demand will require a regional approach for corridor preservation that crosses jurisdictional boundaries. Metropolitan agencies have encouraged abandoned rail lines be preserved for either non-motorized trail or bikeway systems, or for eventual conversion to public transit or light rail systems.

Cities with an agricultural base need to maintain rail service options to move crops to market. Meanwhile, the State continues to plan for HSR in California. Given the population growth and air quality constraints, the proposed 2026 RTP/SCS supports the corridor alignment that provides service to major population centers within the Central Valley.

3.2.5.3 Goods Movement

Shipping raw materials and finished goods is a central feature of any economy. While the trucking industry carries the majority of freight, commodity movement can occur by road, rail, air, and pipeline. Throughout the State, freight movement over State highways has grown faster than capacity, and the Fresno COG Region is no exception to this trend.

The *San Joaquin Valley I-5/SR 99 Goods Movement Corridor Study*[25] recommends projects and improvements that contribute to an efficient, safe, integrated, multimodal transportation system.

The eight San Joaquin Valley RTPAs, in conjunction with Caltrans and San Joaquin Valley Air Pollution Control District (SJVAPCD), have undertaken a series of phased studies to improve commodity movement within and through the valley. The third phase culminated with a truck model, intended to forecast truck trips and VMT, analyze air quality and emissions from heavy-duty trucks, impacts of congestion on major truck routes, and safety and road maintenance issues associated with truck activity. The third phase also provided improvements to truck model and integration with local

[25] Cambridge Systematics, Inc. 2017. *San Joaquin Valley I-5/SR 99 Goods Movement Corridor Study.* June 30. Website: https://sjvcogs.org/wp-content/uploads/2017/08/DR1_FresnoCOG_FinalReport_20170710-2.pdf (accessed February 26, 2026).

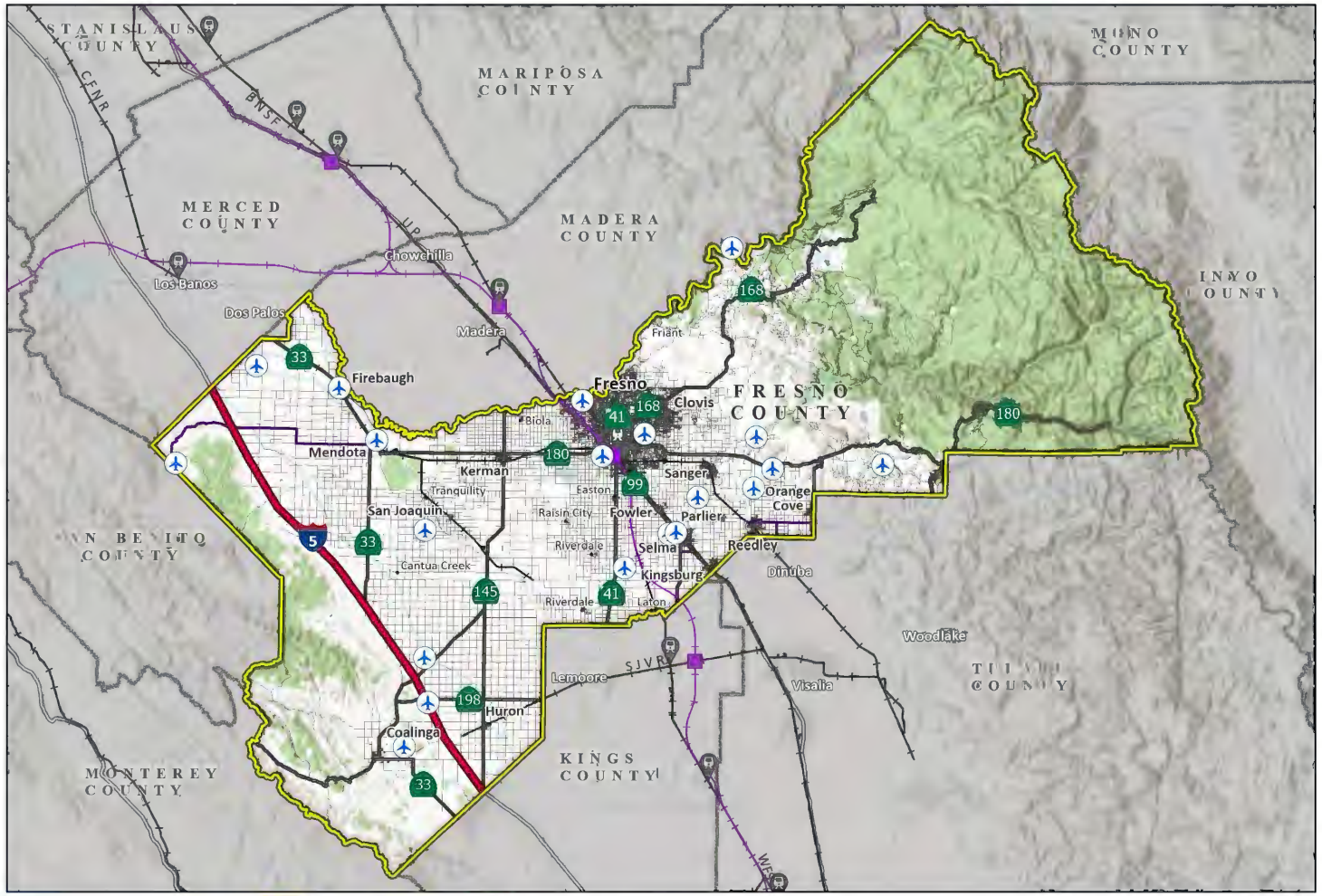


FIGURE 3-5

Regional Transportation Plan/Sustainable Communities Strategy
Intermodal Transportation Network

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models. Additionally, the San Joaquin Valley RTPAs developed the *San Joaquin Valley Interregional Goods Movement Plan.*[26] The document is a coordinated strategic plan for system-wide, multi-modal goods movement planning in the San Joaquin Valley.

In addition to the *San Joaquin Valley Interregional Goods Movement Plan,* the Fresno COG served as the project manager for a Caltrans-funded study focusing on the potential for a short-haul rail intermodal service to connect the San Joaquin Valley with the Port of Oakland. The study, known as the California Interregional Intermodal Service (CIRIS),[27] analyzed alternatives that would reduce truck traffic by diverting some of the goods between the San Joaquin Valley and the Port of Oakland from the current truck operations to rail.

The Fresno COG has also led several phases of the California Inland Port Project studies. These studies evaluated shifting goods from the ports of Los Angeles and Long Beach from truck to rail and identified locations in the Central Valley as potential inland ports for transloading. Overall, implementation of the inland port concept in California supports a wide range of State and local public policy objectives, including improved economic competitiveness, reduced GHG emissions, and decreased highway congestion. Phase One of the feasibility study was completed in 2020, and Phase Two is currently underway, focusing on market readiness and acceptance, cost estimation, partnership development with one or both Class I railroads, assessment of regional economic competitiveness, and understanding the environmental process necessary to move forward. This phase also establishes the Executive Advisory Group (EAG), which helps inform decision making throughout the study. All major stakeholders have a role in the EAG, and the private sector, including major shippers and experts, provides guidance through a Shipper's Committee.[28]

3.2.5.4 Recreational Travel

The Fresno COG Region hosts many recreational destinations of regional significance and includes routes to others in adjacent counties. Residents and travelers of the region throughout the State vacation to, or pay short visits to, many destinations, including:

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26 Cambridge Systematics, Inc. 2013. *San Joaquin Valley Interregional Goods Movement Plan.* August. Website: https://www.fresnocog.org/wp-content/uploads/2017/04/FR2_SJV-Goods-Movement-Plan_Task-9-Final-Report_0830136.pdf (accessed February 26, 2026).

27 The Tioga Group, Inc. et al. 2006. *California Inter-Regional Intermodal System (CIRIS) Implementation Plan Final Report.* June 11. Website: http://tiogagroup.com/docs/Tioga_Grp_CIRIS_2006.pdf (accessed February 26, 2026).

28 San Joaquin Valley Regional Policy Council. n.d. *California Inland Port Project - A Transformative Project for the State of California.* Website: https://sjvcogs.org/california-inland-port-project/ (accessed March 3, 2026).

- Yosemite Valley
- Grant Grove
- Boyden Cavern
- John Muir Wilderness
- Millerton Lake
- Sequoia Lake
- San Joaquin River
- Kings River
- Shaver Lake
- Huntington Lake
- Kaiser Wilderness Area
- One Flat Reservoir

The Fresno-Clovis Metropolitan Area also houses the Fresno Convention Center and is the destination point from outlying communities for theater, musical events, the Fresno County Fair, sports and other special-interest events, and regional shopping. California State University, Fresno, is a major attractor for football, baseball, basketball, track, and cultural events, and is also a major employer within the region. The State Center Community College has campuses in Clovis, Fresno, and Reedley, as well as in Madera County north of the Fresno COG Region border near SR-99.

3.2.5.5 Transportation Security

Given potential, unexpected, large-scale security incidents or natural disasters, the federal BIL and the FAST Act require that MPOs consult with agencies and officials responsible for planning natural disaster risk reduction. These regulations recommend that the RTP be consistent with emergency relief and disaster preparedness plans, strategies and policies that support homeland security and safeguard users' personal security of all motorized and non-motorized users. The County of Fresno prepared a Hazard Mitigation Plan in 2024 to identify and profile hazards that pose a risk to the County (e.g., wildfires, floods, and earthquakes), assess the region's vulnerability to these hazards, and examine the capabilities in place to mitigate them.[29]

Transportation plays a crucial role in emergency evacuations. Examples of transportation strategies that have been implemented within the Fresno COG Region with emergency operations in mind include the following:

- The City of Fresno's Traffic Operation Center (TOC) Advanced Transportation Management System (ATMS), which has the capability to provide continuous green lights to Intelligent Transportation Systems (ITS) corridors;

- Traffic control guides that deploy traffic control personnel to key intersections based on criteria to manually direct traffic;

- Electronic freeway signage that uses changeable message sign boards to post messages about evacuation centers and other important traffic movement information; and

- Mobilizing mass transit, including Fresno Area Express, Handy Ride, school buses, and public- and private-sector transportation providers to assist the general public and populations with special transportation needs.

[29] County of Fresno. 2024. *Hazard Mitigation Plan.* May. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/2/public-health/fresno-county-hmp-final.pdf (accessed February 26, 2026).

Agencies are continuously improving their emergency response plans, such as developing citywide emergency or evacuation signal timing plans and incorporating TOC's strategy and plan development into the citywide planning efforts.

3.2.5.6 Modal Financing

Chapter 6 of the RTP/SCS provides the Financial Element, which discusses the investment decisions and revenue assumptions that were considered in the RTP/SCS. It identifies anticipated revenue sources as well as the financing techniques available for the region's planned transportation investments, ongoing operations, and maintenance. The Financial Element addresses available revenue sources as well as the federal, State, regional, and local revenues the region may expect over the next 25 years.

Among other considerations, the Financial Element:

1. Estimates the costs and projects the revenues available for transportation system improvements recommended in the RTP. In doing so, it contains financial assumptions and projections that set parameters for the RTIP.

2. Describes how revenue projection models were analyzed leading to a preferred project scenario. It serves as an inventory of existing and potential new transportation funding sources for transportation system improvements in the Fresno COG Region.

3. Identifies potential funding shortfalls along with recommendations for potential revenue sources that the region could pursue to implement the transportation vision over the long term.

4. Includes a "financially constrained" program as required by federal legislation. Financial forecasts are used to plan investments using revenues that are reasonably expected to be available. Also included is a list of projects ("financially unconstrained") that are both necessary and desirable should funding become reasonably available.

5. Includes a general discussion of how projects are programmed into the RTP's financially constrained and unconstrained list.

6. Discusses how the region will implement the RTP/SCS plan investments through subsequent programming actions.

As previously described, the RTP/SCS contains a financially constrained project list, which identifies programs for which funding has been identified or is reasonably expected to be available within the RTP's planning horizon. Federal statute states that a financial plan must demonstrate how the projects can be built while the existing transportation system is being maintained. To meet this requirement, the RTP compares revenue projections for its planning horizon against all projects needed to support the region's surface transportation investments provided by the member agencies.

The Financial Element's assumptions include revenue estimates for specific governmental funding programs, local contributions, and tax initiatives. The assumptions provide a level of financial detail

adequate for local and State decision-makers to exercise options. Member agencies submit planned projects that are expected to be completed within the RTP's planning horizon. This process then allows the Fresno COG to compare estimated project costs against projected revenues to ensure that the adopted program of projects will not exceed reasonably foreseeable future revenues.

Appendix B to the 2026 RTP/SCS describes the available revenues for each funding source throughout the planning period. The totals reflect an estimated annual average amount from each of the various funding sources for the years 2026 through 2049.

It should be noted that the financial calculations provided in the 2026 RTP/SCS rely on the following assumptions:

- The RTP's estimated revenues assume an inflation rate of 2 percent and are reported in expenditure year dollars.
- Local Transportation Fund revenues are assumed to be constant throughout the RTP's lifespan.
- The Surface Transportation Block Grant Program (STBG) and the Congestion Mitigation and Air Quality Improvement (CMAQ) Program will continue or be replaced by similar programs throughout the RTP's life.
- Federal and State transit funds are assumed to remain at their present levels throughout the plan's life.
- Projected State and federal highway revenues reflect the average amounts programmed in the State Transportation Improvement Program (STIP) and are consistent with the California Transportation Commission (CTC) adopted, 5-year STIP fund estimate.
- Measure C, Fresno County's local half-cent sales tax for transportation improvements, will be renewed and/or augmented before it expires in 2027. Voters have extended the measure once already, in 2006.
- Respective transit operators have provided specific revenue projections for their services.
- The Fresno COG's member agencies have provided local streets and roads revenue projections.
- Successful acquisition of a "Better Utilizing Investments to Leverage Development Transportation Discretionary" (BUILD) Grant is assumed in the first half of the RTP planning period.
- The utilization of advanced construction is assumed whenever appropriate to advance funding for planned projects into the first half of the RTP planning period.

A listing of available and assumed funding sources is contained in the RTP/SCS document incorporated by reference into this Draft PEIR and is also provided in Table 3.D, below.

Table 3.D: Regional Transportation Plan Funding by Source

Fund Name	Transportation Mode	Funding Contribution		
		Current (2026)	Midpoint (2037)	Final (2049)
Federal				
Active Transportation Program (ATP) Regional	Bicycle/Pedestrian	$2,456,955	$34,854,986	$84,549,862
ATP – Statewide Awards	Bicycle/Pedestrian	$3,192,428	$45,307,033	$109,904,027
Better Utilizing Investments to Leverage Development Transportation Discretionary (BUILD) Grants Program	Capacity	$4,224,109	$59,949,680	$145,421,163
Congestion Mitigation and Air Quality Improvement (CMAQ)	Mixed-Use	$16,269,771	$230,901,071	$560,110,787
Federal Transit Administration (FTA) 5307 (Urbanized)	Transit	$12,561,520	$178,273,463	$432,448,794
FTA 5310 (Enhanced Mobility)	Transit	$720,981	$10,232,184	$24,820,831
Highway Safety Improvement Program (HSIP)	Mixed-Use	$1,291,531	$17,322,130	$39,290,778
Infrastructure for Rebuilding America (INFRA)	Capacity	$750,000	$10,644,022	$25,819,853
Surface Transportation Block Grant (STBG)	Mixed-Use	$15,531,047	$220,417,078	$534,679,127
State				
Intercity Rail Capital Program (TIRCP)	Transit	$14,616,700	$207,440,638	$503,201,387
Interregional Transportation Improvement Program (ITIP)	Mixed-Use	$1,210,000	$16,229,629	$36,810,454
Local Partnership Program (LPP)	Mixed-Use	$2,020,000	$28,667,900	$69,541,470
Local Partnership Program (LPP) Competitive	Mixed-Use	$777,000	$11,027,207	$26,749,367
Article 3, LTF – Bike/Ped Shares	Bicycle/Pedestrian	$1,176,387	$16,695,319	$40,498,852
Senate Bill (SB) 125 Approved	Transit	$54,530,648	$54,530,648	$54,530,648
Section 190 Grade Separation Program	Maintenance/Operations	$138,010	$1,958,642	$4,751,197
Solutions for Congested Corridors (SCCP)	Mixed-Use	$189,426	$2,688,339	$6,521,269
State Highway Operations and Protection Program (SHOPP)	Maintenance/Operations	$70,327,750	$998,093,507	$2,421,136,191
State Transit Assistance (STA)	Transit	$10,341,764	$146,770,620	$356,030,430
State Transportation Improvement Program (STIP Regional)	Mixed-Use	$16,670,000	$236,581,133	$573,889,258
Trade Corridor Enhancement Program (TCEP/SB-1 Competitive)	Capacity	$520,298	$6,978,283	$15,828,434

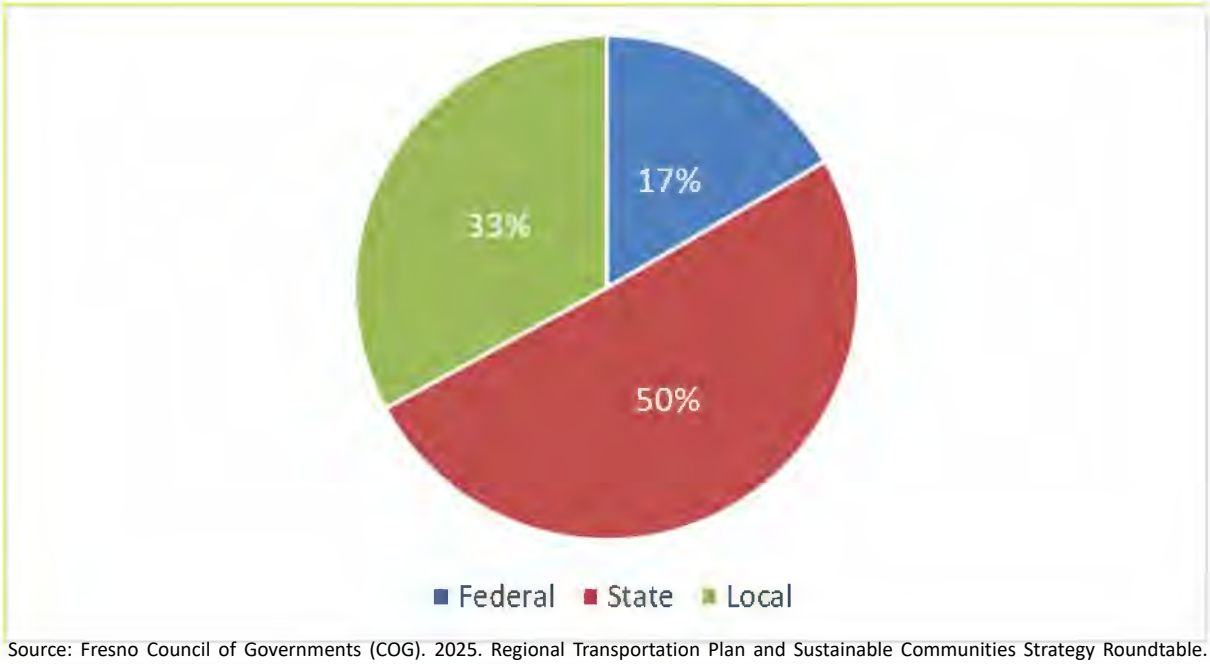
Table 3.D: Regional Transportation Plan Funding by Source

Fund Name	Transportation Mode	Funding Contribution		
		Current (2026)	Midpoint (2037)	Final (2049)
Local				
Fresno County Local Sales Tax (Current Shares, 2007 Extension)	Mixed-Use	$112,760,872	$112,760,872	$112,760,872
Fresno County Local Sales Tax (Combined Usage, 2027 Future Extension Shares)	Mixed-Use	$0	$1,494,765,849	$3,787,495,007
Total Regional Transportation Plan Funding		**$342,276,197**	**$4,143,088,233**	**$9,966,790,058**

Source: Fresno Council of Governments (COG). 2025. Regional Transportation Plan and Sustainable Communities Strategy Roundtable. May 28.

Figures 3-6 through 3-8, below, provide breakdowns of the funding source categories described in Table 3.D, above (federal, State, and local), for each milestone year.

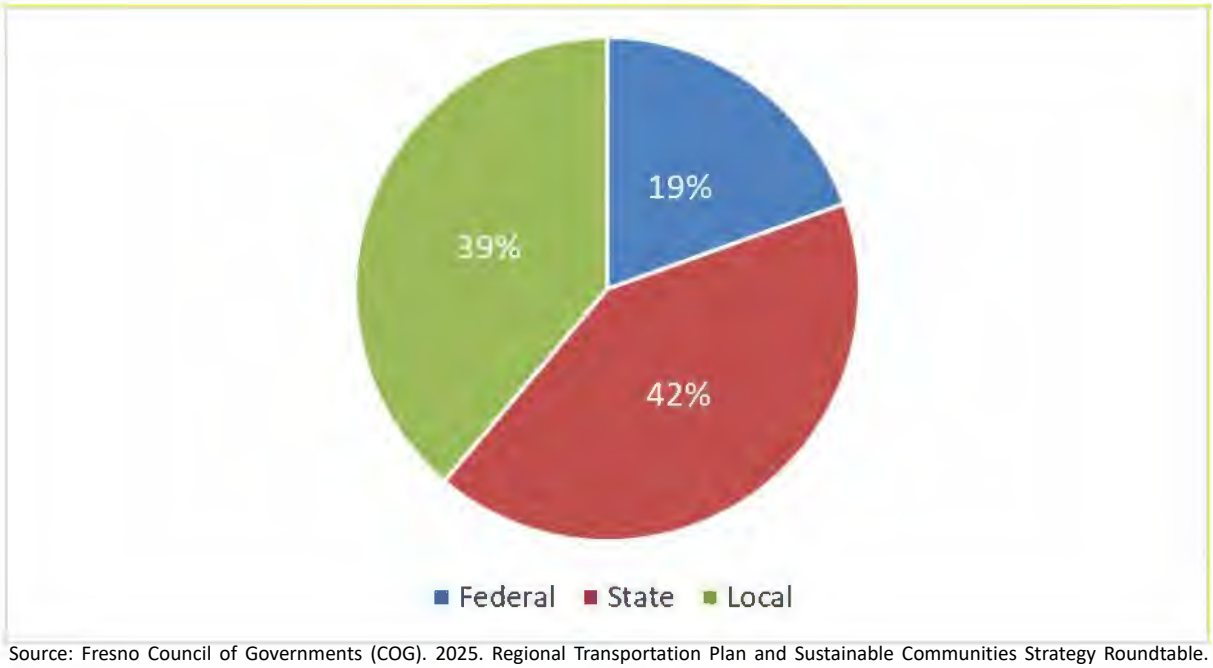
Figure 3-6: Regional Transportation Plan Funding Contribution by Source (Current Year 2026)



Source: Fresno Council of Governments (COG). 2025. Regional Transportation Plan and Sustainable Communities Strategy Roundtable. May 28.

As shown on Figure 3-6, above, in the RTP's current year (2026), State sources are the largest contributor to RTP transportation project funding, followed by local sources.

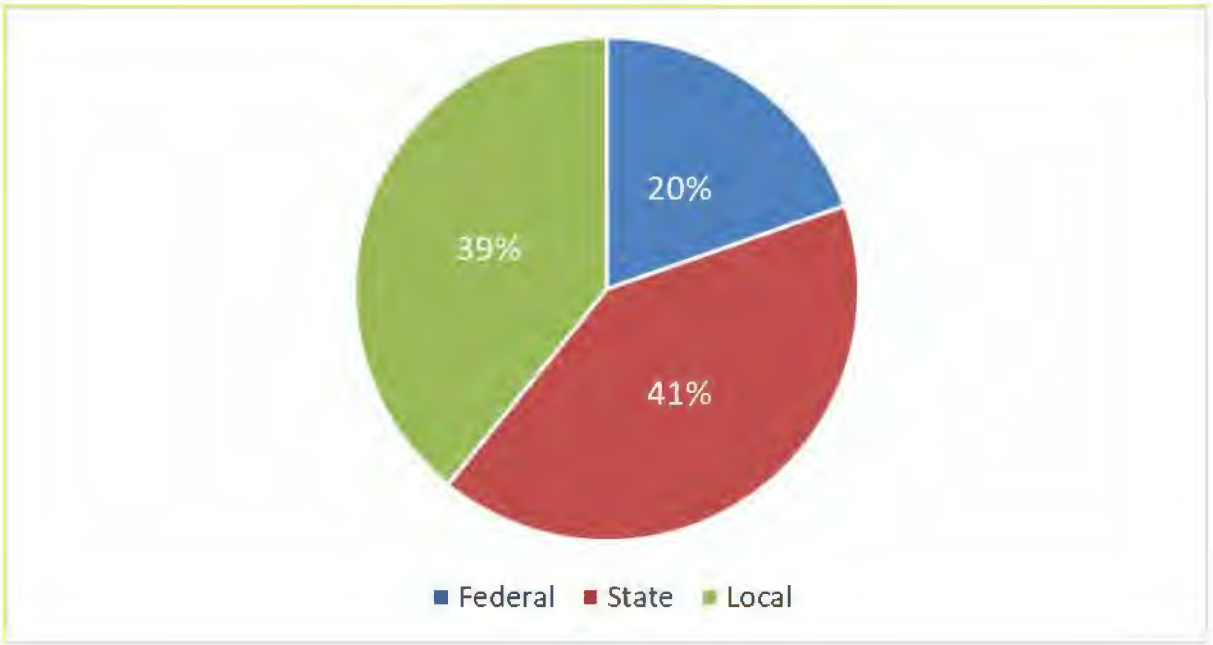
Figure 3-7: Regional Transportation Plan Funding Contribution by Source (Midpoint Year 2037)



Source: Fresno Council of Governments (COG). 2025. Regional Transportation Plan and Sustainable Communities Strategy Roundtable. May 28.

As shown on Figure 3-7, above, in the midpoint year of 2037, State sources are the largest contributor to RTP transportation project funding, followed by local sources.

Figure 3-8: Regional Transportation Plan Funding Contribution by Source (Horizon Year 2049)



Source: Fresno Council of Governments (COG). 2025. Regional Transportation Plan and Sustainable Communities Strategy Roundtable. May 28.

As shown on Figure 3-8, above, in the RTP horizon year of 2049, State sources are the largest contributor to RTP transportation project funding, followed by local sources.

The Project Evaluation Criteria were used to score and prioritize projects submitted during the RTP Call for Projects in the event that the cost of project submittals exceeded projected available funding. An RTP Project Evaluation Criteria Focus Group discussed the 2026 RTP Project Evaluation Criteria. The Focus Group consisted of various representatives from COG member agencies and nongovernmental organizations with an interest in bike/pedestrian facilities, air quality, health, and transportation equity. The Focus Group met on three separate occasions (July 23, August 1, and August 13, 2024) in an effort to ensure a comprehensive set of criteria, and the final 2026 Project Evaluation Criteria were approved by the Fresno COG Policy Board on September 26, 2024.

The 2026 Project Evaluation Criteria Update involved substantial revisions to the 2022 RTP Project Evaluation Criteria, including revisions to project top score weight, an updated bike/pedestrian connectivity question, removal of a climate adaptation question, rephasing of questions, and general verbiage updates throughout the document. The objectives of these updates were to ensure that (1) community values and funding priorities were represented, (2) criteria were clearly defined and based on quantifiable metrics, and (3) criteria were applied to project modes only when appropriate and relevant.

The 2026 RTP Project Evaluation Criteria were used solely to determine a project's ranking in the RTP in terms of projected funding. The criteria, in combination with the SCS strategies, were used to

create the RTP's constrained and unconstrained list of projects. The 2026 RTP Project Evaluation Criteria are provided in Chapter 6, Financial Element, of the RTP/SCS.

As with the 2022 RTP, one Revenue Projection was developed for the 2026 RTP, and a Project Scenario Tool was created to automate the process for determining which projects should be considered for flexible funding sources (see Appendix B to the 2026 RTP/SCS for further discussion on the Project Scenario Tool). The priorities of each project scenario determined where flexible funding sources would be allocated. The Project Scenario Tool took into consideration the scores each project received for certain questions in the RTP Project Evaluation Criteria, and the scores determined the priorities emphasized in each of the five SCS scenarios. All five alternatives were fine-tuned by fluctuating federal, State, and local funding sources, as listed in Table 3.D, above.

The 2026 RTP financially constrained listing reflects a total project amount of $9,910,000,000. Each of the 2,827 transportation investment projects identified in the constrained project list can be assigned to one of six transportation modes/categories (Bike and Pedestrian; Transit; Streets and Roads – Capacity; Streets and Roads – Operations; Streets and Roads – Maintenance; and Other). Table 3.E, below, provides the estimated total transportation investment costs by project category.

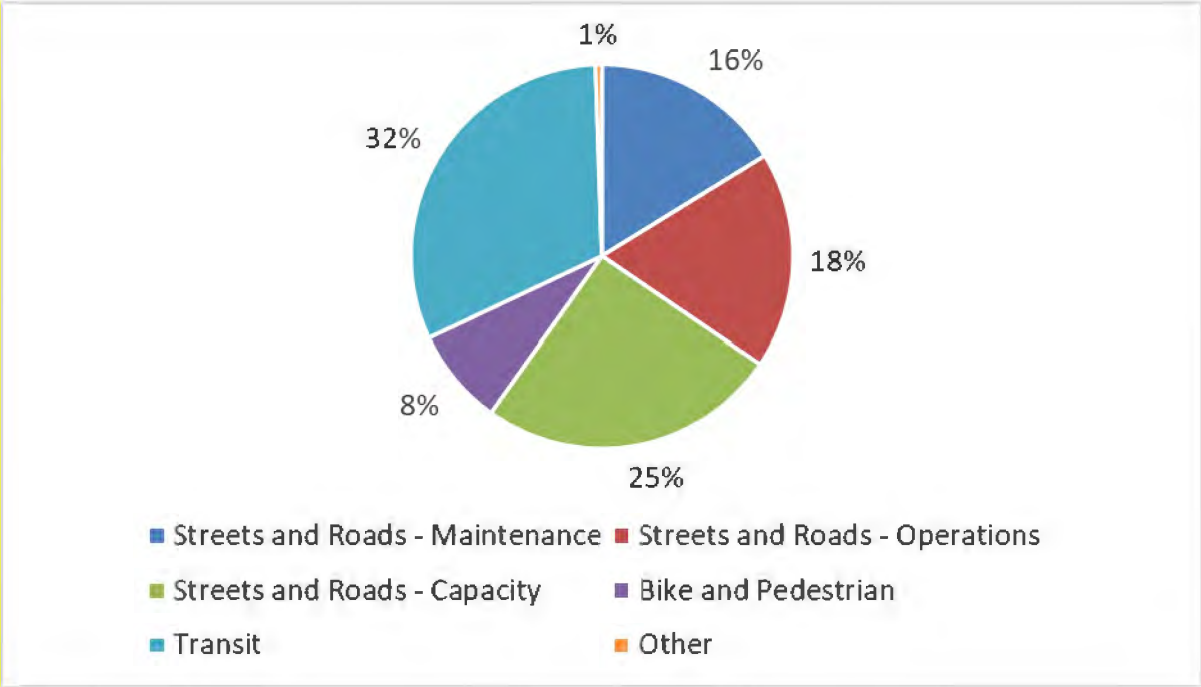
Table 3.E: Overall Sustainable Communities Strategy Estimated Investment Cost by Project Category

Category	Project Count	Estimated Cost
Bike and Pedestrian	737	$802,250,000
Transit	152	$3,130,000,000
Streets and Roads – Capacity	295	$2,500,000,000
Streets and Roads – Operations	461	$1,830,000,000
Streets and Roads – Maintenance	1,169	$1,600,000,000
Other	13	$52,810,000
Total	2,827	$9,910,000,000

Source: Fresno Council of Governments (COG). 2025. 2026 RTP Projects Map – Draft. July 14.

As shown in Table 3.E, above, and Figure 3-9, below, the transportation project category resulting in the highest investment cost is Transit, followed by Streets and Roads – Capacity. The transportation project category with the highest project count is Streets and Roads – Maintenance, followed by Bike and Pedestrian.

Figure 3-9: Overall Sustainable Communities Strategy Estimated Investment Cost by Project Category

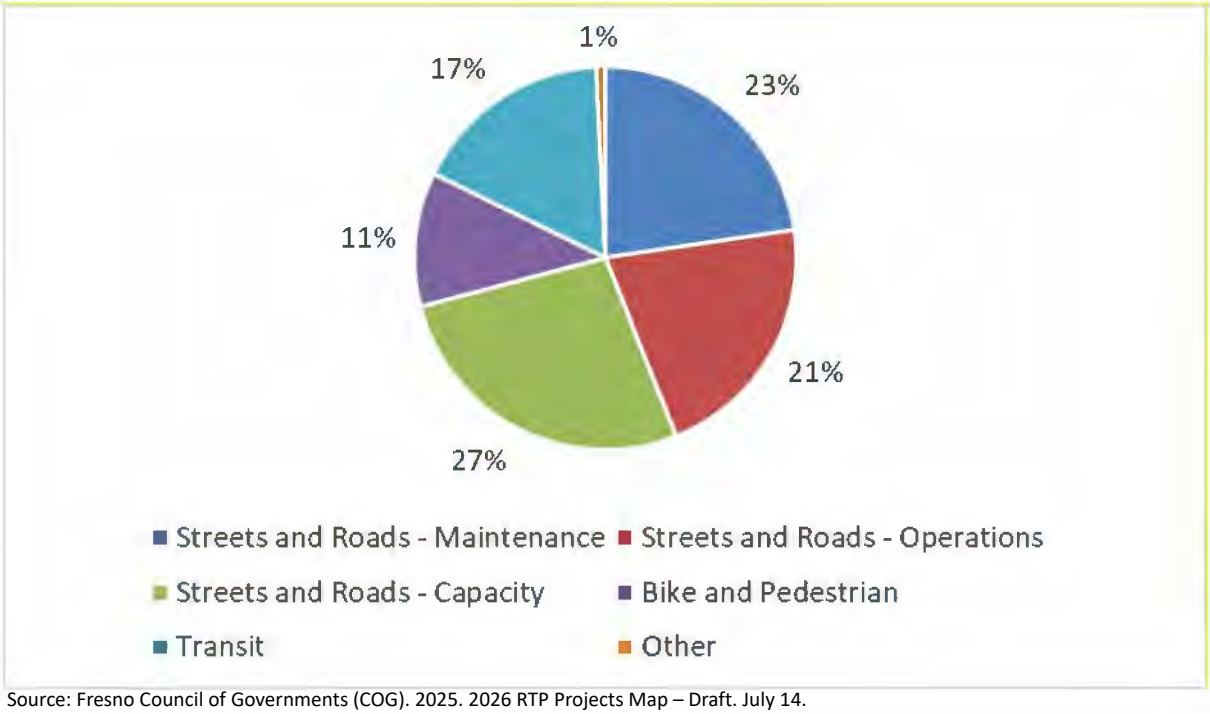


Source: Fresno Council of Governments (COG). 2025. 2026 RTP Projects Map – Draft. July 14.

A comparison of each SCS scenario alternative by transportation project category investment cost is shown below on Figures 3-10 through 3-14. Each of the five scenarios results in slightly different lists of constrained projects due to how strategies are prioritized. However, the project lists do not differ vastly, given that different funding sources in the revenue projection are intended for specific uses and have certain restrictions.

Additional information on the project list, revenue projection, and funding sources is available in Chapter 6, Financial Element, of the 2026 RTP/SCS incorporated by reference.

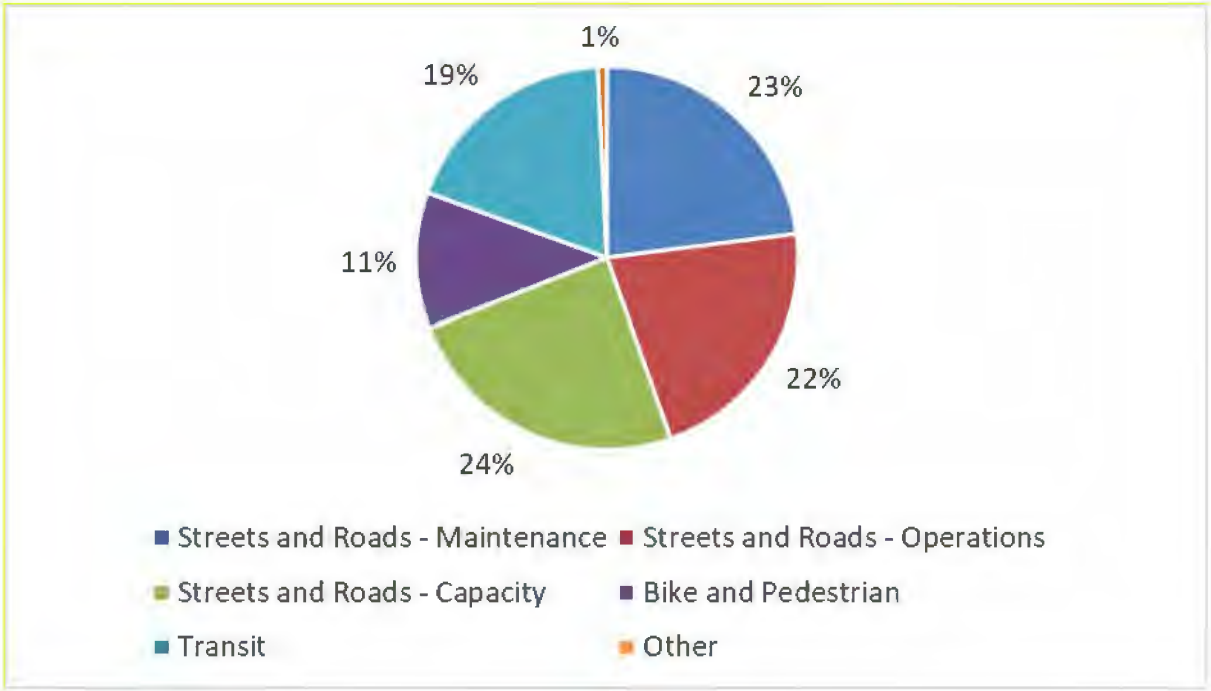
Figure 3-10: Scenario A Investment Cost Breakdown



Source: Fresno Council of Governments (COG). 2025. 2026 RTP Projects Map – Draft. July 14.

As shown above on Figure 3-10, Scenario A would involve the highest investment costs in the project categories of Streets and Roads – Capacity, Streets and Roads – Maintenance, and Streets and Roads – Operations.

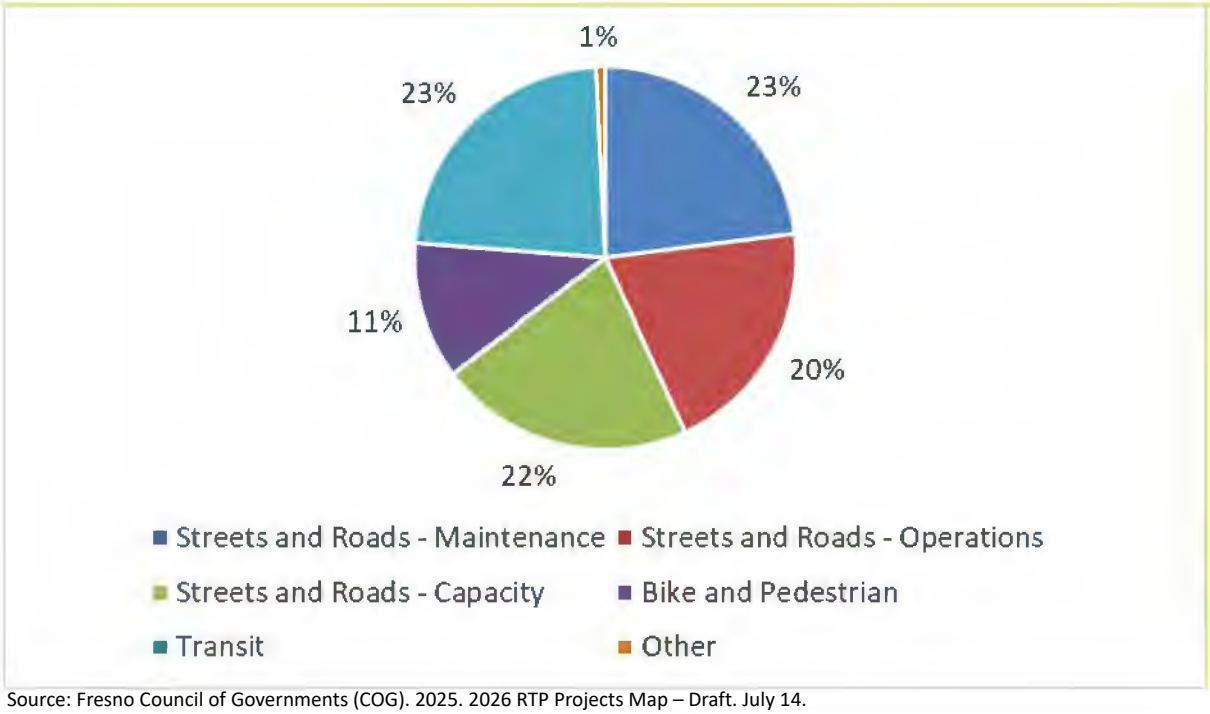
Figure 3-11: Scenario B Investment Cost Breakdown



Source: Fresno Council of Governments (COG). 2025. 2026 RTP Projects Map – Draft. July 14.

As shown above on Figure 3-11, similar to Scenario A, Scenario B would involve the highest investment costs in the project categories of Streets and Roads – Capacity, Streets and Roads – Maintenance, and Streets and Roads – Operations. However, Scenario B would involve a slightly lower investment cost in the Streets and Roads – Capacity project category and slightly higher Transit and Streets and Roads – Operations investment costs.

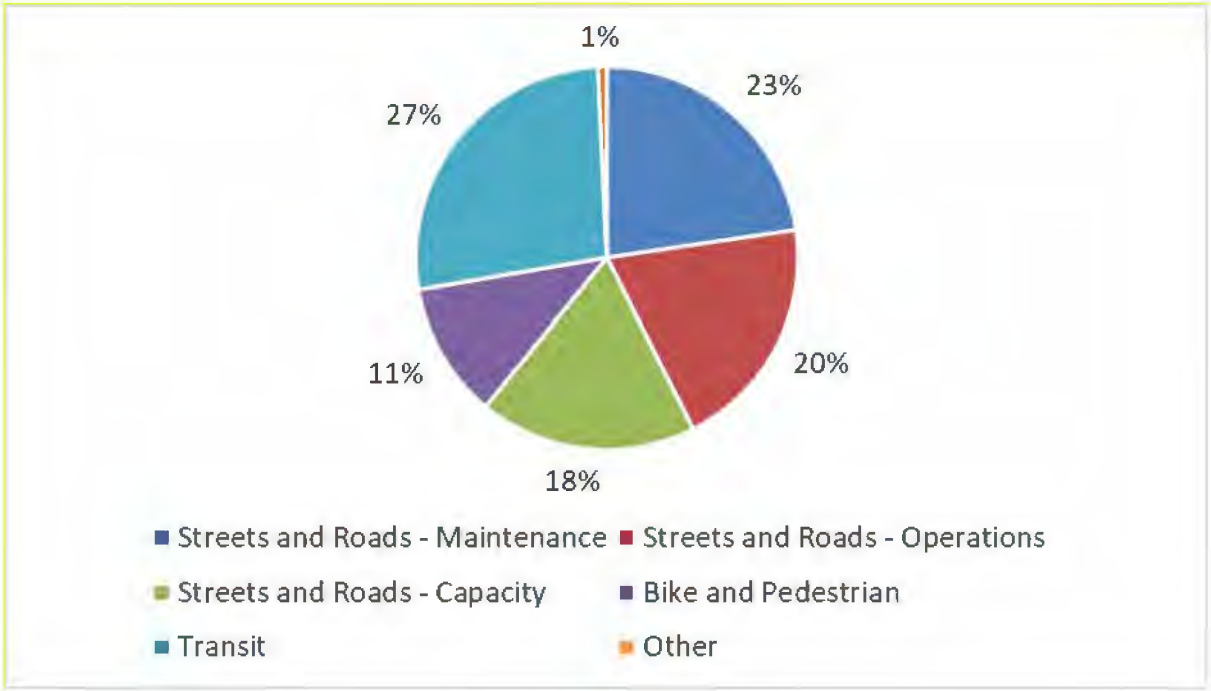
Figure 3-12: Scenario C Investment Cost Breakdown



Source: Fresno Council of Governments (COG). 2025. 2026 RTP Projects Map – Draft. July 14.

As shown above on Figure 3-12, Scenario C would involve the highest investment costs in the project categories of Transit, Streets and Roads – Maintenance, and Streets and Roads – Capacity.

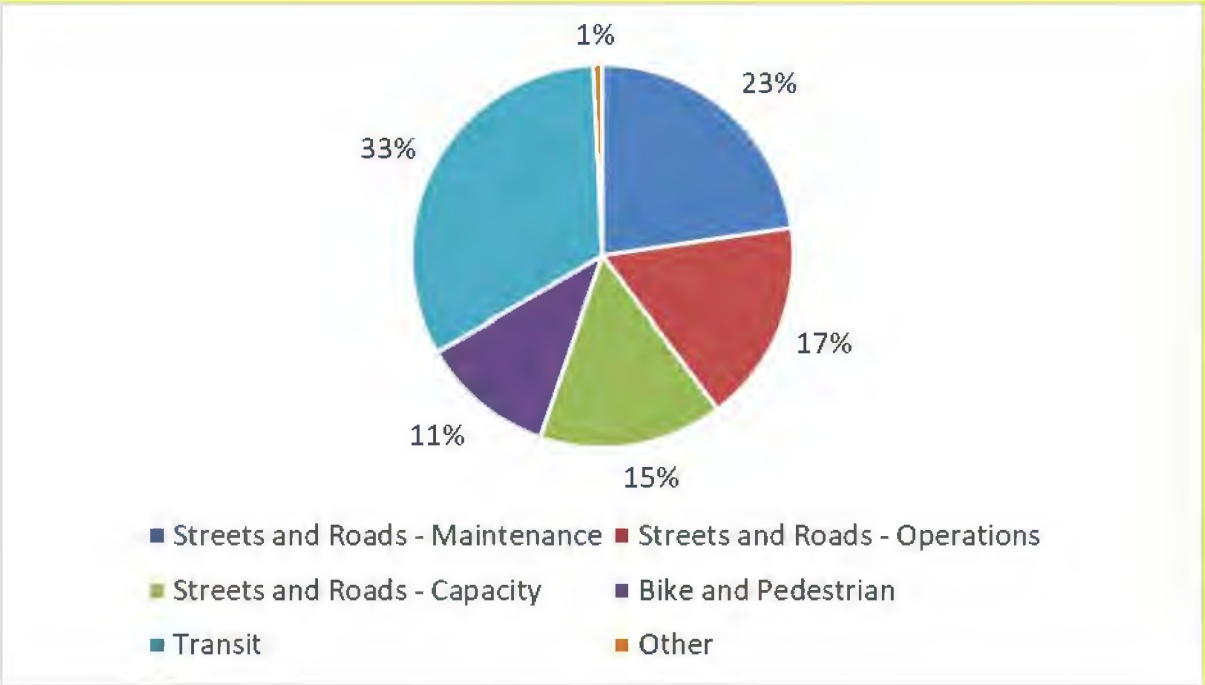
Figure 3-13: Scenario D Investment Cost Breakdown



Source: Fresno Council of Governments (COG). 2025. 2026 RTP Projects Map – Draft. July 14.

As shown above on Figure 3-13, Scenario D would involve the highest investment costs in the project categories of Transit, Streets and Roads – Maintenance, and Streets and Roads – Operations.

Figure 3-14: Scenario D Investment Cost Breakdown



Source: Fresno Council of Governments (COG). 2025. 2026 RTP Projects Map – Draft. July 14.

As shown above on Figure 3-14, similar to Scenario D, Scenario E would involve the highest investment costs in the project categories of Transit, Streets and Roads – Maintenance, and Streets and Roads – Operations. However, Scenario E would involve a higher investment cost in the Transit project category, and slightly lower Streets and Roads – Capacity and Streets and Roads – Operations investment costs.

Table 3.F, below, illustrates the revenue investment by transportation mode between the 2022 RTP/SCS and its 2026 update. The region is investing significantly more in transit and is decreasing funding in other modes.

Table 3.F: Revenue Investment by Transportation Mode, 2022 RTP/SCS vs. 2026 RTP/SCS

Transportation Mode	2022 RTP/SCS	2026 RTP/SCS
Bicycle and Pedestrian	17%	8%
Capacity Increasing	27%	25%
Maintenance and Operation	39%	35%
Transit	17%	32%

Source: Fresno Council of Governments (COG). 2025. 2026 RTP Projects Map – Draft. July 14.
RTP/SCS = Regional Transportation Plan/Sustainable Communities Strategy

3.2.5.7 Public Participation

Public participation was encouraged at every stage of the RTP/SCS planning process and all meetings were open to the public. The Fresno COG's citizen involvement centers on public information, education, and citizen participation in an advisory and decision-making process. A dedicated website was established (planfresno.com) to host RTP Update information, including public outreach, timelines, committee information, and the final RTP/SCS. Outreach efforts included advertising via the Fresno COG's website and the dedicated RTP Update website, public outreach events, annual reports, emails, newsletters, presentations, and public hearings. Citizen workshops were held jointly and coordinated with public and quasi-public agencies as opportunities presented themselves. Workshops included both in-person and web-based options to better solicit public input.

A listing of all public outreach activities is provided as Appendix D to the 2026 RTP/SCS. The Fresno COG continues to focus on strengthening its government-to-government relationships with Native American Tribes and makes every effort to regularly and meaningfully consult and coordinate on matters that significantly affect their communities. Fresno COG staff have received training on California's SB 18 requirements that mandate cities and counties contact and consult with California Native American Tribes before adopting or amending a General Plan or when designating land as open space.

3.2.6 Project Objectives

Section 15124(b) of the *State CEQA Guidelines* requires that a Project Description disclose the objectives of a proposed project. For the purposes of this PEIR, the project objectives are the goals included in Chapter 4 of the 2026 RTP/SCS titled "Implementing the Plan." These goals will aid decision makers in the review of the proposed project and associated environmental impacts. The 2026 RTP/SCS goals, also considered the proposed project's objectives, are described below:

- **Goal #1: Improved Mobility and Accessibility for All.** The Fresno COG Region's population includes large segments that are likely to be transportation disadvantaged due to circumstances such as: low income, limited English proficiency, not having a vehicle, or being young, elderly, or disabled. While partnerships throughout the region provide an array of mobility services, addressing rural and disadvantaged communities' transportation needs is no simple task. In addition to enhancing existing transit services, local transit providers are exploring alternatives to traditional fixed-route service, such as on-demand microtransit. Equally important is improving active transportation and ridesharing options. Expanding resources for meaningful outreach and clearly communicating available mobility options in multilingual and accessible formats to transportation-disadvantaged populations are essential.

- **Goal #2: Vibrant Communities That are Accessible by Sustainable Transportation Options.** Creating built environments with integrated land use and transportation is needed in the near term to create more walkable communities, support multimodal mobility, and improve air quality. Residents continue to identify local air quality as one of their top concerns across various outreach efforts. Additionally, promoting complete streets that are human-scale and transit-oriented development will help reduce dependence on single-occupancy vehicle trips. Neighborhood design and amenities can impact public health outcomes by affecting the

likelihood that people will walk or bike to nearby destinations, have access to healthy foods, and have opportunities for physical activity. Improving walkability in existing and new neighborhoods is particularly important due to the aging population and the number of seniors who are choosing to age in place. Obesity rates in the Fresno COG Region are also relatively high compared to other regions in the State, both in adults and children, increasing the need for more physical activity opportunities. Additionally, employing smart growth principles will help to conserve farmland, open space, and other natural resources and improve local air quality.

Housing plays an important role in the region's ability to meet its GHG reduction targets. Funding for transportation improvements that support housing, such as increased transit and active transportation opportunities, will help to reduce dependency on single-occupancy vehicles. Financial resources and technical assistance will be necessary to meet State goals and address local needs.

- **Goal #3: A Safe, Well-Maintained, Efficient, and climate-Resilient Multimodal Transportation Network.** Improved safety for all road users continues to be one of the highest priorities in the region. The Fresno COG Region's traffic fatality rate is approximately 50 percent higher than in California overall. Traffic safety has become a growing concern across the State in recent years.

  Maintaining existing transportation infrastructure is fundamental to preserving the existing transportation network upon which so many residents and industries rely. Maintenance continues to be a top concern at both the State and regional levels. Strategic investment in improving the existing network is underway, thanks in part to SB 1 and the County's Measure C sales tax.

  Additionally, it is important to invest in infrastructure improvements to increase transportation network resiliency. Hazards caused or exacerbated by climate change are becoming more frequent, such as wildfires, flooding, and drought conditions.

  As the region continues to grow, improving efficiencies on the existing system and reducing congestion help to improve air quality and provide a reliable transportation system for residents and goods movement. Transportation Demand Management (TDM) is a set of strategies that aim to reduce single-occupancy vehicle trips and reduce congestion. TDM strategies include telecommuting, alternative work schedules, and mode shifts to transit, bicycling, walking, or other micro-mobility options.

  Since the Moving Ahead for Progress in the 21st Century Act (MAP-21) became law in 2012, MPOs are required to conduct performance-based planning and focus on achieving performance outcomes. Performance measures for safety, congestion, and infrastructure conditions are discussed in Chapter 4, Implementing the Plan, of the 2026 RTP/SCS, which is incorporated by reference.

- **Goal #4: A Transportation Network That Supports a Sustainable and Vibrant Economy.** The San Joaquin Valley, and the Fresno COG Region specifically, have always been California's agricultural epicenter, generating more than $45 billion every year in agricultural products. The Fresno COG Region is also becoming a major player in the rapidly growing logistics and distribution industry. The SR-99 and I-5 corridors provide the bulk of the capacity for this essential goods movement. The goods movement industry supports a significant portion of the State's economy and requires a reliable transportation network to function at its best.

  Providing residents with greater mobility increases their access to jobs, education, healthcare, etc. Greater mobility outside the region may be made possible by HSR, which is currently under construction in the San Joaquin Valley. Should the initial operating segment be completed, residents of the Fresno COG Region will have expanded access to other parts of the State, and additional employers and residents are expected to be attracted to the region.

- **Goal #5: A Region Embracing Clean Transportation, Technology, and Innovation.** New technologies are rapidly transforming the transportation sector. In the near term, additional outreach, planning, and infrastructure are needed for electric vehicles to ensure residents are aware of the benefits, diminish range anxiety, and support the transition to electric fleets. In addition, the Fresno COG Region will need to prepare for: additional micro-mobility options; autonomous vehicles; sustainable and efficient freight movement; and broadband internet to support telework.

  The COVID-19 pandemic substantially impacted travel in the short term, and increased telework options may have long-term impacts on VMT as well. Most substantial was VMT reduction during 2020 due to lockdowns, which—compared to an average 2019 level—decreased daily VMT by approximately 34 percent, from over 25 million daily VMT to barely 17 million. Based on the results of the Fresno COG's online telecommute survey, potentially one-third of the Fresno COG Region's employers and employees plan to telecommute at least a couple of days per week. However, not all communities in the Fresno COG Region have access to broadband internet, which is a barrier to telework opportunities, remote learning, and increased access to other resources. Expanding broadband internet across the region will further help reduce VMT.

  Deploying new technology in a thoughtful manner will help ensure its successful integration into the region. The existing transportation network, when integrated with more innovative solutions, can provide residents with more diverse and reliable travel choices.

4.0 EXISTING ENVIRONMENTAL SETTING, ENVIRONMENTAL ANALYSIS, IMPACTS, AND MITIGATION MEASURES

ISSUES ADDRESSED IN THE DRAFT PEIR

This chapter addresses environmental topics listed in Appendix G (Environmental Checklist Form) of the *Guidelines for the California Environmental Quality Act* (*State CEQA Guidelines*) (California Code of Regulations [CCR] Title 14, Chapter 3, Sections 15000–15397). The sections are presented in the following order:

1. Aesthetics
2. Agriculture and Forestry Resources
3. Air Quality
4. Biological Resources
5. Cultural Resources
6. Energy
7. Geology and Soils
8. Greenhouse Gas Emissions
9. Hazards and Hazardous Materials
10. Hydrology and Water Quality
11. Land Use and Planning
12. Mineral Resources
13. Noise
14. Population and Housing
15. Public Services
16. Recreation
17. Transportation
18. Tribal Cultural Resources
19. Utilities and Service Systems
20. Wildfire

For each environmental topic analyzed, the Program Environmental Impact Report (PEIR) includes the existing environmental setting, regulatory setting, thresholds of significance that will be applied to determine whether the project's impacts are significant or less than significant, analysis of the environmental impacts, and a determination of whether the project would have a significant impact if implemented. A "significant impact" or "significant effect" means "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, flora fauna, ambient noise, and object of aesthetic significance. An economic or social change by itself shall not considered to be a significant effect on the environment." (14 CCR Section 15382). Each environmental topic section in Chapter 4.0 also includes a discussion of the cumulative effects of the project when considered in combination with other projects causing related impacts, as required by *State CEQA Guidelines* Section 15130.

SECTION ORGANIZATION

Each of the sections is organized into subsections, as follows:

- The topics and issues covered in the section, as well as sources relied on, are briefly described.
- **Scoping Process** describes comments received during the scoping period related to the issue under investigation, if any.
- **Methodology** describes the approach and methods employed to complete the environmental analysis for the environmental topic under investigation.

- **Existing Environmental Setting** describes the relevant physical conditions that existed at the time of the issuance of the Notice of Preparation (NOP) (May 13, 2025) that may influence or affect the issue under investigation. This section focuses on physical characteristics that are relevant to the environmental topic being analyzed.

- **Regulatory Setting** lists and discusses the laws, ordinances, regulations, plans, and policies that relate to the specific environmental topic and how they apply to the proposed project.

- **Thresholds of Significance** sets forth the thresholds that are the basis of the conclusions regarding significance, which are primarily the criteria in Appendix G to the *State CEQA Guidelines.*

- **Project Impacts** describes the potential environmental changes to the existing physical conditions that may occur if the proposed project is implemented. Evidence is presented to show the cause-and-effect relationship between the proposed project and potential changes in the environment. In accordance with *State CEQA Guidelines* Section 15126.2(a), this PEIR is required to "identify and focus on the significant environmental effects" of the proposed project. The magnitude, duration, extent, frequency, and range or other parameters of a potential impact are ascertained to the extent feasible to determine whether impacts may be significant. In accordance with CEQA, potential project impacts, if any, are classified as follows for each of the environmental topics discussed in this PEIR.

    - **No Impact:** A "no impact" determination is made when the proposed project is found to have no environmental impact.

    - **Less Than Significant Impact:** Less than significant impacts are environmental impacts that have been identified but are not potentially significant. No mitigation is required for less than significant impacts.

    - **Less Than Significant with Mitigation Incorporated:** This classification refers to potentially significant environmental impacts that can be feasibly mitigated to a level of insignificance. If the proposed project is approved, the decision-making body is required to make findings pursuant to *State CEQA Guidelines* Section 15091 that significant impacts have been mitigated to the extent feasible through the implementation of mitigation measures.

    - **Significant and Unavoidable Impact:** If the proposed project is approved with significant and unavoidable impacts, the decision-making body is required to adopt a statement of overriding considerations pursuant to *State CEQA Guidelines* Section 15093 explaining why the project benefits outweigh the unavoidable adverse environmental effects.

- **Level of Significance Prior to Mitigation** summarizes the potentially significant impacts of the project, if any, prior to mitigation.

- **Mitigation Measures** identifies generalized mitigation measures to be undertaken by the Fresno Council of Governments (COG) and project-specific measures that avoid, minimize, rectify, reduce, eliminate, or compensate for a potentially significant impact.

- **Level of Significance after Mitigation** describes the significance of potential impacts after the implementation of mitigation measures. Potential significant unavoidable impacts are clearly stated in this section.

- **Cumulative Impacts** refer to potential environmental changes to the existing physical conditions resulting from project implementation and all other reasonably foreseeable, planned, and approved future projects in the project vicinity. *State CEQA Guidelines* Section 15355 defines cumulative impacts as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Cumulative impacts may result from individually minor but collectively significant projects taking place over a period of time. Projects that have progressed to the stage where CEQA review has been initiated are normally treated as foreseeable probable future projects.

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4.1 AESTHETICS

This section of the Draft Program Environmental Impact Report (PEIR) discusses the existing aesthetic conditions within the Fresno Council of Governments (COG) Region and provides an analysis of the potential impacts anticipated with implementation of the proposed 2026 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (proposed project) related to aesthetics. Specifically, this section addresses potential impacts related to aesthetics, including whether the proposed project would: block or substantially alter scenic vistas or views; degrade the visual character or quality of the site and its surroundings; create visual contrasts that are inconsistent with the existing landscape; or produce new sources of light or glare that could affect the visual environment or public views.

4.1.1 Scoping Process

Potential impacts related to aesthetic resources were not identified during the public scoping meeting held for the proposed project on May 28, 2025. The Fresno COG received no comment letters in response to the Notice of Preparation (NOP) issued for the proposed project between May 13 and June 12, 2025, concerning the proposed project's potential impacts related to aesthetic resources.

4.1.2 Methodology

This section analyzes the potential aesthetic impacts of future transportation and land use development projects facilitated by the proposed project to the extent feasible. Aesthetic impacts are generally localized. Because of this, specific and detailed analyses are most appropriate at the individual improvement project and new development project levels rather than the programmatic level represented in this PEIR. Subsequent project-specific California Environmental Quality Act (CEQA) documents may be required to further analyze the transportation improvements or new development facilitated by the proposed project to determine the magnitude of their aesthetic impacts, including appropriate mitigation for measures.

4.1.2.1 Key Concepts

The assessment of aesthetic impacts is subjective by nature and is guided by the consensus of the community in which a scenic resource is located and/or the general viewing public. Generally, high-quality views have topographic relief, a variety of vegetation, rich colors, impressive scenery, and unique natural and/or built features. Moderate-quality views have interesting but minor landforms, some variety in vegetation and color, and/or moderate scenery. Low-quality views have uninteresting features, little variety in vegetation and color, uninteresting scenery, and/or common elements. Viewer types in the Fresno COG Region are diverse and include residents, tourists, commuters/motorists, and business owners/employees. Views would occur from various modes of transportation (motor vehicles, transit, bikes, walking, etc.) as well as stationary sources (for example, adjacent properties). Viewers would have a range of sensitivity to visual changes. An assessment of a project's aesthetic impacts generally utilizes the following concepts.

Aesthetic Resources. These resources are the combined natural or manmade elements, such as landforms, vegetation, water features, urban design, and/or architecture, that provide an overall visual impression that is pleasing to, or valued by, its observers. Factors important in describing the aesthetic

resources of an area include visual character, scenic resources, and scenic vistas. These factors together not only describe the intrinsic aesthetic appeal of an area, but also communicate the value placed upon a landscape or scene by its observers.

Scenic Resources. Components of the landscape, including visually significant hillsides, ridges, water bodies, vegetation, and buildings, are critical in shaping the visual character and scenic identity of a region. Development and transportation projects could impact a scenic resource directly through physical changes (e.g., removal, disturbance, or development on a ridgeline, hillside, peak, or shoreline) and/or through limiting access to the scenic resource to the viewing public. The degree to which these resources are present or significant is based on the values of the community and the viewing public.

Scenic Vista. A scenic vista typically consists of panoramic views of important visual features, as seen from public viewing areas. This definition combines visual quality with information about view exposure to describe the level of interest or concern that viewers may have for the quality of a particular view or visual setting. Development and transportation projects can affect a scenic vista by either blocking or partially obstructing publicly available views of the vista, or by blocking access to said vistas.

State Scenic Highway. The State Scenic Highway Program was created in 1963 to protect and enhance the natural scenic beauty of California highways and adjacent corridors. Through special conservation treatment, a highway may be designated as 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 or transportation projects intrude upon the traveler's enjoyment of the view.

Scenic Corridors. Scenic corridors are public features that facilitate movement (primarily by automobile, transit, bicycle, or foot) from one location to another and provide expansive views of natural landscapes and/or visually attractive manmade development. Scenic corridors analyzed under CEQA typically include State-designated scenic highways and locally designated scenic routes.

Visual Character. The visual character of an area is defined by the combination of natural and/or manmade features that create an overall impression of an area. In this context, visual "character" will vary widely based on one's location. For example, the visual character of a residential neighborhood may be defined by a pleasing streetscape with mature landscaping and well-maintained residences, while that of a commercial area may be defined by the age, style, and mix of uses, the pedestrian scale (or lack thereof), landscaping, and public amenities.

In urban settings, visual character may be qualitatively assessed by the type and density of a particular land use, urban landscaping and site design, architecture, topography, and background setting. Adverse effects to visual character may result from the development of incompatible uses, the absence of required public amenities, poor building siting and design, and/or insufficient, inappropriate, incompatible signage, landscaping, screening, or lighting.

In rural settings, the visual character may be qualitatively assessed by the presence of open space, natural landforms, agricultural fields, vegetation patterns, and scattered rural development, which collectively create a landscape dominated by natural features and expansive views.

Visual Quality. Visual quality indicates the uniqueness or desirability of a visual resource, within a frame of reference that accounts for the uniqueness and "apparent concern for appearance" by concerned viewers (e.g., residents, visitors, jurisdictions). A well-established approach to visual analysis is used to evaluate visual quality, using the concepts of vividness, intactness, and unity.[1]

- Vividness describes the memorability of landscape components as they combine in striking patterns.
- Intactness refers to the visual integrity of the natural and human-built landscape.
- Unity indicates the visual coherence and compositional harmony of the landscape as a whole.

Glare. Glare is a continuous or periodic intense light that may cause eye discomfort or be temporarily blinding to humans. Sunlight reflecting off windows and building surfaces may create glare that affects adjacent uses or interferes with the operation of motor vehicles, aviation, or other activities. Glare can also be produced during evening hours by artificial light sources, such as illuminated signage and vehicle headlights. Glare-sensitive uses generally include residences and transportation corridors (i.e., roadways).

Light Sources. A light source is a device or feature that produces illumination, including incandescent bulbs, fluorescent and neon tubes, halogen and other vapor lamps, light-emitting diode (LED) fixtures, and reflecting surfaces or refractors incorporated into a lighting fixture. Any translucent enclosure of a light source is considered part of the light source.

Illumination. Illumination is characterized as increases in ambient nighttime lighting from project sources, including light fixtures, parking lots, building lighting, etc. New nighttime light sources have the potential to increase ambient nighttime illumination levels and result in spillover of light onto adjacent properties. These effects have the potential to interfere with certain functions, including vision, sleep, privacy, and general enjoyment of the natural nighttime condition.

4.1.3 Existing Environmental Setting

This section describes the existing environmental setting of the Fresno COG Region pertaining to aesthetics and visual resources.

4.1.3.1 Visual Character and Topography

The Fresno COG Region contains both urban and rural land, each of which is associated with a distinct visual character. It also contains varying topography and a range of elevations. The elevation of the Fresno COG Region ranges from approximately 100 feet above mean sea level (amsl) in the central San

[1] United States Department of Transportation Federal Highway Administration (USDOT FHWA). 2015. *Guidelines for the Visual Impact Assessment of Highway Projects*. January. Website: https://www.environment.fhwa.dot.gov/env_topics/other_topics/VIA_Guidelines_for_Highway_Projects.aspx. (accessed March 11, 2026).

Joaquin Valley portion to over 14,000 feet amsl in the eastern portion adjacent to the Sierra Nevada mountains.[2]

In order to more accurately characterize the range of geographies within the Fresno COG Region, the County's *General Plan Background Report* divides the Fresno COG Region into five geographic subareas: the Coast Range Foothill Area, the Westside Valley Area, the Eastside Valley Area, the Sierra Foothill Area, and the Sierra Nevada Mountain Area. The visual character and topographical features specific to each subarea are described in further detail below:[3]

- **Coast Range Foothills Area:** This subarea, which stretches from the western border of Fresno County to Interstate (I-)5, consists mostly of agricultural land and open space. This subarea does not include any incorporated cities. As such, the visual character of this area is generally associated with gentle rolling hills and unrestricted views of the Fresno COG Region landscape.

- **Westside Valley Area:** This subarea, which stretches from I-5 to the Fresno Slough, is generally flat and, similar to the Coast Range Foothills Area, primarily consists of agricultural land and open space. However, this subarea contains four incorporated cities (Coalinga, Huron, Mendota, and Firebaugh). Despite this, the visual character of this area is generally characterized by views of the agricultural landscape and the Coast Range Foothills Area to the west.

- **Eastside Valley Area:** This subarea, which stretches from the Fresno Slough to the Friant-Kern Canal, is generally flat and contains 11 incorporated cities (Fresno, Clovis, Sanger, San Joaquin, Fowler, Selma, Kerman, Parlier, Kingsburg, Orange Cove, and Reedley) and several unincorporated communities (Friant, Laton, Riverdale, Easton, Caruthers, Lanare, Tranquillity, Del Rey, and Biola). Although the Eastside Valley Area is therefore the most urbanized subarea, it is still dominated by agricultural land and open space uses. As such, the visual character of this area is generally associated with views of the agricultural landscape surrounding the cities and communities, and with views towards the Sierra Foothill Area to the east.

- **Sierra Foothill Area:** This subarea, which stretches from the Friant-Kern Canal to the western boundary of United States National Forest land, contains mostly agriculture and open space, as well as several unincorporated communities. This subarea is adjacent to National Park and National Forest land and contains rolling foothills that ultimately transition into the mountainous terrain in the Sierra Nevada Mountain Area. This subarea also contains several large reservoirs, such as Millerton Lake and part of Pine Flat Lake. As such, the visual character of this area is generally associated with the rolling hills, trees, and rock formations leading to the Sierra Nevada Mountain Area.

- **Sierra Nevada Mountain Area:** This subarea, which stretches from the western boundary of United States National Forest land to the eastern boundary of Fresno County, contains

[2] County of Fresno. 2024. *Fresno County, California Hazard Mitigation Plan*. May. Page 134 (accessed December 1, 2025).

[3] County of Fresno. 2024. *General Plan Background Report.* February. Pages 3-2–3-5. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/planning-and-land-use/general-plan/background-report-2024.pdf (accessed November 11, 2025).

mountainous terrain that limits development, although some rural residential uses are present. This subarea consists mostly of open space, including the Sierra National Forest, Sequoia National Forest, and Kings Canyon National Park. This subarea also contains several large reservoirs, such as Edison Lake, Florence Lake, Courtright Reservoir, Wishon Reservoir, Shaver Lake, Huntington Lake, and part of Pine Flat Lake. As such, the visual character of this area is generally associated with preserved natural areas, including mountains, trees, rock formations, and water bodies.

4.1.3.2 Scenic Resources

The County's *General Plan Background Report*[4] identifies both general and specific scenic resources throughout the region. In the general sense, rolling hills, trees, rock formations, water bodies, mountain ranges, large farms, ranches, rangelands, and regional parks all contribute to the scenic quality of the Fresno COG Region. The Fresno COG Region also identifies specific resources, as listed below:

- **Sierra National Forest:** Located in the Sierra Nevada mountains, the Sierra National Forest contains oak trees, coniferous/evergreen trees, mountains, wilderness reservoirs, rivers, trails, and scenic roads.

- **Sequoia National Park:** Located in the Sierra Nevada mountains, Sequoia National Park contains mountains, foothills, canyons, caverns, and notably tall trees.

- **Kings Canyon National Park:** Located in the Sierra Nevada mountains, Kings Canyon National Park contains mountains, foothills, canyons, caverns, and notably tall trees.

- **General Grant Tree:** Located in Kings Canyon National Park, this sequoia tree is the second-largest sequoia in the world and is over 3,000 years old.

- **Kerman Ecological Reserve:** Located south of the San Joaquin River, this 1,800-acre ecological reserve was established to protect annual grasslands and associated wildlife.

- **Alkali Sink Ecological Reserve**: Located south of the San Joaquin River, this 930-acre ecological reserve was established to protect Alkali Sink Scrub habitat and associated wildlife.

- **Mendota Wildlife Area:** Encompassing the Fresno Slough, this 11,825-acre area is managed as a seasonally flooded wetland and attracts migrating waterfowl.

- **Kings River:** This river flows from the Sierra Nevada mountains southwest through the central part of the Fresno COG Region and into Tulare County at Reedley, connecting to several bypasses and sloughs. The Kings River is a designated Wild and Scenic River in the following locations within Fresno County: the Middle Fork from its headwaters at Lake Helen to its confluence with the main stem; the South Fork from its headwaters at Lake 11599 to its confluence with the main stem; and

[4] County of Fresno. 2023. *Fresno County General Plan Background Report. General Plan Review and Revision.* April.

from the confluence of the Middle Fork and South Fork to the point at an elevation of 1,595 feet amsl.

- **San Joaquin River:** This river flows from the Sierra Nevada mountains southwest along the northern border of the Fresno COG Region, where it is joined by flows from the Fresno Slough. From there, the river flows northwest through the San Joaquin Valley. In coordination with the San Joaquin River Conservancy, land along the river (the "San Joaquin River Parkway") is intended for low-impact recreational and educational opportunities that allow for the protection of the river's natural resources.

- **Millerton Lake:** Located adjacent to where the San Joaquin River flows from the Sierra Nevada foothills, this lake covers approximately 4,900 acres when full and 47 miles of shoreline. This lake also contains Friant Dam, built in 1944.

- **Huntington Lake:** Located at an elevation of 6,955 feet in the Sierra National Forest, this lake covers approximately 1,435 surface acres and 14 miles of shoreline. This lake contains Big Creek Dam Numbers 1, 2, and 3 and a smaller saddle dam at the headwaters of Big Creek.

- **Shaver Lake:** Located at an elevation of 5,500 feet in the Sierra National Forest, this lake covers approximately 2,177 acres and 22 miles of shoreline.

- **Courthouse Park:** Located in the downtown area of Fresno, this park was established in 1872 and serves as a community gathering place and a representation of Fresno's history. The park contains a fountain, lawns, mature trees, benches, memorials, and statues.

4.1.3.3 Regional Scenic Vistas

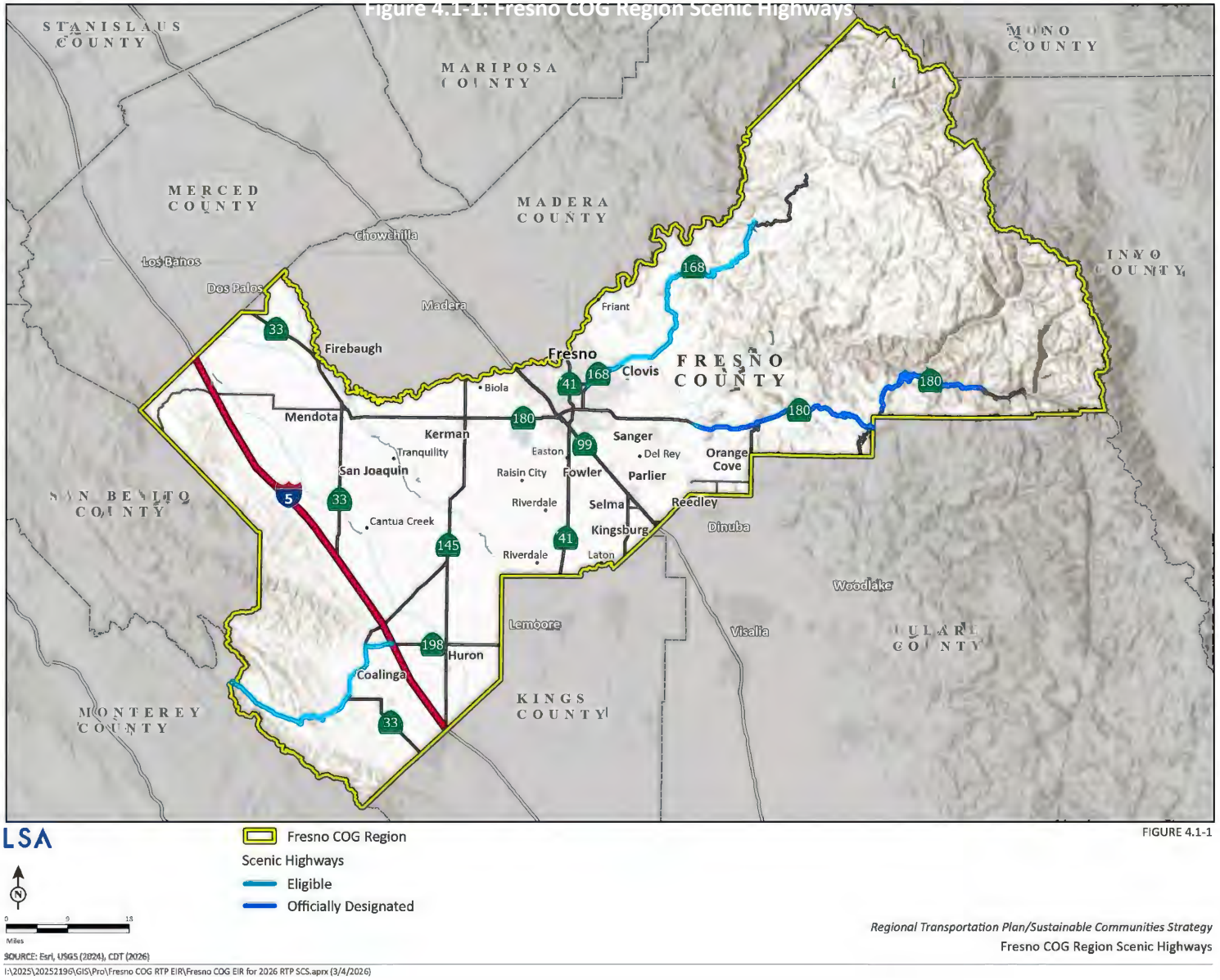
While the County's General Plan does not designate official scenic vistas, the County's General Plan EIR notes that scenic vistas in the region include expansive views from east-to-west roadways like State Route (SR-)180 or SR-198 of elevated peaks and ridges in the Sierra Nevada, in the eastern part of the Fresno COG Region.[5]

4.1.3.4 Regional Scenic Corridors

According to the California Department of Transportation (Caltrans) Scenic Highway Program (Sections 260 through 263 of the California Streets and Highways Code), the Fresno COG Region contains one Officially Designated State Scenic Highway, divided into two segments: (1) SR-180 from Alta Main Canal near Minkler to the General Grant Grove section of Kings Canyon National Park, and (2) SR-180 from the General Grant Grove section of Kings Canyon National Park to the Kings Canyon National Park boundary near Cedar Grove, as shown on Figure 4.1-1. Views from this highway include farmland, rangeland, the Sierra Nevada foothills, canyons, mountains, and notable trees.

[5] County of Fresno. 2023. *General Plan Review and Zoning Ordinance Update Program Environmental Impact Report Public Review Draft.* April. Page 4.1-17. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/environmental-impact-reports/1_draft-program-environmen.pdf (accessed November 11, 2025).

Figure 4.1-1: Fresno COG Region Scenic Highways



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In addition to the Officially Designated State Scenic Highway, the Fresno COG Region also contains eligible State Scenic Highways, which could become Officially Designated following the County's application and adoption of a Corridor Protection Program. The eligible State Scenic Highways are listed below and are also shown on Figure 4.1-1:

- SR-198 from Route 101 (near San Luis Obispo) to SR-33 (near Coalinga);
- SR-33 from SR-198 (near Coalinga) to SR-198 (near the oilfields);[6]
- SR-168 from SR-65 (near Clovis) to Huntington Lake;
- SR-198 from SR-33 (near the oilfields in Coalinga) to I-5; and
- SR-180 from SR-65 (near Minkler) to the Kings Canyon National Park boundary (near Cedar Grove).

In addition to Caltrans designations, Fresno County has designated a system of scenic roadways,[7] including landscaped drives, scenic drives, and scenic highways, as discussed further below.

Landscaped Drives. Landscaped drives are defined by the County as roads bordered by mature and consistent landscaping that have areawide significance. Landscaped drives within the Fresno COG Region that are designated by the County include the following:

- Kearney Boulevard from Westlawn Avenue to the City of Fresno;
- Van Ness Avenue from the City of Fresno at Beverly to Shaw Avenue;
- North Van Ness Boulevard from Shaw Avenue to the San Joaquin River;
- Butler Avenue, from Peach Avenue to Fowler; and
- Minnewawa Avenue, from Kings Canyon to the Central Canal within the Fresno COG Region.

Designated Scenic Drives. Scenic drives are defined by the County as rural roads traversing land with outstanding natural scenic qualities and connecting with scenic highways. County-designated scenic drives within the Fresno COG Region include the following:

- Trimmer Springs Road from SR-180 to Trimmer;
- Maxson Road from Trimmer Springs Road to Watts Valley Road;
- Watts Valley Road from Maxson Road to Pitman Hill Road;
- Burrough Valley Road from Watts Valley Road to Tollhouse Road;
- Piedra Road from SR-180 to Piedra;
- Dinkey Creek Road/McKinley Grove Road from SR-168 to Courtright Reservoir;
- Edison Florence Lake Road from Huntington Lake to Florence Lake;
- Blossom Trail Route;
- Wild Flower Route;
- Auberry Road;

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6 It should be noted that there are two separate segments of SR-198 connected by SR-33.

7 County of Fresno. 2024. *General Plan Policy Document.* February. Page 2-143. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/planning-and-land-use/general-plan/fcgpr_general-plan_county_final_2024_02.pdf (accessed November 6, 2025).

- Morgan Canyon Road;
- Millerton Road; and
- Marina Drive.

Scenic Highways. Scenic highways are defined by the County as highways that traverse land with unique or outstanding scenic quality or provide access to regionally significant scenic and recreational areas. County-designated scenic drives within the Fresno COG Region include the following:

- SR-168 from the Friant Kern Canal to Lodge Road;
- SR-168 from Lodge Road to Pineridge;
- SR-168 from Pineridge to Huntington Lake Road;
- SR-168 from Huntington Lake Road to Huntington Lake;
- SR-180 from Trimmer Springs Road to the Tulare County line;
- SR-180 from the Kings Canyon National Park boundary near General Grant Grove to the Kings Canyon National Park boundary near Cedar Grove;
- SR-198 from I-5 to the Monterey County line, excluding the City of Coalinga; and
- I-5 within the Fresno COG Region.

National Forest Scenic Byways. National Forest Scenic Byways are designated by the United States Forest Service (USFS) as routes that provide unique or outstanding landscapes for viewers. County-designated scenic drives within the Fresno COG Region include the Kings Canyon Scenic Byway and the Sierra Heritage Scenic Byway.

4.1.3.5 Regional Light and Glare Sources

Existing sources of nighttime lighting in the Fresno COG Region generally consist of automobile headlights, streetlights, and lighting associated with land uses (flood lights, security lighting, private residential lights, etc.). Under existing conditions, the more urbanized portions of the Fresno COG Region (the incorporated cities within the Westside Valley Area and the Eastside Valley Area) experience the highest intensity of nighttime lighting, while the portions of the Fresno COG Region consisting mostly of open space and agricultural uses (the Coast Range Foothills Area, the Sierra Foothill Area, and the Sierra Nevada Mountain Area) contain fewer sources of nighttime lighting and therefore less nighttime lighting overall. Lighting sources in these areas are isolated rather than comprising an overall lighting network, as is the case in a city.

Similar to lighting, existing sources of glare in the Fresno COG Region are associated with existing development (e.g., windows and building surfaces). As such, the more urbanized portions of the Fresno COG Region (the incorporated cities within the Westside Valley Area and the Eastside Valley Area) experience the highest intensity of glare, while the portions of the Fresno COG Region consisting

mostly of open space and agricultural uses (the Coast Range Foothills Area, Sierra Foothill Area, and Sierra Nevada Mountain Area) contain fewer sources of glare, and therefore less glare overall.

4.1.4 Regulatory Setting

This section includes applicable federal, State, regional, and local policies and regulations.

4.1.4.1 Federal Regulations

National Scenic Byways Program. This program was established by the Federal Highway Administration (FHWA) in Title 23, Section 162, of the United States Code (USC) under the Intermodal Surface Transportation Efficiency Act of 1991. Under this program, roadways in the United States can be classified as National Scenic Byways[8] or All-American Roads[9] based on their archaeological, cultural, historic, natural, recreational, and scenic qualities.

United States Bureau of Land Management Back Country Byways Program. As part of the larger National Scenic Byways Program, the Bureau of Land Management (BLM) has established the Back Country Byways Program for less-traveled roadways in remote areas.

United States Forest Service National Scenic Byways Program. As part of the larger National Scenic Byways Program, the USFS has established the National Forest Scenic Byways Program for routes traversing National Forest System Lands.

Wild and Scenic Rivers Act. The Wild and Scenic Rivers Act of 1968 (16 USC §§ 1271-1287) established protections for free-flowing rivers with outstanding natural, cultural, and recreational values. Eligible rivers can be designated as Wild River Areas, Scenic River Areas, or Recreational River Areas. Boundaries for protected rivers generally extend 0.25 mile from either bank in the lower 48 states and 0.5 mile on rivers outside national parks in Alaska in order to protect river-related values.

4.1.4.2 State Regulations

California Environmental Quality Act. The *State CEQA Guidelines,* codified in the California Public Resources Code (PRC), Division 13, Sections 21000–21178.1*,* provide a framework for the protection of public scenic views and visual resources from development impacts. As discussed in Appendix G (Environmental Checklist Form) to the *State CEQA Guidelines*, a project may have a significant impact on the environment with respect to aesthetics if it would result in (1) negative effects on a scenic vista, (2) damage to scenic resources within a State Scenic Highway, (3) degradation of the visual character or quality of a site and its surroundings, or (4) creation of a new source of substantial light or glare affecting views.

Caltrans Scenic Highway Program. The Caltrans Scenic Highway Program, established in 1963 under Senate Bill (SB) 1467, protects the natural scenic beauty of the State's highways and corridors through its designated scenic highways throughout the State. Caltrans defines a scenic highway as any freeway, highway, road, or other public right-of-way (ROW) that traverses an area of outstanding scenic quality,

[8] A National Scenic Byway is defined as a roadway that possesses outstanding qualities that exemplify regional characteristics.

[9] An All American Road is defined as a roadway that is a destination unto itself.

containing striking views, flora, geology, and other unique natural attributes. Other considerations given to a scenic highway designation include how much of the natural landscape a traveler may see and the extent to which visual intrusions degrade the scenic corridor. This program is codified in Sections 260 through 263 of the California Streets and Highways Code.

Caltrans Classified Landscaped Freeways Program. Established by Caltrans in the 1970s, the Classified Landscaped Freeways Program designates landscaped freeways, or sections of freeways with ornamental vegetation planting that meets the criteria established by the California Code of Regulations (CCR), Outdoor Advertising Regulations, Title 4, Division 6. Ornamental vegetation is defined as planting designed primarily to improve the aesthetic appearance of the highway. The program maintains a list of the original whole segments of classified landscaped freeways. This list is maintained in concurrence with CCR Title 41.

4.1.4.3 Regional Regulations

There are no regional regulations that apply to the proposed project with respect to aesthetics.

4.1.4.4 Local Regulations

Local General Plans. The Fresno COG Region contains Fresno County and 15 incorporated cities, each with an individual general plan prepared pursuant to California Government Code Section 65300. Each general plan contains goals and policies related to aesthetics within the particular jurisdiction. Although general plan element titles may vary, this information is typically found within the general plan open space/conservation element, or equivalent.

4.1.5 Thresholds of Significance

The following thresholds of significance are based on Appendix G of the *State CEQA Guidelines*. Based on these thresholds, implementation of the proposed project would have a significant adverse impact with respect to aesthetics if it would:

Threshold 4.1.1: Have a substantial adverse effect on a scenic vista;

Threshold 4.1.2: Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;

Threshold 4.1.3: In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality; or

Threshold 4.1.4: Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

4.1.6 Project Impacts

The following discussion describes the potential impacts related to aesthetics that could result from implementation of the proposed project.

Threshold 4.1.1: Would the project have a substantial adverse effect on a scenic vista?

Significant and Unavoidable Impact. In the Fresno COG Region, scenic vistas include expansive views from east-to-west roadways such as SR-180 or SR-198. Additionally, scenic vistas exist from the Coast Ranges and Sierra Nevada foothill areas and from peaks and ridges in the Sierra Nevada, in the eastern part of the Fresno COG Region.

The Fresno COG Region comprises a variety of land uses, including, but not limited to: agricultural, residential, commercial, industrial, and institutional land uses. Much of the Fresno COG Region consists of unincorporated areas and agricultural land. Accordingly, views within agricultural areas where existing development is very limited, such as in cultivated fields, orchards, or rangelands, would be assumed to have a higher visual quality than developed areas. However, views near major transportation corridors may interrupt views in these areas. Additionally, in some areas, cultivated agricultural lands abruptly give way to views of residential, industrial, and other development that interrupt visual continuity and contrast sharply with the natural and cultivated landscape. Development tends to reduce visual quality because it conflicts with the more natural setting.

Implementation of the proposed project would facilitate a range of future transportation improvements and land use development that could result in substantial adverse effects on scenic vistas. Future projects contemplated under the proposed project include improvements across all transportation modes, including motor vehicles, transit (commuter and local), rail (commuter and interregional), goods movement (rail freight and trucking), bicycle and pedestrian facilities, aviation systems, and transportation systems management (TSM) programs. Additionally, as growth and development occur under the proposed project, member agencies would review and approve development proposals for consistency with applicable plans, policies, and regulations.

Construction. Upon implementation of the proposed project, construction of transportation improvements and associated development could result in temporary visual impacts affecting scenic vistas visible from public vantage points. Construction activities may include demolition, grading, excavation, vegetation removal, temporary route changes, scaffolding, utility installations, and signage. These elements could obstruct views or create visual contrast with surrounding landscapes. Additionally, construction staging areas may create noticeable visual contrasts, while elevated or large-scale structures, such as grade-separated facilities, interchanges, or goods movement roadways, may be visually prominent even during construction.

As described in Section 3.0, Project Description, the Fresno COG selected Scenario C (Enhanced Transit and Smart Growth) as the preferred project scenario. A key focus of this scenario is the preservation of resource lands, including agricultural land. Under this approach, future projects would be prioritized within urban centers through infill and high-density transit-oriented development. This scenario would also include additional strategies designed to avoid development on or near agricultural and resource lands. However, the proposed project does not

preclude future transportation improvement projects or land use developments facilitated by the proposed project from being located on or near agricultural lands, resource lands, or lands in urban fringe or rural areas. These areas are more likely to contain scenic vistas or important visual features and provide public vantage points of these views. Construction on or near agricultural or resource lands in urban fringe or rural areas could temporarily block or partially obstruct publicly available views of the region's scenic vistas, including those along SR-180 and SR-198 and of the Coast Ranges, Sierra Nevada foothills, and ridgelines. However, these impacts would be temporary and would cease upon completion of construction.

Accordingly, consistent with **Project-Specific Mitigation Measure (PMM) AES-1,** the following measures would be implemented to minimize temporary visual impacts to scenic vistas where feasible. These include limiting pre-construction clearing to only what is necessary for construction; preserving existing vegetation and trees wherever possible; siting construction areas away from existing residential neighborhoods, recreational areas, or other land uses with highly sensitive viewers; and regrading disturbed areas from construction, staging, and storage in accordance with local requirements to reduce temporary impacts to scenic vistas where feasible.

Operation. As similarly stated in the construction analysis, new land use development under Scenario C would be prioritized within urban centers via infill, mixed-use development, and other strategies, which would avoid development on or near agricultural and resource land. However, the proposed project does not preclude future transportation improvement or land use development projects facilitated by the proposed project from being located on or near agricultural lands, resource lands, or lands in urban fringe or rural areas. These areas are more likely to contain scenic vistas or important visual features and provide public vantage points of these views. Although unlikely, development of these future projects on or near agricultural or resource lands or within urban fringe or rural areas could temporarily block or partially obstruct publicly available views of the region's scenic vistas, including those along SR-180 and SR-198 and of the Coast Ranges, the Sierra Nevada foothills, and ridgelines. Further, these future projects may also lead to the conversion of open space, recreational areas, agricultural lands, wetlands, wooded areas, reservoirs, agricultural lands, or vacant lands to new uses. Such conversions could affect areas visible from USFS, Caltrans, regional, or city-designated scenic vistas, resulting in long-term alterations of these vistas. Additionally, some future projects may be within scenic subareas and near identified scenic vistas. New infrastructure, such as highways with noise barriers, grade-separated facilities, widened roads, or tall structures in urban or rural areas, may also block or degrade views from Caltrans, regional, or city-designated scenic points. The elevation and scale of the proposed grade-separated facilities, or high-rise development, could be visually intrusive to surrounding areas (depending on the degree of visibility of the transportation facility).

Transportation modification projects would generally be less substantial than those created by new transportation projects. Transportation modifications would occur on existing facilities and are not assumed to be designed at a higher elevation and therefore would not be expected to block views of scenic resources even if limited ROW acquisition were required. With implementation of project-specific design features consistent with **PMM AES-1**, future transportation and land use projects would minimize permanent visual impacts by providing appropriate transitions in building height and bulk; using compatible colors, textures, and graffiti-

resistant materials; incorporating landscaping and natural elements along corridors and around sound walls; and designing see-through safety barriers and visually sensitive sound walls where feasible. These design features would reduce permanent impacts to scenic vistas to the extent feasible.

Additionally, future active transportation projects under the proposed project would improve access to scenic parts of the Fresno COG Region, such as mountainous areas. These future projects would also add visual improvements to the region through landscaping, lighting, and a sustainable or Complete Streets approach to design, resulting in expanded views for multimodal users. Subsequent project-specific CEQA documents would include an evaluation of whether each project would result in a substantial adverse effect on a scenic vista, including consistency with the current regulations and policies applicable to the project site at the time the project is proposed, and would identify appropriate potential mitigation in addition to the project-level mitigation identified in this PEIR.

As described in Chapter 3.0, Project Description, the design of each transportation improvement project and land use development facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur under implementation of the proposed project. With implementation of construction and project-specific design features, pursuant to **PMM AES-1**, project impacts related to scenic vistas would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. As such, potential impacts associated with scenic vistas are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.1.2: Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Significant and Unavoidable Impact. The Fresno COG Region includes many areas that are considered scenic, particularly views of rural farmland, the foothills, and the Sierra Nevada mountains. As discussed, in Section 4.1.3, Existing Environment Setting, SR-180 is the only Officially Designated State Scenic Highway traversing over 60 miles, from Minkler to the General Grant Grove area. This area offers intact views of rangelands, as well as of the pine woodlands and river areas where the roadway enters the Sequoia National Forest in the Sierra Nevada.

Implementation of the proposed project would facilitate a range of future transportation improvements and land use developments that could result in potentially significant impacts to scenic resources within a State Scenic Highway.

Construction. Construction of the proposed transportation improvements and associated development could result in temporary impacts to scenic resources by blocking views of scenic

features, including trees, rock outcroppings, and historic structures, along Officially Designated State Scenic Highways. Although future projects would be prioritized within urban centers through infill and high-density transit-oriented development, some projects may require development of previously undisturbed vacant land, including designated open space, that is visible from Officially Designated State Scenic Highways that could result in potentially significant impacts to scenic resources. Furthermore, improvements to highways, arterials, and transit systems would occur throughout the region and could be located within or adjacent to designated or eligible State Scenic Highways. Therefore, future projects could occur along or adjacent to SR-180, the only designated State Scenic Highway in the Fresno COG Region, or on or adjacent to other highways, including portions of SR-168, SR-198, and SR-33, which are eligible for designation (Figure 4-1.1). Corridor protection programs under the State Scenic Highway Program contain land use elements that support scenic preservation along their routes.

Future projects along or adjacent to an Officially Designated State Scenic Highway would be required to evaluate whether they could affect the scenic highway and, if so, whether the project is consistent with the corridor protection program. If a highway is listed as eligible for official designation, it is also part of the Scenic Highway System and its eligible status must be preserved. Accordingly, any future projects along or adjacent to a scenic highway, such as along SR-180, or within an eligible scenic highway, such as along SR-168, SR 198, and SR-33, would be required to adhere to the corridor protection programs, as well as comply with applicable rules and regulations governing the protection of that area as a scenic resource. Accordingly, consistent with **PMM AES-1,** the following measures would be implemented to minimize temporary visual impacts to scenic resources along an Officially Designated State Scenic Highway or an eligible scenic highway to the extent feasible. These include limiting pre-construction clearing to only what is necessary for construction; preserving existing vegetation and trees wherever possible; siting construction areas away from existing residential neighborhoods, recreational areas, or other land uses with highly sensitive viewers; and regrading disturbed areas from construction, staging, and storage in accordance with local requirements.

Operation. New land use development under Scenario C would be prioritized within urban centers via infill, mixed-use development, and other strategies, which would avoid development on or near agricultural and resource lands. However, the proposed project does not preclude future transportation improvement or land use development projects facilitated by the proposed project from being located on or near agricultural lands, resource lands, or lands in urban fringe or rural areas. As a result, this development pattern would generally avoid expansion along scenic highways, limiting potential impacts to scenic resources. Additionally, development within urbanized areas of the Fresno COG Region, where existing dense development partially obstructs views of scenic resources, would generally result in limited visual impacts. Although unlikely, future projects, including growth-inducing projects, could occur along or adjacent to SR-180, or on or adjacent to other highways, including portions of SR-168, SR-198, and SR-33, which are eligible for designation (Figure 4-1.1).

Future projects along or adjacent to these areas could result in permanent impacts to scenic resources by blocking views of scenic features, including trees, rock outcroppings, and historic structures along Officially Designated State Scenic Highways. Additionally, new infrastructure, such

as highways with noise barriers, grade-separated facilities, widened roads, or tall structures in urban or rural areas, may also block or degrade views from Officially Designated State Scenic Highways. However, the elevation and scale of the proposed grade-separated facilities or high-rise development could be visually intrusive to surrounding areas, depending on the degree of visibility from surrounding viewpoints. Subsequently, impacts from transportation modification projects would generally be less substantial than those created by new transportation projects. Transportation modifications would occur on existing facilities and are not assumed to be designed at a higher elevation. Therefore, they would not be expected to block views of scenic resources Officially Designated State Scenic Highways even if limited ROW acquisition may occasionally be required. With implementation of project-specific design features consistent with **PMM AES-1**, future transportation and land use projects would minimize permanent visual impacts by providing appropriate transitions in building height and bulk; using compatible colors, textures, and graffiti-resistant materials; incorporating landscaping and natural elements along corridors and around sound walls; and designing see-through safety barriers and visually sensitive sound walls where feasible. These measures would therefore reduce potential permanent impacts to scenic resources on an Officially Designated State Scenic Highway or an eligible scenic highway to the extent feasible.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, this analysis represents a general characterization of reasonably foreseeable impacts that could occur under implementation of the proposed project. With implementation of specific design features to address potential impacts to scenic resources along an Officially Designated State Scenic Highway or an eligible scenic highway, pursuant to **PMM AES-1**, and adherence to local, State, and federal regulations, including corridor protection programs, impacts would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts associated with impacts to scenic resources along an Officially Designated State Scenic Highway or an eligible scenic highway are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.1.3: In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Significant and Unavoidable Impact. The Fresno COG Region is 5,963 square miles and consists of a variety of land uses, including, but not limited to: agricultural, commercial, industrial, and institutional

land uses.[10] However, only 3 percent of the Fresno COG Region's total land area consists of incorporated cities, while the remaining 97 percent is unincorporated.

As previously stated, implementation of the proposed project would facilitate a range of future transportation improvement and land use development projects that could substantially degrade the existing visual character or quality of public views of the site and its surroundings. These improvements would be located in both rural and urban settings.

Construction. Construction of transportation improvements and associated development could temporarily affect the existing visual character or quality of public views due to the presence of construction equipment, staging areas, disturbed soil from grading and excavation, demolition activities, temporary signage and detours, and other related activities visible from public viewpoints. Improvements may occur within nonurbanized areas or in areas subject to public views where viewer sensitivity is high. Although future projects would be prioritized within urban centers through infill and high-density transit-oriented development, some construction may occur on previously undisturbed vacant land, including designated open space, temporarily altering the existing visual character or quality of public views. Additionally, depending on the scale, location, and intensity of each future project, construction of future projects could also result in temporary visual impacts in urbanized areas. Accordingly, consistent with **PMM AES-1**, the following measures would be implemented to minimize potential temporary impacts on visual character and the quality of public views to the extent feasible. These measures include limiting pre-construction clearing to only what is necessary for construction; preserving existing vegetation and trees wherever possible; siting construction areas away from existing residential neighborhoods, recreational areas, or other land uses with highly sensitive viewers; and regrading disturbed areas from construction, staging, and storage in accordance with local requirements.

Operation. As discussed in Section 4.14, Population and Housing, urbanization and associated population growth in the Fresno COG Region are anticipated to increase significantly by the proposed project horizon year of 2049 regardless of whether the 2026 RTP/SCS is implemented. As described in Section 3.0, Project Description, the Fresno COG selected Scenario C (Enhanced Transit and Smart Growth) as the preferred project scenario. One of the focal points of this scenario is the preservation of resource land, which includes agricultural land. Other focal points of this scenario are sustainable urban growth focused on existing urban centers and established urban areas, and supporting higher-density growth with mixed-use development. Under this approach, new land use development would be prioritized within urban centers via infill, mixed-use development, and other strategies, which would avoid development on or near agricultural and resource land. Future projects located within urban centers would be generally consistent with the existing visual character and quality of the surrounding urban areas. However, new projects in urbanized areas could result in adverse visual impacts, depending on the scale of improvements and location of viewers. However, the proposed project does not preclude future transportation improvement or land use development projects facilitated by the proposed project from being located on or near agricultural lands, resource lands, or lands in urban fringe or rural

[10] County of Fresno. 2024. *Fresno County General Plan Background Report.* Page 3-10. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/planning-and-land-use/general-plan/background-report-2024.pdf (accessed November 20, 2025).

areas. These areas are more likely to provide public vantage points and views where viewer sensitivity is high. As such, future development located on or near agricultural or resource lands in urban fringe or rural areas, including new mixed-use projects such as residential, commercial, or industrial buildings, and transportation improvements, such as highways with noise barriers, grade-separated facilities or widened roads, or other transit facilities, would modify existing visual character by adding urban elements to rural or open spaces. Therefore, future projects could result in adverse visual impacts, depending on the scale of improvements and the location of viewers.

With implementation of project-specific design features consistent with **PMM AES-1**, future transportation and land use projects would minimize permanent visual impacts by providing appropriate transitions in building height and bulk; using compatible colors, textures, and graffiti-resistant materials; incorporating landscaping and natural elements along corridors and around sound walls; and designing see-through safety barriers and visually sensitive sound walls where feasible. These measures would reduce potential permanent impacts on visual character and the quality of public views to the extent feasible.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur under implementation of the proposed project. With implementation of specific design features to minimize potential impacts on visual character and the quality of public views, pursuant to **PMM AES-1**, as well as adherence to local, State, and federal regulations, impacts would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. As such, potential impacts associated with visual character and the quality of public views are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.1.4: Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Significant and Unavoidable Impact. Currently, development in the Fresno COG Region is generally focused in the areas around urban centers and cities, such as Fresno, Clovis, and Sanger. Existing development and motor vehicles in the Fresno COG Region produce light and glare, with the primary sources of light being streetlights, parking lot lighting, and automobile headlights at night. General sources of glare include reflected sunlight from the windows of buildings, from automobiles, and from glass building façades.

As previously stated, implementation of the proposed project would facilitate a range of future transportation improvement and land use development projects that could create a new source of substantial light or glare.

Construction. Both transportation improvement and land use development projects facilitated by the proposed project would involve construction activities, which have the potential to create temporary construction-related light and glare. Anticipated sources of light and glare from construction include nighttime construction lighting, security lighting, and temporary signage. Light resulting from construction activities could impact sensitive uses, substantially altering the character of surrounding uses or interfering with the performance of off-site activities. Additionally, minor glare from sunlight on construction equipment and vehicle windshields could affect pedestrian and vehicular views. Moreover, it is assumed that some construction, particularly on transportation projects, may occur at night and could also create nighttime sources of glare. Implementation of **PMM AES-2**, which requires the incorporation of project-specific construction phase design features, such as limiting nighttime construction lighting to the minimum necessary for safety, shielding and directing temporary lighting downward and away from sensitive receptors, and installing temporary screening where construction occurs adjacent to light-sensitive uses, would reduce temporary light and glare impacts where feasible.

Operation. Implementation of the proposed project has the potential to create new substantial sources of light or glare associated with operational lighting from vehicles, buildings, parking lots, streetlights, intersection control devices, reflective signage, and reflective roadway materials. This additional light and glare could result in potentially significant impacts. Under the proposed project, transportation improvement and land use development projects could introduce nighttime sources of lighting (buildings, vehicles, etc.). As stated above, Scenario C emphasizes sustainable urban growth focused on existing urban centers and established areas, and higher-density growth with mixed-use development. These urban centers generally have high levels of existing nighttime light and glare. However, the proposed project does not preclude future transportation improvement or land use development projects facilitated by the proposed project from being located on or near agricultural lands, resource lands, or lands in urban fringe or rural areas.

Thus, it is assumed that some projects could occur in or adjacent to rural or agricultural areas of the Fresno COG Region, which currently have low levels of existing nighttime light and glare. These projects could introduce new sources of light or glare, potentially affecting day- or nighttime views in jurisdictions without ordinances protecting night skies. However, future projects subject to discretionary approval by the appropriate lead agency are required to comply with the requirements of CEQA. This includes an environmental review to determine if a project would result in significant impacts with respect to light or glare. As such, future projects would be required to adhere to lighting requirements set by local jurisdictions. In addition, many jurisdictions have general plan policies and other relevant regulations relating to the protection of night skies and the prevention of obtrusive lighting. Typical measures include the use of downward-directed and shielded lighting. New developments under the proposed project would be required to comply with the applicable lighting standards, and the location, type, and direction of the lighting. A lighting plan is also typically required to be submitted to planning departments during the development review process. However, adherence to lighting standards may not be applicable to all types of development projects, and light and glare impacts may occur in some areas. Accordingly, implementation of **PMM AES-2**, which requires the incorporation of specific design features, such as planting trees along transportation corridors to reduce glare from the sun,

shielding transportation lighting fixtures to minimize off-site light trespass, and direct architectural lighting onto the building surfaces to minimize glare and limit light spillover onto adjacent properties, would reduce permanent light and glare impacts where feasible.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur under implementation of the proposed project. With implementation of specific design features to address potential light and glare impacts, pursuant to **PMM AES-2**, and with adherence to local regulations, impacts related to light and glare would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. As such, potential impacts associated with scenic vistas are considered **significant and unavoidable** for the purposes of this analysis.

4.1.7 Level of Significance Prior to Mitigation

Prior to mitigation, the proposed project would have potentially significant impacts related to aesthetics.

4.1.8 Mitigation Measures

4.1.8.1 Fresno COG Measures

No regional mitigation measures are proposed for the Fresno COG pertaining to aesthetics. However, as appropriate and feasible, the Fresno COG will encourage the implementation of the project-specific mitigation strategies listed below.

4.1.8.2 Project-Specific Measures

The following mitigation measures would be applied to future transportation improvement and land use development projects to reduce potentially significant impacts related to aesthetics to the extent feasible:

PMM AES-1 Implementing agencies shall consider mitigation measures to address potential aesthetic impacts that substantially degrade scenic vistas and visual character, as applicable and feasible:

- During construction of individual Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) projects, the following measures shall be incorporated to minimize temporary and visual impacts:
    - Pre-construction clearing shall be limited to that necessary for construction.

- Where feasible, existing vegetation, particularly vegetation along the edge of construction areas, shall be preserved to help screen views.

- Existing trees shall be protected, where feasible, or replaced where removed to minimize visual impacts associated with clear-cutting.

- After construction, areas disturbed by construction, staging, and storage shall be restored to original contours and revegetated with plant material similar in quantities and types to that which was removed and in compliance with local jurisdictional requirements.

- To the extent feasible, construction staging shall not be located within the immediate foreground distance (~500 feet) of existing residential neighborhoods, recreational areas, or other land uses that include highly sensitive viewers. Where unavoidable, staging sites shall be screened from viewers using appropriate solid screening materials such as temporary fencing and walls. Fencing and walls shall be maintained, including removal of any graffiti.

- Project design shall minimize contrasts in scale and massing between project elements and surrounding natural forms. This includes proposed grading that matches surrounding terrain in accordance with county and city hillside ordinances, where applicable.

- During design and operation of individual RTP/SCS projects, the following measures shall be incorporated to minimize permanent visual impacts:

  - New development shall provide appropriate transitions in building height and bulk that are sensitive to the physical and visual character of adjoining neighborhoods that have lower development intensities and building heights.

  - During project design, comparable range of colors and textures for building materials shall be used. Projects shall specify graffiti-resistant materials and finishes, where feasible and appropriate.

  - Landscaping shall be replaced and renewed where existing vegetation is removed. Project design shall incorporate plant species that complement the surrounding landscape and proposed development.

  - Project design shall incorporate see-through safety barrier designs (e.g., railings rather than walls), as appropriate.

  - Project design shall incorporate landscaping along highway corridors to introduce natural elements and visual interest that soften the hard-edged, linear character of the transportation corridors, while following local design guidelines (where feasible), to ensure visual compatibility with the existing

setting and minimize changes in visual quality or character. Local design guidelines may include setback buffers, landscaping, color, texture, signage, and lighting criteria.

- Where sound walls are proposed, visual impacts shall be accounted for during sound wall design and construction, as follows:
  - Transparent panels shall be used, if feasible, to preserve views where proposed sound walls would block views from residences.
  - Landscaped earth berms, or a combination of wall and berm, shall be used, if feasible, to minimize the apparent sound wall height.
  - Sound walls of materials shall be designed with color and texture that complements the surrounding landscape and develops visual interest.
  - Landscaping shall be incorporated near proposed sound walls to screen the wall, where feasible. Native vegetation shall be used where feasible.

PMM AES-2 Implementing agencies shall consider mitigation measures to address potential aesthetic impacts from light and glare, as applicable and feasible:

- During construction, light and glare shall be minimized through the implementation of temporary lighting controls and construction best management practices (BMPs). These practices include:
  - Limiting nighttime construction lighting to the minimum necessary for safety and security;
  - Shielding and directing temporary lighting downward and away from sensitive receptors and roadways;
  - Positioning lighting to avoid glare to motorists;
  - Using non-reflective materials on temporary structures and equipment, where feasible;
  - Installing temporary screening where construction occurs adjacent to light-sensitive uses.
- Glare from transportation projects shall be minimized through the adoption of project design features that reduce glare. These features include:
  - Planting trees along transportation corridors to reduce glare from the sun;
  - Landscaping off-street parking areas, loading areas, and service areas;

- Shielding transportation lighting fixtures to minimize off-site light trespass;
- Requiring lighting that illuminates parking areas to be hooded and arranged so as not to cause a nuisance to highway traffic or sensitive receptors.

- Glare from land use projects shall be minimized through the adoption of project design features that reduce glare. These features include:
  - Limit the use of reflective materials, such as metal to the extent feasible.
  - Use non-reflective glass (or glass treated with a non-reflective coating) for all exterior windows and glass used on building surfaces.
  - Provide structural and/or vegetative screening from light-sensitive uses.
  - Direct architectural lighting onto building surfaces with low reflectivity to minimize glare, limit spillover onto adjacent properties, and reduce skyglow into the nighttime sky, thereby avoiding incidental light impacts on nearby private properties and undeveloped open space.

4.1.9 Level of Significance After Mitigation

While implementation of **PMMs AES-1** and **AES-2** would assist the Fresno COG and lead agencies of future transportation improvement and land use development projects in reducing impacts related to aesthetics to the extent feasible, the analysis presented in this section is general in nature, and given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future transportation improvement and land use development projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. As appropriate and feasible, the Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified. Nevertheless, impacts related to aesthetics are considered **significant and unavoidable** for the purposes of this analysis.

4.1.10 Cumulative Impacts

As defined in Section 15130 of the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for aesthetics.

The cumulative impact analysis area for aesthetics consists of the Fresno COG Region and surrounding jurisdictions within the broader San Joaquin Valley that contribute to shared visual resources and viewsheds. These resources include agricultural lands and open space, skylines and distant mountain views, historic downtowns and community landmarks, rivers and waterways, parks and recreational areas, and habitat and natural landscapes that define the region's visual character.

Past, present, and future projects in the cumulative impact area could impact aesthetics through night sky lighting and overall changes in the visual environment as the result of increasing urbanization of large areas. However, some types of impacts to aesthetic resources would be localized and not cumulative in nature. For example, the creation of light, glare, or shadows at one location is not worsened by light, glare, or shadows created at another location. Rather these effects are independent, and the determination as to whether they are adverse is specific to the characteristics of the project and location of the site where they would occur. Projects that block a view or affect the visual quality of a site also result in localized impacts. The impact occurs specific to a site or area and remains independent from another project elsewhere that may block a view or degrade the visual environment of a specific site.

Subsequently, as development in one area (such as a large metropolitan urban center like the Fresno-Clovis Metropolitan Area) increases and possibly expands over time and meets or connects with development in an adjoining ex-urban area, the effect of night sky lighting experienced outside of the Fresno COG Region may increase in the form of larger and/or more intense nighttime glow in the viewshed. Although the proposed project encourages compact growth and development patterns within existing urbanized areas to shift growth away from agricultural and rural areas of the Fresno COG Region, development outside of those geographies with long-distance views may result in nighttime lighting becoming more visible, covering a larger area, and/or appearing in new areas as a result of projected development under the proposed project. Additionally, as planned cumulative development occurs over time, the overall visual environmental would change. Whether this overall change in land use would be experienced as an adverse or beneficial outcome is highly subjective. However, the combination of forecasted development in the Fresno COG Region and planned development in neighboring counties would result in a different visual environment than what currently exists.

As stated above under Section 4.1.9, impacts of the proposed project related to aesthetics are considered significant and unavoidable given the programmatic nature of the proposed project, the scale of the Fresno COG Region, and the inability of the Fresno COG to enforce project-specific mitigation or make land use approvals. Because the proposed project would result in significant adverse environmental impacts with respect to aesthetics, these impacts would represent an incremental contribution to the environmental impacts of other cumulative or related projects, including other regional-scale plans, ultimately leading to a **cumulatively considerable impact** to aesthetics.

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4.2 AGRICULTURE AND FORESTRY RESOURCES

This section of the Draft Program Environmental Impact Report (PEIR) discusses the existing setting of agriculture and forestry resources in the Fresno Council of Governments (COG) Region, sets forth the relevant regulatory requirements that apply to the analysis of the proposed 2026 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (proposed project) with respect to agriculture and forestry resources, and evaluates whether the project would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance; conflict with existing zoning for agricultural use or a Williamson Act contract; conflict with existing zoning for, or cause rezoning of, forest land or timberland; result in the loss of forest land or conversion of forest land to non-forest use; or involve other changes in the existing environment that could result in conversion of farmland or forest land. This section also evaluates the potential for implementation of the proposed project to impact agriculture and forestry resources. The section is based in part on information provided by the California Department of Conservation (DOC) Farmland Mapping and Monitoring Program (FMMP), the United States Department of Agriculture (USDA), the California Department of Forestry and Fire Protection (CAL FIRE), the Natural Resources Conservation Service (NRCS), the County's General Plan,[1] and the County's General Plan Environmental Impact Report (EIR).[2]

4.2.1 Scoping Process

Potential impacts related to agriculture and forestry resources were not identified during the public scoping meeting held for the proposed project on May 28, 2025.

The Fresno COG received no comment letters in response to the Notice of Preparation (NOP) issued for the proposed project between May 13 and June 12, 2025, concerning the proposed project's potential impacts related to agriculture and forestry resources.

4.2.2 Methodology

Impacts to agriculture and forestry resources were assessed based on documents and maps from the DOC and the County of Fresno General Plan Background Report[3] and General Plan EIR.[4]

Pursuant to the DOC FMMP, all lands within California are classified into one of the following map categories: Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local

1 County of Fresno. 2024. *Fresno County General Plan Policy Document. General Plan Review*. February.
2 County of Fresno. 2023. *Program Environmental Impact Report Public Review Draft. Fresno County General Plan Review and Zoning Ordinance Update*. April.
3 County of Fresno. 2023. *Fresno County General Plan Background Report. General Plan Review and Revision.* April.
4 Ibid.

Importance, Farmland of Local Potential, Grazing Land, Urban and Built-Up Land, Other Land,[5] Water, and Area Not Mapped.[6] A description of each FMMP category is provided in Section 4.2.4.2.

Government Code Section 65560(c) defines agricultural land as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land. The remaining categories are used for reporting changes in land use as required for the FMMP's biennial farmland conversion report. Public Resources Code (PRC) Section 21060.1 notes that the categories of Prime Farmland, Farmland of Statewide Importance, and Unique Farmland constitute "agricultural land" for environmental review purposes under CEQA. These three categories are henceforth referred to as "Important Farmland" for the purposes of this analysis.

The California Environmental Quality Act (CEQA) (PRC Sections 21095 and 21060.1(a)) and the *State CEQA Guidelines*, Appendix G, define three of the FMMP Farmland categories—Prime Farmland, Unique Farmland, and Farmland of Statewide Importance—as agricultural lands for purposes of CEQA analysis and acknowledge that their conversion to non-agricultural uses may be considered a significant impact. In accordance with *State CEQA Guidelines* Appendix G, impacts to agricultural resources were evaluated for the proposed project's potential to result in the conversion of Important Farmland to non-agricultural uses.

The proposed project's potential to convert or accelerate deterioration of forestry resources was considered to determine potential impacts to forestry resources. The *California's Forests and Rangelands 2017 Assessment* produced as part of CAL FIRE's Fire and Resource Assessment Program, defines forest/forests as a "biological community of plants and animals that is dominated by tree and other wood plants; by definition in the Assessment, all lands with greater than 10 percent tree canopy cover including all California Wildlife Habitat Relationships types in the Conifer Forest, Conifer Woodland, Hardwood Forest and Hardwood Woodland land cover classes."[7] The PRC defines forest land as "land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits."[8] This information was used in this chapter of the Draft PEIR to assess potential impacts to forestry resources in the County at a general level.

The development of new transportation and land use projects as facilitated by the proposed project may affect agriculture, timber and forestry resources, through both direct (e.g., directly converting land containing these resources) and indirect (e.g., inducing growth near land containing these

5 The Rural Land Mapping Project provides more detail on the distribution of various land uses within the Other Land category in eight FMMP counties, including the Fresno COG Region. The Rural Land categories include Rural Residential Land, Semi-Agricultural and Rural Commercial Land, Vacant or Disturbed Land, Confined Animal Agriculture, and Nonagricultural or Natural Vegetation.

6 California Department of Conservation (DOC). Important Farmland Categories. Website: https://www.conservation.ca.gov/dlrp/fmmp/Pages/Important-Farmland-Categories.aspx (accessed March 15, 2026).

7 California Department of Forestry and Fire Protection (CAL FIRE). 2017. *Fire and Resource Assessment Program, California's Forests and Rangelands 2017 Assessment.* Page 286. Website: https://frap.fire.ca.gov/media/4babn5pw/assessment2017.pdf (accessed November 11, 2025).

8 California Public Resources Code, Section 12220(g).

resources) effects. Potential agriculture and forestry resources impacts that can result from changes to land use patterns and transportation strategies under implementation of the proposed project cannot be meaningfully quantified at this time, and therefore were evaluated qualitatively based on information regarding future transportation improvements and growth known at this time.

Subsequent project-specific CEQA documents may be required to characterize in more detail the conditions related to agricultural and forestry resources at each individual project site, further analyze the transportation improvements or new development facilitated by the proposed project to determine the magnitude of potential impacts, and identify appropriate project-specific mitigation measures.

4.2.3 Existing Environmental Setting

This section describes the existing environmental setting of the Fresno COG Region pertaining to agriculture and forestry resources.

4.2.3.1 Agricultural Resources

According to the County's General Plan, agricultural land is the Fresno COG Region's most valuable natural resource and the historical basis of its economy.[9] The Fresno COG Region maintains approximately 1.8 million acres of farmland, which encompasses nearly half of the region's entire land area.[10] The agricultural industry is the main economic driver in the region, with agricultural jobs accounting for approximately 20 percent of the region's total employment. The Fresno COG Region is also the highest-ranked region in the State for agricultural production. The region's transportation system is a key component of the agriculture industry given that it allows for the movement of agricultural workers, supplies, and products throughout the region.

On a yearly basis, the Fresno County Agricultural Commissioner publishes an annual crop report summarizing annual agricultural production and profits. According to the most recent crop report available (2023), the region's total gross agricultural production value for 2023 was $8,589,054,000, and the top three crops produced were grapes, almonds, and pistachios.[11]

Figure 4.2-1 depicts the FMMP acres listing of existing FMMP categories within the Fresno COG Region. This information is also summarized in Table 4.2.A, below.

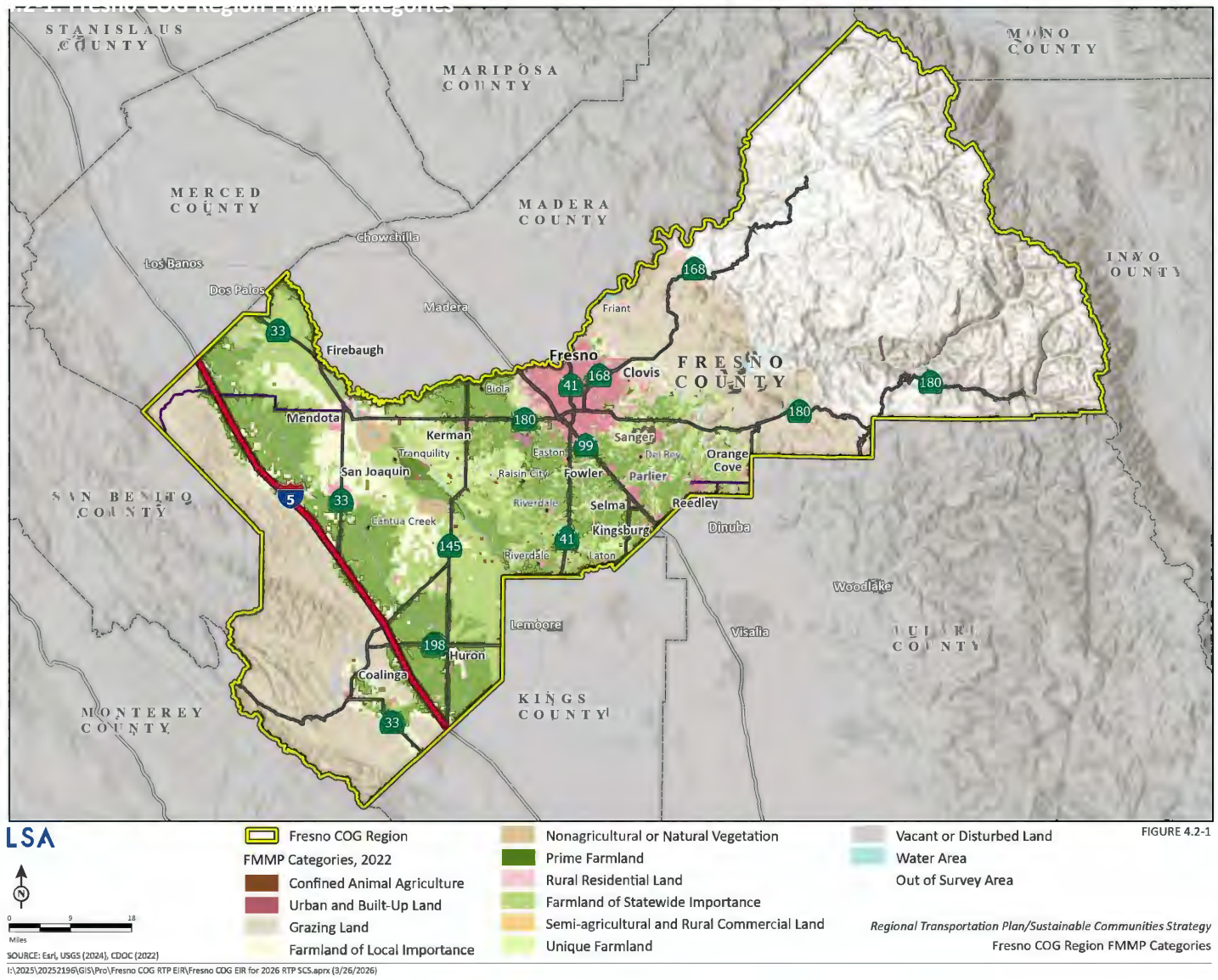
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9 County of Fresno. 2024. *Fresno County General Plan Policy Document.* February. Page 3. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/planning-and-land-use/general-plan/fcgpr_general-plan_county_final_2024_02.pdf (accessed November 12, 2025).

10 County of Fresno. 2023. *General Plan Review and Zoning Ordinance Update Program Environmental Impact Report Public Review Draft.* April. Page 4.1-17. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/environmental-impact-reports/1_draft-program-environmen.pdf (accessed November 12, 2025).

11 County of Fresno Department of Agriculture and Weights and Measures. 2024. *The 2023 Crop Report.* Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/agricultural-commissioner/ag-crop-reports/2023-ag-crop-report.pdf (accessed November 12, 2025).

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STANISLAUS COUNTY
MARIPOSA COUNTY
MONO COUNTY
MERCED COUNTY
MADERA COUNTY
INYO COUNTY
FRESNO COUNTY
SAN BENITO COUNTY
MONTEREY COUNTY
KINGS COUNTY
TULARE COUNTY
Chowchilla
Los Banos
Dos Palos
Madera
Friant
Firebaugh
Fresno
Clovis
Biola
Mendota
Kerman
Tranquility
Easton
Sanger
Del Rey
Orange Cove
San Joaquin
Raisin City
Fowler
Parlier
Riverdale
Selma
Reedley
Kingsburg
Dinuba
Laton
Woodlake
Lemoore
Visalia
Huron
Coalinga
33
5
168
41
180
99
145
198
LSA
Fresno COG Region
FMMP Categories, 2022
Confined Animal Agriculture
Urban and Built-Up Land
Grazing Land
Farmland of Local Importance
Nonagricultural or Natural Vegetation
Prime Farmland
Rural Residential Land
Farmland of Statewide Importance
Semi-agricultural and Rural Commercial Land
Unique Farmland
Vacant or Disturbed Land
Water Area
Out of Survey Area
0 9 18
Miles
SOURCE: Esri, USGS (2024), CDOC (2022)
I:\2025\20252196\GIS\Pro\Fresno COG RTP EIR\Fresno COG EIR for 2026 RTP SCS.aprx (3/26/2026)
FIGURE 4.2-1
Regional Transportation Plan/Sustainable Communities Strategy
Fresno COG Region FMMP Categories

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Table 4.2.A: Fresno COG Region FMMP Categories

DOC Farmland Designation	Total Acreage	Percentage of Total Area in Fresno COG Region
Prime Farmland	658,143	17
Farmland of Statewide Importance	380,125	10
Unique Farmland	94,216	2
Important Farmland Subtotal	***1,132,484***	***29***
Farmland of Local Importance	200,943	5
Grazing Land	819,593	21
Confined Animal Agriculture	9,638	0.3
Non-Agriculture and Natural Vegetation	34,936	1
Semi-Agricultural and Rural Commercial Land	10,845	0.3
Vacant and Disturbed Land	40,423	1
Rural Residential Land	47,365	1
Urban and Built-Up Land	136,096	4
Out of Survey Area[1]	1,408,911	37
Water Areas	5,110	0.1
Total Area Inventoried	**3,846,345**	**100**

Source: DOC. 2022. FMMP. Fresno County Important Farmland Data.
[1] Area that falls outside of the NRCS soil survey. Not mapped by the FMMP.
COG = Council of Governments
DOC = Department of Conservation
FMMP = Farmland Mapping and Monitoring Program
NRCS = Natural Resources Conservation Service

As shown in Table 4.2.A, the Fresno COG Region contains approximately 3,846,345 acres of land, of which about 1,132,484 acres (29 percent) are considered Important Farmland for the purposes of CEQA.

The remaining 71 percent of the Fresno COG Region, approximately 2,713,861 acres, consists of other farmland types or non-agricultural land, including about 136,096 acres of urban and built-up areas and approximately 47,365 acres of rural residential land. In summary, a substantial portion of the Fresno COG Region is used for agricultural purposes.

Conversion of agricultural land is typically associated with development and urbanization. Conversion can also take place when cultivated land is left unplanted (i.e., fallow) either temporarily or permanently. The decision to leave lands fallow can be to allow soil to recover from previous plantings, as a result of drought/lack of water availability, because of the high cost of obtaining water, as a result of regulatory changes, and/or to develop the land.[12] The Fresno COG Region aims to minimize the conversion of productive agricultural land given that this conversion "diminishes the

[12] California Department of Conservation (DOC). *2016-2018 California Farmland Conversion Report.* Page 22. Website:https://www.conservation.ca.gov/dlrp/fmmp/Documents/fmmp/pubs/2016-2018/FCR/FCR_1618_Report.pdf (accessed November 12, 2025).

region's agricultural production capacity and economic viability and detrimentally impacts surrounding agricultural operations to the extent that further losses in production may occur."[13]

The California DOC publishes triennial Farmland Conversion Reports that track changes in land use. The following analysis examines the 2016–2018 and 2020–2022 triennial periods for the Fresno COG Region (Tables 4.2.B and 4.2.C).

According to Table 4.2.B: Fresno COG Region Agricultural Land Conversion (2016–2018), between 2016 and 2018, the region experienced a net loss of 4,396 acres of Important Farmland and a net decrease of 4,637 acres of total agricultural land. Additionally, the total amount of land classified as Urban and Built-Up Land increased by 3,958.

Table 4.2.B: Fresno COG Region Agricultural Land Conversion (2016–2018)

Land Use Category	Total Acreage Inventoried		2016–2018 Acreage Changes
	2016	2018	Net Acreage Changed
Prime Farmland	675,720	672,208	-3,512
Farmland of Statewide Importance	397,133	395,148	-1,985
Unique Farmland	94,902	95,352	+450
Important Farmland Subtotal	***1,167,755***	***1,162,708***	***-5,047***
Farmland of Local Importance	191,783	192,434	+651
Grazing Land	822,696	822,455	-241
Urban and Built-Up Land	128,910	132,868	+3,958
Other Land	121,445	121,847	+466
Water Areas	4,908	5,121	+213
Total Area Inventoried	**2,437,497**	**2,437,433**	**-64**

Source: California Department of Conservation, Division of Land Resource Protection. n.d. Table A-7, Fresno County 2016–2018 Land Use Conversion. Website: https://www.conservation.ca.gov/dlrp/fmmp/Documents/fmmp/pubs/2016-2018/FCR/FCR_1618_Report.pdf (accessed November 12, 2025).
COG = Council of Governments

According to Table 4.2.C: Fresno COG Region Agricultural Land Conversion (2020–2022), between 2020 and 2022, the Fresno COG Region experienced a net loss of 5,047 acres of Important Farmland. Additionally, the total amount of land classified as Urban and Built-Up Land increased by 2,812 acres.

[13] County of Fresno. 2024. *Fresno County General Plan Policy Document.* February. Page 2-27. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/planning-and-land-use/general-plan/fcgpr_general-plan_county_final_2024_02.pdf (accessed November 12, 2025).

Table 4.2.C: Fresno COG Region Agricultural Land Conversion (2020–2022)

Land Use Category	Total Acreage Inventoried		2020–2022 Acreage Changes
	2020	2022	Net Acreage Changed
Prime Farmland	663,706	658,146	-5,560
Farmland of Statewide Importance	385,285	380,125	-5,160
Unique Farmland	95,047	94,215	-832
Important Farmland Subtotal	***1,144,038***	***1,132,486***	***-11,552***
Farmland of Local Importance	202,159	210,579	8,420
Grazing Land	819,597	819,593	-4
Urban and Built-Up Land	133,285	136,097	2,812
Other Land	133,241	133,569	328
Water Areas	5,115	5,111	-4
Total Area Inventoried	**2,437,435**	**2,437,435**	**0**

Source: California Department of Conservation, Division of Land Resource Protection. Table A-8, Fresno County 2020–2022 Land Use Conversion. (accessed February 26, 2026).
COG = Council of Governments

As shown in Tables 4.2.B and 4.2.C, the Fresno COG Region has experienced a general decrease in Important Farmland between 2016 and 2022, while Urban and Built-Up Land has increased over the same period. These trends reflect ongoing development pressure on the Fresno COG Region's agricultural lands and indicate a continued shift toward urbanization, with incremental losses of higher-value farmland and expansion of built environments.

As described in Section 4.2.4.2, below, Williamson Act lands consist of parcels restricted to agricultural or related open space use under contracts with local governments. Farmland Security Zone (FSZ) contracts are another option in the Williamson Act program. FSZ contracts offer landowners greater property tax reductions with a minimum term of 20 years. As shown on Figure 4.2-2, in 2024, the Fresno COG Region contained approximately 141,767 acres of land under Williamson Act Mixed Enrollment Status, which are lands enrolled in a Williamson Act contract that contain a combination of Prime, Non-Prime, Open Space Easement, or other contracted or enrolled lands not yet delineated by the County.[14] In addition, 30,021 acres were in FSZ contracts. Moreover, approximately 4,390 acres are in "non-renewal," meaning the landowner or the jurisdiction had initiated a Notice of Nonrenewal for the entire contract or a portion of the contracted land, triggering a 9-year countdown to the expiration of the contract for standard contracts or a 19-year countdown for FSZ contracts.[15] Land in non-renewal is subject to all the requirements of the contract until it expires.

[14] California Department of Conservation (DOC). 2024. Williamson Act Enrollment Finder. Website: https://maps.conservation.ca.gov/dlrp/WilliamsonAct/App/ (accessed March 25, 2026).

[15] California Department of Conservation (DOC). n.d. Williamson Act Contract Removal. Website: https://www.conservation.ca.gov/dlrp/wa/Pages/removing_contracts.aspx (accessed March 25, 2026).

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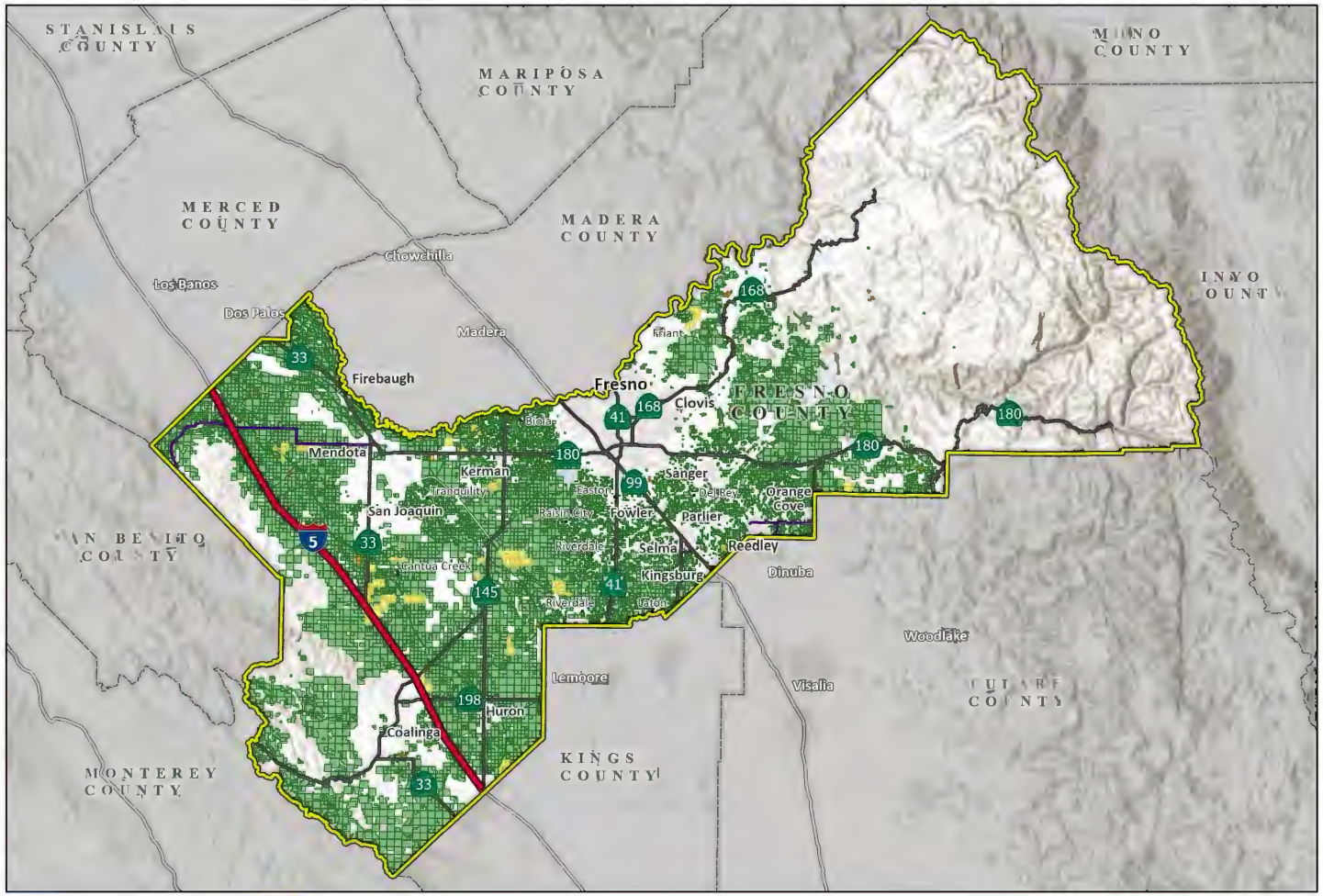


FIGURE 4.2-2

Regional Transportation Plan/Sustainable Communities Strategy
Williamson Act and Farmland Security Zone Land

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4.2.3.2 Forest Resources

The Fresno COG Region contains federally owned national park and forest land.[16] As shown on Figure 4.2-3, forest lands within the Fresno COG Region include the Sierra National Forest and Sequoia National Forest. These national forests are managed by the United States Forest Service (USFS), which is part of the USDA.

The Sierra National Forest encompasses approximately 1,395,553 acres of land across Fresno, Madra, and Mariposa counties. Of this total acreage, approximately 102,000 acres are privately, rather than federally, owned. The Sierra National Forest is managed by the Land Management Plan for the Sierra National Forest.[17] This plan determines allowed uses and activities, identifies resource preservation and protection strategies, and outlines applicable requirements.

The Sequoia National Forest encompasses approximately 1,165,045 acres of land across Fresno, Tulare, and Kern counties. Of this total acreage, approximately 46,000 acres are privately or locally, rather than federally, owned. Management of the Sequoia National Forest is directed by the Sequoia National Forest Land and Resource Management Plan.[18] Similar to the Land Management Plan for the Sierra National Forest, this document regulates activities and resources within the Sequoia National Forest.

In addition to the federally owned national park and forest land described above, which is generally set aside for preservation purposes, the Fresno COG Region also contains land designated for timber production. As described below in Section 4.2.4.3, the County has established a Timberland Preserve Zone (TPZ), which is intended to provide for the exclusive management of lands and forests for the long-term commercial production and harvesting of trees, including uses that are an integral part of a timber management operation. According to the County's General Plan,[19] land within a TPZ cannot be converted to a non-forestry use without a rezoning through the County and approval by the State Board of Forestry.

4.2.4 Regulatory Setting

Federal, State, and local regulations and programs related to agriculture and forestry resources that are applicable to the proposed project are described below.

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16 County of Fresno. 2023. *General Plan Review and Zoning Ordinance Update Program Environmental Impact Report Public Review Draft.* April. Page 4.2-4. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/environmental-impact-reports/1_draft-program-environmen.pdf (accessed November 12, 2025).

17 United States Forest Service (USFS). 2016. *Draft Revised Land Management Plan for the Sierra National Forest, Fresno, Madera, and Mariposa Counties, California.* May. Website: https://www.govinfo.gov/content/pkg/GOVPUB-A13-PURL-gpo69136/pdf/GOVPUB-A13-PURL-gpo69136.pdf (accessed November 12, 2025).

18 United States Forest Service (USFS). 2023. *Land Management Plan for the Sequoia National Forest, Fresno, Kern, and Tulare Counties, California.* May. Website: https://www.fs.usda.gov/sites/nfs/files/legacy-media/sequoia/2023%20Sequoia%20National%20Forest%20Land%20Management%20Plan.pdf (accessed November 12, 2025).

19 Ibid.

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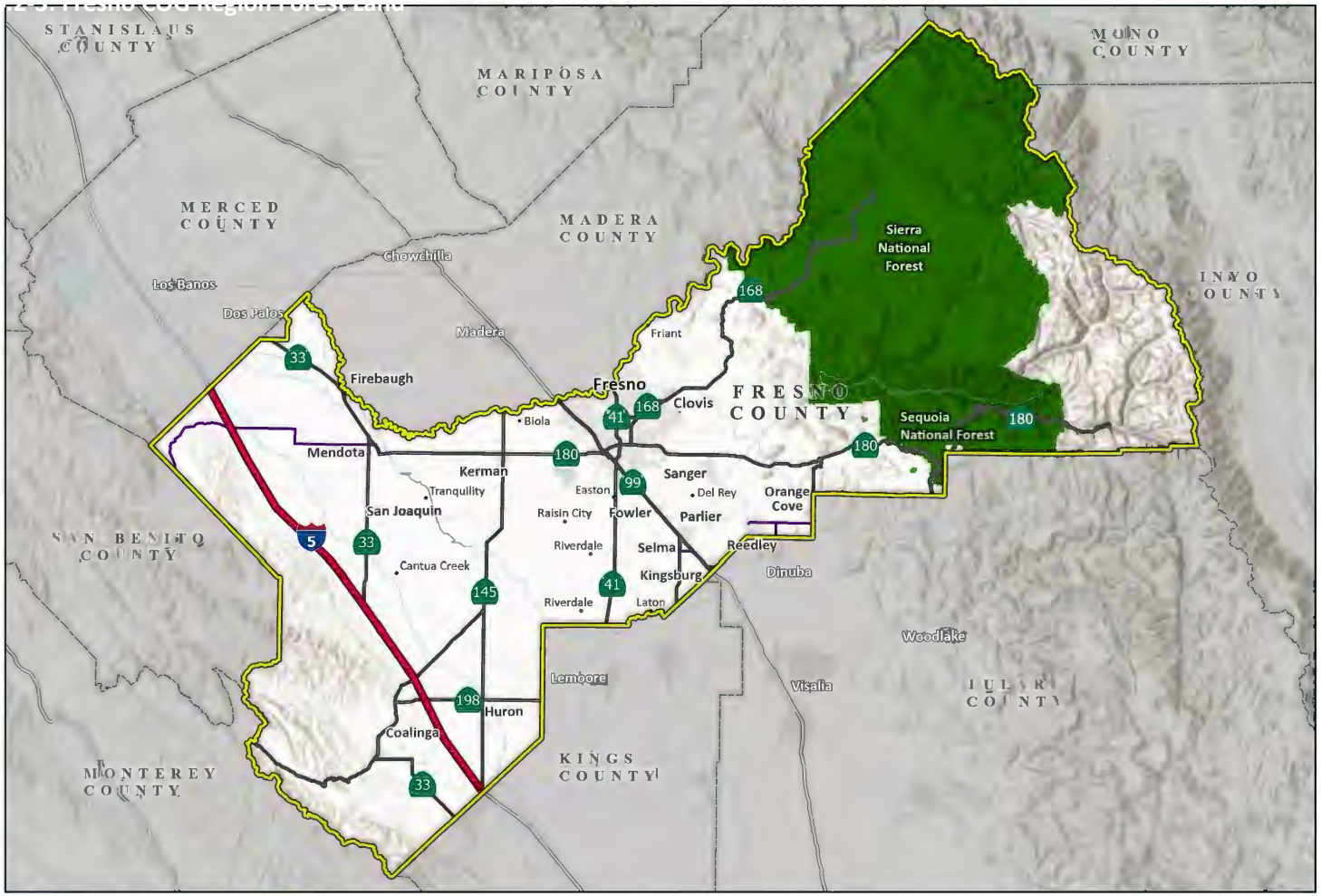


FIGURE 4.2-3

Regional Transportation Plan/Sustainable Communities Strategy
Fresno COG Region Forest Land

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4.2.4.1 Federal Regulations

Farmland Protection Policy Act. The Farmland Protection Policy Act (FPPA) (7 United States Code [USC] 4201-4209) was enacted by Congress as part of the 1981 Agriculture and Food Act (Farm Bill), and the final rule was published in 1994. The purpose of the law is to minimize the extent to which federal activities contribute to the unnecessary and irreversible conversion of agricultural land to non-agricultural uses. It also seeks to ensure that federal programs are administered in a manner to be compatible with State, local, and private efforts to protect farmland. For the purposes of the law, federal programs include construction projects such as highways, airports, dams, and federal buildings sponsored or financed in whole or in part by the federal government, and the management of federal lands. The FPPA does not cover private construction subject to federal permitting and licensing, projects planned and completed without any assistance from a federal agency, federal projects related to national defense during a national emergency, and projects proposed on land already committed to urban development.

Farm and Ranch Lands Protection Program. Established in 1996, the Farm and Ranch Lands Protection Program (FRPP) (16 USC 3838h-3838i) provides matching grants to states, local, Tribal, and non-profit entities for the purchase of agricultural conservation easements. The program is administered by the USDA NRCS.[20] In order to be eligible for FRPP funding, an easement area must be (1) threatened by development and (2) located near agricultural infrastructure and markets.

National Forest Management Act. The National Forest Management Act of 1976 (Public Law 94–588) established a nationwide system for forestry management. Specifically, this regulation requires the Secretary of Agriculture to evaluate forest lands within the United States; develop a management program based on multiple-use, sustained-yield principles; and implement a resource management plan for each unit of the National Forest System. The two national forests partially located in the County, the Sierra National Forest and Sequoia National Forest, are subject to the National Forest Management Act.

Forest Legacy Program. The Forest Legacy Program (16 USC Sections 2103c) is a voluntary conservation program administered by the USFS in partnership with state agencies to encourage the protection of privately owned forest lands. The program provides grants to states to permanently protect forested properties through conservation easements or direct acquisition. Development is typically prohibited on lands covered by the Forest Legacy Program.

4.2.4.2 State Regulations

California Department of Conservation Farmland Mapping and Monitoring Program. Pursuant to Government Code Section 65570, the DOC FMMP compiles consistent, timely, and accurate data to decision makers for use in planning for the present and future of California's agricultural land resources. The FMMP provides maps and statistical data to the public, academia, and local, State, and federal governments on the nature, location, and extent of farmland, grazing land, and urban built-up areas in the State to assist in making informed decisions for the best utilization of California's farmland. Government Code Section 65570 mandates the FMMP to biennially report to

[20] Trust for Public Land. Farm and Ranch Lands Protection Program (FRPP). Website: https://www.tpl.org/about/farm-and-ranch-lands-protection-program-frpp (accessed November 11, 2025).

the Legislature on the conversion of farmland and grazing land and to provide maps and data to local governments and the public. The FMMP also prepares and maintains an automated map and database system to record and report changes in the use of agricultural lands. These maps combine soil survey and current land use information from the USDA and NRCS to provide an inventory of agricultural resources in each county. The maps show urbanized lands and a qualitative sequence of agricultural designations. Pursuant to the FMMP, all lands within California are classified into one of seven map categories. The minimum mapping unit is 10 acres, except as otherwise noted.[21]

Provided below is a description of the various map categories established by the FMMP, assessing the importance of agricultural land based on factors such as soil characteristics, climate, and water supply for the Fresno COG Region:

- **Prime Farmland:** The best combination of physical and chemical features and able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.

- **Farmland of Statewide Importance:** Similar to Prime Farmland but with minor shortcomings, such as steeper slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.

- **Unique Farmland:** Lesser-quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated but may include unirrigated orchards or vineyards. Land must have been cultivated at some time during the 4 years prior to the mapping date.

- **Farmland of Local Importance:** Land of importance to the local economy, as defined by each county's local advisory committee and adopted by its board of supervisors. This refers to all farmable lands in the county that do not meet the definitions of Prime, Statewide, or Unique. This includes land that is or has been used for irrigated pasture, dryland farming, confined livestock and dairy, poultry facilities, aquaculture, and grazing land.

- **Farmland of Local Potential:** Farmland of Local Potential is a subcategory of Farmland of Local importance and aggregated with Farmland of Local Importance acreage in the land use conversion table. Only four counties include Farmland of Local Potential: Glenn, San Luis Obispo, Santa Clara, and Yolo counties. Therefore, this category is not applicable to the Fresno COG Region.

- **Grazing Land:** This type of land is occupied with vegetation suited to grazing livestock. This category was developed in cooperation with the California Cattleman's Association, the University of California Cooperative Extension, and other groups interested in the extent of grazing activities. The minimum mapping unit is 40 acres.

[21] California Department of Conservation (DOC). n.d. *A Guide to the Farmland Mapping and Monitoring Program.* 2004. Page 6. Website: https://www.conservation.ca.gov/dlrp/fmmp/Documents/fmmp/Archive/fmmp_guide_2004.pdf (accessed November 11, 2024).

- **Urban and Built-Up Land:** 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 of land uses include residential, industrial, commercial, and institutional facilities; public administrative purposes; railroad and transportation yards; cemeteries; airports; golf courses; sanitary landfills; sewage treatment; and water control structures; and other developed purposes.

- **Other Land:** This type of land is not included in any other mapping category. Common examples include low-density rural developments; brush, timber wetland, and riparian area not suitable for livestock grazing; confined livestock, poultry, or aquaculture facilities; strip mines; 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. The Rural Land Mapping Project provides more detail on the distribution of various land uses within the Other Land category in eight FMMP counties, including Fresno County.[22] The Rural Land categories include:

    - **Confined Animal Agriculture:** Confined animal agricultural lands include poultry facilities, feedlots, dairy facilities, and fish farms. In some counties, confined animal agriculture is a component of the farmland of local importance category.

    - **Rural Residential Land:** Rural residential land includes residential areas of one to five structures per 10 acres.

    - **Nonagricultural or Natural Vegetation:** Nonagricultural and natural vegetation includes heavily wooded, rocky or barren areas, riparian and wetland areas, grassland areas that do not qualify for grazing land due to their size or land management restrictions, small water bodies, and recreational water ski lakes. Constructed wetlands are also included in this category.

    - **Semi-Agricultural and Rural Commercial Land:** Semi-agricultural and rural commercial land includes farmsteads, agricultural storage and packing sheds, unpaved parking areas, composting facilities, equine facilities, and firewood lots.

    - **Vacant or Disturbed Land:** Vacant or disturbed land includes open field areas that do not qualify for an agricultural category, mineral and oil extraction areas, off-road vehicle areas, electrical substations, channelized canals, and rural freeway interchanges.

- **Water:** Perennial water bodies with an extent of at least 40 acres.

- **Area Not Mapped:** Areas that fall outside of the NRCS soil survey and are not mapped by the FMMP.

[22] California Department of Conservation (DOC). n.d. Important Farmland Categories. Website: https://www.conservation.ca.gov/dlrp/fmmp/Pages/Important-Farmland-Categories.aspx (accessed March 15, 2026).

Williamson Act and Farmland Security Act. The California Land Conservation Act of 1965 (CLCA), better known as the Williamson Act (California Government Code §51200 et. seq.), enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments that are much lower than normal because they are based on farming and open space uses as opposed to full market value. Pursuant to Government Code §51230, counties and cities may establish Agricultural Preserves, which define boundaries of those areas within which the city or county will be willing to enter into contracts pursuant to the CLCA. Contracts made pursuant to the CLCA only are allowed for areas within established Agricultural Preserves. Williamson Act contracts have a minimum term of 10 years, with renewal occurring automatically each year, although local governments can establish initial contract terms for longer periods of time. Only land located within an Agricultural Preserve is eligible for a Williamson Act contract. The boundary is designated by resolution of the board of supervisors or city council having jurisdiction. Agricultural Preserves generally must be at least 100 acres in size; however, a city or county may allow for lesser acreage if a finding is made that the characteristics of the agricultural enterprises in the area are unique and that the establishment of preserves of less than 100 acres is consistent with the general plan of the county or city. The rules of each Agricultural Preserve specify the uses allowed. Land uses within an Agricultural Preserve must be open space or agricultural in nature or other such uses that are not incompatible with agricultural uses as identified by the local government for the duration of the contract. The contracts run with the land and are binding on all successors in the interest of the landowner.

In return for entering into a contract, the landowner is granted preferential taxes that are based on agricultural and related land uses rather than fair market value. Contracts may be exited at the option of the landowner or local government by initiating the process of term non-renewal. Under this process, the remaining contract term (9 years in the case of an original term of 10 years) is allowed to lapse, with the contract null and void at the end of the term. During the non-renewal process, the annual tax assessment continually increases each year until it is equivalent to current tax rates at the end of the non-renewal period. Under a set of specifically defined circumstances, a contract may be cancelled without completing the process of term non-renewal. Contract cancellation, however, involves a comprehensive review and approval process, as well as the payment of a fee by the landowner.

In August 1998, Senate Bill (SB) 1182 established the FSZ provisions of the Williamson Act. An FSZ is created within an Agricultural Preserve by County Board of Supervisors approval and at the request of a landowner or group of landowners. FSZ contracts offer landowners greater property tax reductions in return for an initial contract term of 20 years, with renewal occurring automatically each year. Land restricted by an FSZ contract is valued for property assessment purposes at 65 percent of its Williamson Act valuation, or 65 percent of its Proposition 13[23] valuation, whichever is lower. New special taxes for urban-related services must be levied at an unspecified reduced rate unless the tax directly benefits the land or living improvements. Cities and special districts that

[23] Proposition 13, passed in 1978, changed tax assessment practices by limiting valuations to a static base year. Source: California Department of Conservation (DOC). n.d. Williamson Act Program Overview. Website: https://www.conservation.ca.gov/dlrp/wa/Pages/wa_overview.aspx (accessed November 11, 2025).

provide non-agricultural services are generally prohibited from annexing land enrolled under an FSZ contract. Similarly, school districts are prohibited from taking FSZ lands for school facilities.

Right-to-Farm Act. California's Right-to-Farm Act (California Civil Code §3482.5) conserves, protects, and encourages the development of agricultural land and industries for the production of food and other agricultural products. It is the intent of this law to reduce the loss of agricultural resources by limiting the circumstances under which agricultural operations may be deemed to constitute a nuisance to surrounding land uses. Under the Right-to-Farm Act, agricultural operations that are consistent with proper and accepted local customs and standards shall not be or become a nuisance due to a changed condition in a locality after such agricultural pursuit has been in operation for 3 years if it was not a nuisance at the time it began.

Z'Berg-Nejedly Forest Practice Act. The Z'Berg-Nejedly Forest Practice Act (Forest Practice Act) (PRC §4511 et. seq.) identifies operating methods and procedures that seek to protect fish, wildlife, forests, and streams within timber harvesting areas. The Forest Practice Act is intended to achieve "maximum sustained production of high-quality timber products…while giving consideration to values relating to recreation, watershed, wildlife, range and forage, fisheries, regional economic vitality, employment and aesthetic enjoyment."[24] The regulations created by the Forest Practice Act define factors such as the size and location of harvest areas, include measures to prevent unreasonable damage to residual trees, and address the protection of riparian areas, watercourses and lakes, wildlife, and habitat areas.

Z'Berg-Warren-Keene-Collier Forest Taxation Reform Act. According to the Z'Berg-Warren-Keene-Collier Forest Taxation Reform Act[25] (California Government Code §51110.1 et. seq.), enacted in 1976, counties must provide for the zoning of land used for growing and harvesting timber as TPZs. TPZs were established to preserve and protect timberland from conversion to other uses and avoid land use conflicts.

Cortese-Knox-Hertzberg Local Government Reorganization Act. The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (California Government Code §56000 et. seq.) established procedures for local government changes of organization, including city incorporations, annexations to a city or special district, and city and special district consolidations. Pursuant to this regulation, each County has a Local Agency Formation Commission (LAFCO) with the power to review and decide on proposals for the expansion of city or special district boundaries. LAFCOs are required to consider agricultural land and open space preservation in all decisions related to expansion of urban development.

Timberland Productivity Act. The Timberland Productivity Act (California Government Code §51100 et. seq.) represents the Legislature's declared intent "to fully realize the productive potential of the forest resources and timberlands of the state." The act imposes mandatory restrictions on parcels zoned for timberland production. Such parcels "shall be zoned so as to restrict their use to growing and harvesting timber and to compatible uses."[26] In exchange, property owners are required to pay

24 Public Resources Code § 4513[b].
25 California Government Code §§ 51110–51119.5: Article 2.
26 California Government Code § 51115.

property taxes on the land based solely on its value for timber harvest, and not for its development potential. Government Code Section 51104(g) of the Timberland Productivity Act defines "timberland production zone" as an area that has been zoned pursuant to Government Code Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses. Compatible uses are defined under Government Code Section 51104(h) and include management for watersheds; management of habitat for hunting and fishing; access roads and staging areas for timber harvesting; gas, electric, water, or communication transmission facilities; grazing; or a residence or other structure necessary for timber management.

Oak Woodlands Conservation Act. The Oak Woodlands Conservation Act of 2001 (Assembly Bill [AB] 242) mandated the California Wildlife Conservation Board to establish a grant program designed to protect and restore oak woodlands using conservation easements, cost-share and long-term agreements, technical assistance, and public education and outreach. The purpose of the grant program is to provide incentives designed to "foster the conservation of oak woodlands in a manner that promotes local priorities while sustaining the economic viability of farming and ranching operations."[27]

4.2.4.3 Regional Regulations

County of Fresno Right-to-Farm Notice (Ordinance 87-010). The County's Right-to-Farm Notice (Fresno County Code of Ordinances §17.04.100) conserves, protects, and encourages the development of agricultural land and industries for the production of food and other agricultural products. Under the Right-to-Farm Notice, consistent with California's Right-to-Farm Act discussed above, residents of property in or near agricultural districts should be prepared to accept the inconveniences and discomfort associated with normal farm activities.

4.2.4.4 Local Regulations

Local General Plans. The Fresno COG Region contains Fresno County and 15 incorporated cities, each with an individual general plan prepared pursuant to California Government Code Section 65300. Each general plan contains goals and policies related to agriculture and forestry resources within the particular jurisdiction. Although general plan element titles may vary, this information is typically found within the general plan open space/conservation element, or equivalent.

Local Municipal Codes. Fresno County and cities within the Fresno COG Region may have adopted zoning designations specific to agricultural and forest land. Zoning designations are typically found in the zoning code, which is a component of the municipal code.

4.2.5 Thresholds of Significance

The following thresholds of significance are based on Appendix G of the *State CEQA Guidelines*. Based on these thresholds, implementation of the proposed project would have a significant adverse impact with respect to agriculture and forestry resources if it would:

[27] State of California Resources Agency California Wildlife Conservation Board. n.d. *The Oak Woodlands Conservation Act of 2001 Program Application and Guidelines.*

Threshold 4.2.1: 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;

Threshold 4.2.2: Conflict with existing zoning for agricultural use, or a Williamson Act contract;

Threshold 4.2.3: 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));

Threshold 4.2.4: Result in the loss of forest land or conversion of forest land to non-forest use; or

Threshold 4.2.5: 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.

4.2.6 Project Impacts

The following discussion describes the potential impacts related to agricultural and forestry resources that could result from implementation of the proposed project.

Threshold 4.2.1: Would the project 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?

Significant and Unavoidable Impact. As shown on Figure 4.2-1 and detailed in Table 4.2.A, above, according to DOC FMMP data from 2022, the Fresno COG Region contains approximately 658,143 acres of Prime Farmland, 94,216 acres of Unique Farmland, and 380,125 acres of Farmland of Statewide Importance. In addition, the Fresno COG Region contains 200,943 acres of Farmland of Local Importance.

As described in Section 3.0, Project Description, the Fresno COG selected Scenario C (Enhanced Transit and Smart Growth) as the preferred project scenario. One of the focal points of this scenario is the preservation of resource land, which includes agricultural land. Other focal points of this scenario are sustainable urban growth focused on existing urban centers and established urban areas, and supporting higher-density growth with mixed-use development. Under this approach, new land use development would be prioritized within urban centers via infill, mixed-use development, and other strategies, which would help avoid conversion of active agricultural uses. Specifically, pursuant to **Fresno COG Mitigation Measure (FMM) AG-1**, the Fresno COG will encourage member agencies to pursue infill development in place of development in rural and environmentally sensitive areas. However, the proposed project does not preclude future transportation improvement projects and land use developments facilitated by the proposed project from being located on or near agricultural land in urban fringe or rural areas, which could result in

the conversion of land that may be classified as Important Farmland. The amount of Important Farmland impacted by transportation improvement projects cannot be fully estimated since the actual design and extent of improvements for projects contained in the proposed 2026 RTP/SCS is not yet known. However, the general nature of such impacts is described below.

Potential impacts to agricultural land under implementation of the proposed project would be temporary and permanent and both direct and indirect. Direct temporary impacts could include temporary use for construction activities, such as construction equipment staging, where agricultural land would be restored to its original function once construction has been completed. Direct permanent impacts could include acquisition and conversion of agricultural land for development. As required by SB 375, the Fresno COG has calculated quantitative estimates of farmland that could be converted under Scenario C. Additional detail regarding SCS modeling is provided in Appendix C to the RTP/SCS document, which is incorporated by reference. According to the Fresno COG, implementation of Scenario C would result in the direct conversion of 924 total acres of farmland, including 23.2 acres of Important Farmland. A detailed breakdown of the Important Farmland anticipated for conversion under implementation of the proposed project is provided in Table 4.2.D, below.

Table 4.2.D: 2026 RTP/SCS Anticipated Important Farmland Conversion

Farmland Type[1]	Acres Converted
Prime Farmland	16.7
Farmland of Statewide Importance	1.5
Unique Farmland	5.0
Total	**23.2**

Source: Fresno Council of Governments. 2026.
[1] As defined by the California Department of Conservation Farmland Mapping and Monitoring Program.
RTP/SCS= Regional Transportation Plan/Sustainable Communities Strategy

Comparatively, the 23.3 acres anticipated for conversion under the proposed project would represent only 0.002 percent[28] of the overall Important Farmland in the Fresno COG Region and only 0.2 percent[29] of the total amount of Important Farmland converted in the Fresno COG Region between 2020 and 2022. As such, potential conversion of Important Farmland under implementation of the proposed project is relatively minor when compared to overall Important Farmland and urbanization trends within the Fresno COG Region.

Indirect permanent impacts could increase the amount of agricultural conversion beyond that needed for each individual project footprint by changing travel and growth patterns that lead to additional development on agricultural land. In addition, future transportation improvement projects could sever agricultural parcels and create remnant parcels of agricultural land. Some parcels could be severed from a larger parcel because transportation facility footprints may bisect the parcel, and some parcels could be severed because access would be restricted or eliminated

[28] (23.2 ÷ 1,132,484) × 100 = 0.002 percent.
[29] (23.2 ÷ 11,552) × 100 = 0.2 percent.

through the creation of a new physical barrier. Some remnant parcels would remain in agricultural use. However, remnant parcels may have the potential to become unfarmable because of lack of access, size, shape, location, or other hardship, which would lead to the conversion of the remnant parcel to a non-agricultural use.

As described throughout this PEIR, subsequent project-specific CEQA documents may be required to further analyze the transportation improvements or new development facilitated by the proposed project. In addition, federally funded projects may be required to prepare project-specific National Environmental Policy Act (NEPA) documents and are required to follow the rules and regulations of FPPA, including determining the impact by completing the Farmland Conversion Impact Rating form (AD-1006 or Form NRCS-CPA-106 for corridor-type projects). For non-federally funded projects, implementing and local agencies should assess projects for the presence of Important Farmland and, if present, perform a Land Assessment and Site Evaluation (LESA), if appropriate. These analyses would further analyze the transportation improvements or new development facilitated by the proposed project to determine the magnitude of impacts to agricultural resources, which each CEQA and/or NEPA document would then be required to address through appropriate project-specific mitigation measures.

As described in Chapter 3.0, Project Description, the design of each transportation improvement project and land use development facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. With adherence to the federal and State agricultural analysis requirements described above and **FMM AG-1**, project impacts associated with the conversion of Important Farmland to non-agricultural use would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to the California Department of Transportation (Caltrans), local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts associated with conversion of Important Farmland to non-agricultural use are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.2.2: Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

Significant and Unavoidable Impact. As with the conversion of Important Farmland under Threshold 4.2.1, above, the amount of Williamson Act contract lands impacted by transportation improvement projects cannot be fully estimated since the actual design and extent of improvements for projects contained in the proposed 2026 RTP/SCS is not yet known. However, the general nature of such impacts is described below.

As described above in Section 4.2.4.4, the Fresno COG member agencies (Fresno County and the incorporated cities within the Fresno COG Region) have established zoning designations specific to agricultural uses, where applicable. In addition, as shown on Figure 4.2-2, in 2024, the Fresno COG

Region contained approximately 141,7667 acres of land under Williamson Act preserve status and 30,021 acres in FSZ contracts. Pursuant to **FMM AG-1**, the Fresno COG will encourage member agencies to pursue infill development in place of development in rural and environmentally sensitive areas. Nevertheless, the development of transportation improvement projects and land use developments facilitated by the proposed project would have the potential to conflict with existing zoning for agricultural use or a Williamson Act contract.

Future land use developments proposed on parcels zoned for agricultural use that would conflict with such zoning would generally require a zoning code amendment or related action. Zoning code amendments are typically subject to discretionary approval by an approving body (e.g., a local city council or the Fresno County Board of Supervisors) at the time the body considers action on the project as a whole. Therefore, any potential conflicts with zoning for agricultural use would be resolved through the zoning code amendment process, and all environmental impacts associated with this process would be evaluated and mitigated to the extent feasible in the related CEQA document.

As described above in Section 4.2.4.2, Williamson Act lands consist of parcels restricted to agricultural or related open space use under contracts with local governments. Therefore, development proposed on a parcel under an active Williamson Act contract could represent a conflict. Partial acquisitions of Williamson Act or FSZ properties might result in remaining portions of the parcels staying under contract if minimum acreage requirements established by the local jurisdiction are met. However, a partial acquisition of land protected by Williamson Act or FSZ contracts could constrain the potential continued use of that land for farming. This is because (1) the remaining land acreage might be too small to meet the minimum requirements under these programs and (2) the resulting increase in property taxes on the land might affect the financial feasibility of continued farming.

Two options to remove a parcel from an active Williamson Act contract and enable its development are non-renewal and cancellation. As previously described, approximately 4,390 acres of the Fresno COG Region are considered under non-renewal as of 2024, meaning the landowner or the jurisdiction has initiated a Notice of Nonrenewal and the contract will expire in 2033 (9 years from 2024) at the latest due to the mandatory countdown period. Cancellation of a Williamson Act contract is allowable under the limited circumstances and conditions set forth in Government Code Section 51280 et seq. If a landowner's petition for cancellation is successful, the landowner is required to pay a cancellation fee equal to 12.5 percent of the cancellation valuation.[30] It is feasible that land currently under a Williamson Act contract could undergo non-renewal or cancellation and be developable by the proposed project horizon year of 2049. Future land use developments on land not currently under an active Williamson Act contract would not result in any conflicts.

Should CEQA documentation for future projects identify potential impacts related to conflicts with a Williamson Act contract, **Project-Specific Mitigation Measure (PMM) AG-1** would require that member agencies consider project-level mitigation measures to address such impacts to the extent feasible, including avoidance or compensation through either the establishment of a new off-site

[30] California Department of Conservation (DOC). Contract Cancellations. Website: https://www.conservation.ca.gov/dlrp/wa/Pages/removing_contracts_cancellations.aspx (accessed March 25, 2026).

conservation easement consistent with DOC easement exchange procedures[31] or the enrollment of agricultural lands into the Williamson Act program under new 10-year or 20-year contracts. This would contribute to the regional balance of land enrolled in a Williamson Act contract in the event of identified project-specific conflicts.

As described in Chapter 3.0, Project Description, the design of each transportation improvement project and land use development facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. With adherence to the agricultural analysis requirements set forth in **FMM AG-1** and **PMM AG-1**, project impacts associated with conflicts with existing zoning for agricultural use or a Williamson Act contract would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts associated with conflicts with existing zoning for agricultural use or a Williamson Act contract are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.2.3: Would the project 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));

Or:

Threshold 4.2.4: Would the project result in the loss of forest land or conversion of forest land to non-forest use?

Significant and Unavoidable Impact. As described in Section 4.2.4.3, the County has established a TPZ consistent with the Z'Berg-Warren-Keene-Collier Forest Taxation Reform Act. The TPZ is intended to provide for the exclusive management of lands and forests for the long-term commercial production and harvesting of trees, including uses that are an integral part of a timber management operation. Therefore, the Fresno COG Region contains land specifically zoned as timberland. While forest and timberland is also present in some individual cities in the Fresno COG Region, cities typically classify these lands as part of overarching "open space" or comparable category.

As described in Section 4.2.3.2, the Fresno COG Region contains federally owned land in the Sierra National Forest and the Sequoia National Forest. Land use within these national forest areas are managed by the USFS and subject to the Land Management Plan for the Sierra National Forest and the Sequoia National Forest Land and Resource Management Plan. It should be noted that these

[31] California Department of Conservation (DOC). n.d. Williamson Act Contract Removal. Website: https://www.conservation.ca.gov/dlrp/wa/Pages/removing_contracts.aspx (accessed March 25, 2026).

national forest lands are generally set aside for outdoor recreation, range, timber, watershed, wildlife and fish, and wilderness purposes and are generally protected from private development.

As previously stated, the Fresno COG selected Scenario C (Enhanced Transit and Smart Growth) as the preferred project scenario. The focal points of this scenario include preservation of resource land, which includes forest land and timberland; sustainable urban growth focused on existing urban centers and established urban areas; and higher-density growth with mixed-use development. All of these approaches would locate future land use developments within urban centers, where land zoned as forest land or timberland is unlikely to be present due to the developed nature of these areas. Nevertheless, it is still possible that growth could occur in areas that would result in conflicts with or cause rezoning of timberland. Future land use developments proposed on parcels within a forest land or TPZ (or similar local zoning designation for timber production) that would conflict with such zoning would generally require a zoning code amendment or related action. Zoning code amendments are typically subject to discretionary approval by an approving body (e.g., a local city council or the Fresno County Board of Supervisors) at the time the body considers action on the project as a whole, in addition to the State Board of Forestry. Therefore, any potential conflicts with zoning for timberland use would be resolved through the zoning code amendment process, and all environmental impacts associated with this process would be evaluated and mitigated to the extent feasible in the related CEQA document.

Forest land within the Fresno COG Region in the Sierra Nevada mountains and foothills is not located in or the near existing urban centers and established urban areas targeted for growth under the proposed project. Therefore, future land use developments facilitated by the proposed project would be unlikely to result in the conversion of forest land. There is potential for transportation improvement projects facilitated by the proposed project to traverse national forest lands, resulting in the potential for conversion of lands within the transportation facility footprint. Sponsors of projects within national forest lands would be required by law to coordinate with CAL FIRE and the USFS to identify the potential for impacts to forest lands and ensure adherence to specific regulations and processes imposed by these agencies.

As described in Chapter 3.0, Project Description, the design of each transportation improvement project and land use development facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. Through coordination with CAL FIRE, the USFS, and the State Board of Forestry and adherence to related requirements, project impacts associated with forest land, timberland, or timberland zoned Timberland Production would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would remain below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts associated with forest land, timberland, or timberland zoned Timberland Production are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.2.5: Would the project 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?

Significant and Unavoidable Impact. While the proposed project is programmatic in nature and does not propose any physical changes to the existing environment, future transportation improvement projects and land use developments facilitated by the proposed project would have the potential to directly and indirectly result in the conversion of farmland or forest land to other land uses. Under FMM AG-1, the Fresno COG will encourage member agencies to pursue infill development, in place of development in rural and environmentally sensitive areas. However, this encouragement would not be binding for member agencies and does not necessarily prohibit development of these areas. Therefore, proposed future transportation improvement projects and land use developments could be sited on or adjacent to existing farmland or forest land, resulting in the direct or indirect conversion of these uses.

Indirect effects could increase the amount of agricultural conversion beyond that needed for each individual project footprint. Indirect impacts could include changing travel and growth patterns in a manner that ultimately results in land conversion or parcel severance. Nevertheless, should the 2026 RTP/SCS identify growth in areas consisting primarily of agriculture or forest land, this could lead to pressure for future development of these areas, which would result in further conversion of agricultural and forest land. Indirect impacts could also include land use conflicts between agricultural or forest land and adjacent developments, such as pesticide use. However, the PMMs identified throughout this PEIR are intended to reduce potential impacts of future projects on surrounding land uses. As described under Threshold 4.2.1, existing regulations would require the assessment of agricultural resources and constraints on a project-by-project basis, including completing the Farmland Conversion Impact Rating form (AD-1006 or Form NRCS-CPA-106 for corridor-type projects) or a LESA evaluation, as appropriate. These analyses would further analyze the transportation improvements or new development facilitated by the proposed project to determine the magnitude of impacts to agricultural resources, and to identify appropriate project-specific mitigation measures.

Further, as previously stated, subsequent project-specific CEQA documents may be required to characterize in more detail the conditions related to agricultural and forestry resources at each individual project site, further analyze the transportation improvements or new development facilitated by the proposed project to determine the magnitude of potential impacts, and identify additional project-specific mitigation measures.

Urban growth anticipated under the proposed project also has the potential to result in large-scale, long-term indirect impacts. As described in Section 4.8, Greenhouse Gas Emissions, greenhouse gas (GHG) emissions associated with human activities, such as burning fossil fuels and land clearing, have been identified as a contributor to global climate change. As described in the County's Hazard Mitigation Plan,[32] climate change will likely adversely impact the ability of watersheds and ecosystems to deliver important ecosystem services such as fertile soil for crop production. Climate-

[32] County of Fresno. 2024. Fresno County, *California Hazard Mitigation Plan*. May. (accessed March 10, 2026).

induced changes in the physical environment, such as drought, severe weather, or wildfire, could not only result in the destruction of existing crops and trees, but could also alter underlying soils in a manner that would prevent future regrowth and therefore result in the permanent loss of agricultural and forest land. Because Section 4.8 of this PEIR determined that implementation of the proposed project would result in significant and unavoidable impacts with respect to GHG emissions, it is possible that the proposed project could contribute to climate-induced environmental changes that could indirectly cause the conversion of agriculture or forest land.

As described in Chapter 3.0, Project Description, the design of each transportation improvement project and land use development facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. Through coordination with appropriate agencies and adherence to the agricultural analysis and mitigation requirements set forth in **FMM AG-1** and **PMM AG-1,** project impacts associated with changes in the existing environment resulting in conversion of farmland or forest land to other uses would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts associated with changes in the existing environment resulting in conversion of farmland or forest land to other uses are considered **significant and unavoidable** for the purposes of this analysis.

4.2.7 Level of Significance Prior to Mitigation

Prior to mitigation, implementation of the proposed project would have potentially significant impacts related to agriculture and forestry resources.

4.2.8 Mitigation Measures

4.2.8.1 Fresno COG Measures

The following mitigation measures would be applied on a regional scale by the Fresno COG to reduce potentially significant impacts related to energy to the extent feasible:

FMM AG-1 The Fresno COG shall encourage member agencies to pursue infill development in place of development in rural and environmentally sensitive areas. The Fresno COG shall encourage member agencies to seek funding to prepare specific plans and related environmental documents to facilitate mixed-use development, and to allow these areas to serve as receiver sites for transfer of development rights away from environmentally sensitive lands and rural areas outside established urban growth boundaries. The Fresno COG shall encourage member agencies to consider agricultural resources in all projects and avoid or minimize impacts on these areas.

4.2.8.2 Project-Specific Measures

The following mitigation measures would be applied to future transportation improvement and land use development projects to reduce potentially significant impacts related to agriculture and forestry resources to the extent feasible:

PMM AG-1 Implementing agencies shall consider measures to reduce or mitigate substantial adverse effects related to the conversion of agricultural land to a non-agricultural use and/or lands under a Williamson Act or Farmland Security Zone (FSZ) contract, as applicable and feasible:

- During design, consider project relocation or corridor realignment to avoid active agricultural lands and land under a Williamson Act or FSZ contract.
- Establish off-site conservation easements on farmland of equal acreage and quality consistent with the recommendations of the California Department of Conservation (DOC); establish 20-year Farmland Security Zone contracts (Government Code Section 51296 et seq.) or 10-year Williamson Act contracts (Government Code Section 51200 et seq.) on farmland of equal acreage and quality; or use other conservation tools available from the DOC Division of Land Resource Protection.

Should the appropriate implementing agency require mitigation as described above, the project sponsor shall provide proof for verification by the implementing agency that the measure has been fulfilled.

4.2.9 Level of Significance After Mitigation

While implementation of **FMM AG-1** and **PMM AG-1** would assist the Fresno COG and lead agencies of future transportation improvement projects and land use developments in reducing impacts related to agriculture and forestry resources to the extent feasible, the analysis presented in this section is general in nature, and given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future transportation improvement projects and land use developments, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. As appropriate and feasible, the Fresno COG will implement and encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified. Nevertheless, impacts related to agriculture and forestry resources are considered **significant and unavoidable** for the purposes of this analysis.

4.2.10 Cumulative Impacts

As defined in Section 15130 of the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for agricultural and forestry resources.

The cumulative impact area for agriculture and forestry resources is the Fresno COG Region, which is recognized for its agricultural industry and national forest lands. As discussed in Section 4.2.3.1, the region has experienced a general decrease in Important Farmland between 2016 and 2022 and Urban and Built-Up Land has increased over the same period, demonstrating a trend of incremental losses of higher-value farmland and expansion of built environments. This trend is anticipated to continue alongside urban development within the Fresno COG Region. Future transportation improvement projects and land use developments facilitated by the proposed project, in combination with unrelated development projects within the Fresno COG Region, could therefore result in cumulatively considerable impacts related to the conversion of agricultural and forest land.

All projects in the cumulative impact area would be required to adhere to existing federal, State, and local requirements for agricultural and forest land (such as national forest protections, Williamson Act contracts, or local zoning [e.g., TPZs]). In the event that projects are proposed on these lands, project proponents would be required to coordinate with the appropriate agency (such as the lead agency, the State Board of Forestry, USFS, and CAL FIRE) to minimize potential impacts. Cumulative projects subject to discretionary review would be required to conduct an analysis of potential impacts to agricultural and forestry resources under CEQA. This may include completion of the LESA evaluation, depending on the extent of potential impacts. In addition, any federally funded projects may be required to prepare project-specific NEPA documents and would be required to follow the rules and regulations of FPPA, including determining the impact by completing the Farmland Conversion Impact Rating form (AD-1006 or Form NRCS-CPA-106 for corridor-type projects).

Pursuant to **PMM AG-1**, implementing agencies of transportation improvement projects that would result in impacts to agricultural land would require project sponsors to establish an off-site conservation easement or arrange for the enrollment of agricultural lands into the Williamson Act program, as appropriate. Therefore, these projects would contribute to the proportion of protected agricultural land in the County, thereby deterring future development of these lands under cumulative projects.

As stated above under Section 4.2.9, impacts of the proposed project related to agriculture and forestry resources are considered significant and unavoidable given the programmatic nature of the proposed project, the scale of the Fresno COG Region, and the inability of the Fresno COG to enforce project-specific mitigation or make land use approvals. Because the proposed project would result in significant adverse environmental impacts with respect to agriculture and forestry resources, these impacts would represent an incremental contribution to the environmental impacts of other cumulative or related projects, including other regional-scale plans, ultimately leading to a cumulatively considerable impact to agriculture and forestry resources in the cumulative impact area.

4.3 AIR QUALITY

This section describes the potential air quality impacts for the proposed 2026 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (proposed project) using methodologies and assumptions recommended in the air quality impact assessment guidelines of the contained in the San Joaquin Valley Air Pollution Control District's (SJVAPCD) *Guidance for Assessing and Mitigating Air Quality Impacts* (GAMAQI).[1]

4.3.1 Scoping Process

Potential impacts related to air quality were not identified during the public scoping meeting held for the proposed project on May 28, 2025.

The Fresno Council of Governments (COG) received one comment letter in response to the Notice of Preparation (NOP) issued for the proposed project between May 13 and June 12, 2025, concerning the proposed project's potential impacts related to air quality. For copies of the NOP comment letters, refer to Appendix A of this Draft Program Environmental Impact Report (PEIR). NOP comments related to air quality included the following:

- The **SJVAPCD**, on May 29, 2025, recommended the analysis of pollution exposure in disadvantaged communities, construction and operational emissions of future development projects facilitated by the proposed project, potential health risks on surrounding receptors, ambient air quality analysis, Voluntary Emission Reduction Agreement (VERA) implementation, vegetative barriers, and applicable SJAPCD rules and regulations.

4.3.2 Methodology

Consistent with the GAMAQI, this section describes existing air quality in the project region and the regulatory framework for air quality at the federal, State, and local levels. The section also evaluates each significance criterion individually, assessing how implementation of the Fresno COG's 2026 RTP/SCS, including changes to the land use pattern and transportation network, may impact air quality at a regional level in comparison to what is projected to occur without implementation of the RTP/SCS. The analysis for each significance criteria includes a discussion of program-level impacts for the RTP/SCS planning horizon year of 2049.

Air quality impacts are typically evaluated quantitatively by estimating air pollutant emissions and comparing emissions with established air district thresholds of significance. These specific and detailed analyses are most appropriate at the individual improvement project and new development project levels rather than the programmatic level that characterizes this PEIR. There is no physical development proposed at this time, and specific development details for improvements facilitated by the RTP/SCS are not available at this time. Therefore, a quantitative impact analysis is not appropriate, and this section presents a qualitative analysis of potential impacts. Subsequent project-specific California Environmental Quality Act (CEQA) documents may be required to further analyze the

[1] San Joaquin Valley Air Pollution Control District (SJVAPCD). 2015. *CEQA, Guidance/Policies/Rules, Guidance for Assessing and Mitigating Air Quality Impacts.* March 19. Website: https://ww2.valleyair.org/media/g4nl3p0g/gamaqi.pdf (accessed November 12, 2025).

transportation improvement or new development projects facilitated by the proposed project to determine the magnitude of potential impacts, and identify appropriate potential mitigation for each individual improvement or new land use development project.

4.3.2.1 Key Concepts

Air Pollutants and Health Effects. Both State and federal governments have established health-based ambient air quality standards (California Ambient Air Quality Standards [CAAQS] and National Ambient Air Quality Standards [NAAQS], respectively) for six common air pollutants, called criteria air pollutants, which were identified from provisions of the federal Clean Air Act (FCAA) (discussed further in Section 4.3.4.1).

Criteria air pollutants and their health effects, and other air pollution-related considerations, are summarized in Table 4.3.A and described in more detail below.

- **Ozone.** Ozone (O_3) is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG) and nitrogen oxides (NO_X). The main sources of ROG and NO_X, often referred to as ozone precursors, are combustion processes (including combustion in motor vehicle engines) and the evaporation of solvents, paints, and fuels. Automobiles are typically the largest source of ozone precursors. Ozone is referred to as a regional air pollutant because its precursors are transported and diffused by wind concurrently with ozone production through the photochemical reaction process. Ozone causes eye irritation, airway constriction, and shortness of breath and can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema.

- **Carbon Monoxide.** Carbon monoxide (CO) is an odorless, colorless gas usually formed as the result of the incomplete combustion of fuels. The single largest source of CO is motor vehicles. CO transport is limited—it disperses with distance from the source under normal meteorological conditions. However, under certain extreme meteorological conditions, CO concentrations near congested roadways or intersections may reach unhealthful levels that adversely affect local sensitive receptors. Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service (LOS) or with extremely high traffic volumes. Exposure to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause headaches, nausea, dizziness, and fatigue, impair central nervous system function, and induce angina (chest pain) in persons with serious heart disease. Extremely high levels of CO can be fatal.

Table 4.3.A: Sources and Health Effects of Air Pollutants

Pollutants	Sources	Primary Health Effects
Ozone (O_3)	• Precursor sources:[1] motor vehicles, industrial emissions, and consumer products	• Respiratory symptoms • Worsening of lung disease leading to premature death • Damage to lung tissue • Crop, forest, and ecosystem damage • Damage to a variety of materials, including rubber, plastics, fabrics, paints, and metals
Particulate Matter Less than 2.5 Microns in Diameter ($PM_{2.5}$)	• Cars and trucks (especially diesels) • Fireplaces, wood stoves • Windblown dust from roadways, agriculture, and construction	• Premature death • Hospitalization for worsening of cardiovascular disease • Hospitalization for respiratory disease • Asthma-related emergency room visits • Increased symptoms and increased inhaler usage
Particulate Matter Less than 10 Microns in Diameter (PM_{10})	• Cars and trucks (especially diesels) • Fireplaces, wood stoves • Windblown dust from roadways, agriculture, and construction	• Premature death and hospitalization, primarily for worsening of respiratory disease • Reduced visibility and material soiling
Nitrogen Oxides (NO_X)	• Any source that burns fuels, such as cars, trucks, construction and farming equipment, and residential heaters and stoves	• Lung irritation • Enhanced allergic responses
Carbon Monoxide (CO)	• Any source that burns fuels, such as cars, trucks, construction and farming equipment, and residential heaters and stoves	• Chest pain in patients with heart disease • Headache • Light-headedness • Reduced mental alertness
Sulfur Oxides (SO_X)	• Combustion of sulfur-containing fossil fuels • Smelting of sulfur-bearing metal ores • Industrial processes	• Worsening of asthma: increased symptoms, increased medication usage, and emergency room visits
Lead (Pb)	• Contaminated soil	• Impaired mental functioning in children • Learning disabilities in children • Brain and kidney damage
Toxic Air Contaminants (TACs)	• Cars and trucks (especially diesels) • Industrial sources, such as chrome platers • Neighborhood businesses, such as dry cleaners and service stations • Building materials and products	• Cancer • Reproductive and developmental effects • Neurological effects

Source: California Air Resources Board. 2018.

[1] Ozone is not generated directly by these sources. Rather, chemicals emitted by these precursor sources react with sunlight to form ozone in the atmosphere.

- **Particulate Matter.** Particulate matter is a class of air pollutants that consists of mixed solid and liquid airborne particles from human-made and natural sources. Particulate matter is categorized in two size ranges: PM_{10}, for particles less than 10 microns in diameter, and $PM_{2.5}$, for particles less than 2.5 microns in diameter. Motor vehicles are a primary generator of particulate matter, through tailpipe emissions as well as brake pads, tire wear, and entrained road dust. Wood burning in fireplaces and stoves, industrial facilities, and ground-disturbing activities such as construction are other sources of such fine particulates. These fine particulates are small enough to be inhaled

into the deepest parts of the human lung and can cause adverse health effects. According to the California Air Resources Board (CARB), studies in the United States and elsewhere have demonstrated a strong link between elevated particulate levels and premature deaths, hospital admissions, emergency room visits, and asthma attacks,[2] and studies of children's health in California have demonstrated that particle pollution may significantly reduce lung function growth in children. Statewide attainment of particulate matter standards could reduce premature deaths, hospital admissions for cardiovascular and respiratory disease, asthma-related emergency room visits, and episodes of respiratory illness in California.

- **Nitrogen Dioxide.** Nitrogen dioxide (NO_2) is a reddish-brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO_2. Aside from its contribution to ozone formation, NO_2 also contributes to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition. NO_2 may be visible as a coloring component on high pollution days, especially in conjunction with high ozone levels. NO_2 decreases lung function and may reduce resistance to infection.

- **Sulfur Dioxide.** Sulfur dioxide (SO_2) is a colorless, acidic gas with a strong odor. It is produced by the combustion of sulfur-containing fuels such as oil, coal, and diesel. SO_2 has the potential to damage materials and can cause health effects at high concentrations. It can irritate lung tissue and increase the risk of acute and chronic respiratory disease. SO_2 also reduces visibility and the level of sunlight at the ground surface.

- **Lead.** Lead (Pb) is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been mobile and industrial sources. As a result of the phase-out of leaded gasoline, metal processing is currently the primary source of lead emissions. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery factories. Twenty years ago, mobile sources were the main contributor to ambient lead concentrations in the air. In the early 1970s, the United States Environmental Protection Agency (EPA) established national regulations to gradually reduce the lead content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. The EPA banned the use of leaded gasoline in highway vehicles in December 1995. As a result of EPA regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector and levels of lead in the air decreased dramatically.

The State has set additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the public with a reasonable margin of safety.

Significance thresholds established by an air quality district are used to manage total regional and local emissions within an air basin based on its attainment status for criteria pollutants. These emission thresholds were established for individual development projects that would contribute to regional and local emissions and could adversely affect or delay the air basin's projected attainment target goals for

[2] California Air Resources Board (CARB). Inhalable Particulate Matter and Health ($PM_{2.5}$ and PM_{10}). Website: https://ww2.arb.ca.gov/resources/inhalable-particulate-matter-and-health (accessed March 27, 2026).

non-attainment criteria pollutants. Because of the conservative nature of the significance thresholds, and the basinwide context of individual development project emissions, there is no direct correlation between a single project and localized air quality-related health effects. One individual project that generates criteria pollutant emissions exceeding a threshold does not necessarily result in adverse health effects for residents in the project vicinity.[3] This condition is especially true when the criteria pollutants exceeding thresholds are those with regional effects, such as ozone precursors like NO_X and ROG.

Further, by its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in non-attainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant. In developing thresholds of significance for air pollutants, the air quality districts have considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Occupants of facilities such as schools, daycare centers, parks and playgrounds, hospitals, and nursing and convalescent homes are considered more sensitive than the general public to air pollutants because these population groups have increased susceptibility to respiratory disease. Persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality. Residential areas are considered more sensitive to air quality conditions, compared to commercial and industrial areas, because people generally spend longer periods of time at their residences, with greater associated exposure to ambient air quality conditions. Recreational uses are also considered sensitive compared to commercial and industrial uses due to greater exposure to ambient air quality conditions associated with exercise.

Air pollutant exposures and their associated health burdens vary considerably within places in relation to sources of air pollution. Motor vehicle traffic is perhaps the most important source of variation in air pollution concentrations. Air quality research consistently demonstrates that pollutant levels are substantially higher near freeways and busy roadways, and human health studies have consistently demonstrated that children living within 100 to 200 meters (328 to 656 feet) of freeways or busy roadways have reduced lung function and higher rates of respiratory disease. At present, it is not possible to attribute the effects of roadway proximity on non-cancer health effects to one or more specific vehicle types or vehicle pollutants. Engine exhaust, from diesel, gasoline, and other combustion engines, is a complex mixture of particles and gases, with collective and individual toxicological characteristics.

Toxic Air Contaminants. In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. Some examples of TACs include benzene, butadiene, formaldehyde, and hydrogen sulfide. Potential human health effects of TACs

[3] Supreme Court of California. 2015. Application for Leave to File Amicus Curiae Brief of San Joaquin Valley Unified Air Pollution Control District in Support of Defendant and Respondent, County of Fresno and Real Party in Interest and Respondent, Friant Ranch, L.P., Page 4. Filed April 13. Website: https://supreme.courts.ca.gov/sites/default/files/supremecourt/default/documents/7-s219783-ac-san-joaquin-valley-unified-air-pollution-control-dist-041315.pdf (accessed March 23, 2026).

include birth defects, neurological damage, cancer, and death. There are hundreds of different types of TACs with varying degrees of toxicity. Individual TACs vary greatly in the health risk they present; at a given level of exposure, one TAC may pose a hazard that is many times greater than another.

TACs do not have ambient air quality standards, but are regulated by the EPA, CARB, and SJVAPCD. In 1998, CARB identified particulate matter from diesel-fueled engines as a TAC. CARB has completed a risk management process[4] that identified potential cancer risks for a range of activities and land uses that are characterized by use of diesel-fueled engines. High-volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic (distribution centers, truck stops) were identified as posing the highest risk to adjacent receptors. Other facilities associated with increased risk include warehouse distribution centers, large retail or industrial facilities, high-volume transit centers, and schools with a high volume of bus traffic. Health risks from TACs are a function of both concentration and duration of exposure.

Unlike TACs emitted from industrial and other stationary sources noted above, most diesel particulate matter is emitted from mobile sources—primarily "off-road" sources such as construction and mining equipment, agricultural equipment, and truck-mounted refrigeration units, as well as trucks and buses traveling on freeways and local roadways.

The *CARB Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*[5] is intended to substantially reduce diesel particulate matter (DPM) emissions and associated health risks through introduction of ultra-low-sulfur diesel fuel—a step already implemented—and cleaner-burning diesel engines. The technology for reducing DPM emissions from heavy-duty trucks is well established, and both State and federal agencies are moving aggressively to regulate engines and emission control systems to reduce and remediate diesel emissions.

Valley Fever. Valley fever is a fungal infection caused by *Coccidioides immitis* (*C. immitis*) organisms. It can cause fever, chest pain and coughing, among other signs and symptoms. The *Coccidioides* species of fungi that cause valley fever are commonly found in the soil in certain areas, including the Central Valley of California. These fungi can be stirred into the air by anything that disrupts the soil, such as farming, construction, and wind. The fungi can then be breathed into the lungs and cause valley fever, also known as acute coccidioidomycosis. A mild case of valley fever usually goes away on its own. In more severe cases of valley fever, doctors prescribe antifungal medications that can treat the underlying infection. Valley fever is not contagious and therefore does not spread from person to person. Most cases (approximately 60 percent) have no symptoms or only very mild flu-like symptoms and do not see a doctor. When symptoms are present, the most common are fatigue, cough, fever, profuse sweating at night, loss of appetite,

[4] California Air Resources Board (CARB). *Health Risk Assessment.* Website: https://ww2.arb.ca.gov/resources/documents/health-risk-assessment (accessed March 27, 2026).

[5] California Air Resources Board, Stationary Source Division/Mobile Source Control Division. 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles.* October. Website: https://ww2.arb.ca.gov/sites/default/files/classic/diesel/documents/rrpfinal.pdf (accessed March 27, 2026).

chest pain, and generalized muscle and joint aches, particularly of the ankles and knees. There may also be a rash that resembles measles or hives but develops more often as tender red bumps on the shins or forearms.

Asbestos. Asbestos is the name given to a number of naturally occurring fibrous silicate minerals that have been mined for their useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength. The three most common types of asbestos are chrysotile, amosite, and crocidolite. Chrysotile, also known as white asbestos, is the most common type of asbestos found in buildings. Chrysotile makes up approximately 90 to 95 percent of all asbestos contained in buildings in the United States.

Construction sometimes requires the demolition of existing buildings that may include materials containing asbestos. Although the proposed project does not call for demolition specifically because no physical development is proposed at this time, some demolition may occur as a result of ongoing implementation of the 2026 RTP/SCS. In addition, asbestos is also found in a natural state (known as naturally occurring asbestos). Exposure and disturbance of rock and soil that naturally contain asbestos can result in the release of fibers into the air and consequent exposure to the public. Asbestos most commonly occurs in ultramafic rock that has undergone partial or complete alteration to serpentine rock (serpentinite) and often contains chrysotile asbestos. In addition, another form of asbestos, tremolite, can be found associated with ultramafic rock, particularly near faults. Sources of asbestos emissions include unpaved roads or driveways surfaced with ultramafic rock, construction activities in ultramafic rock deposits, or rock quarrying activities where ultramafic rock is present. Ultramafic rock is known to occur in Fresno County.

Exposure to asbestos is a health threat; exposure to asbestos fibers may result in health issues such as lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest, and abdominal cavity), and asbestosis (a non-cancerous lung disease that causes scarring of the lungs).

CARB has an Air Toxics Control Measure for construction, grading, quarrying, and surface mining operations requiring the implementation of mitigation measures to minimize emissions of asbestos-laden dust. The measure applies to road construction and maintenance, construction and grading operations, and quarries and surface mines when the activity occurs in an area where naturally occurring asbestos is likely to be found. Areas are subject to the regulation if they are identified on maps published by the Department of Conservation as ultramafic rock units or if the Air Pollution Control Officer or owner/operator has knowledge of the presence of ultramafic rock, serpentine, or naturally occurring asbestos on the site. The measure also applies if ultramafic rock, serpentine, or asbestos is discovered during any operation or activity.

National and State Ambient Air Quality Standards. As noted above, both the EPA and CARB have established ambient air quality standards for the following criteria pollutants: CO, ozone, NO_2, SO_2, lead, and particulate matter. In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the public with a reasonable margin of safety. These ambient air quality standards are levels of contaminants that avoid specific adverse health effects associated with each pollutant.

Federal standards include both primary and secondary standards. Primary standards establish limits to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, and damage to animals, crops, vegetation, and buildings. State and federal standards for the criteria air pollutants are listed in Table 4.3.B.

4.3.3 Existing Environmental Setting

The Fresno COG Region is located within the San Joaquin Valley Air Basin (Basin). The Basin consists of eight counties: Kings, Madera, San Joaquin, Merced, Stanislaus, Tulare, and Fresno counties, and a portion of Kern County. The agency with jurisdiction over air quality in the Basin is SJVAPCD.

Regional and local air quality are impacted by topography, dominant airflows, atmospheric inversions, location, and season. The following discussion provides an overview of existing air quality conditions in the region, as well the region's attainment status and typical sources of air pollution.

4.3.3.1 Existing Air Quality and Climate

The following provides a discussion of the regional and local air quality and climate in the Fresno COG Region.

Regional and Local Air Quality. The Fresno COG Region is located within the Basin and is under the jurisdiction of SJVAPCD. A region's topographic features have a direct correlation with air pollution flow and therefore are used to determine the boundary of air basins. The Basin consists of approximately 25,000 square miles and covers eight counties, including Fresno, Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare counties, and the western portion of Kern County. The Basin is defined by the Sierra Nevada mountains in the east (8,000 to 14,000 feet in elevation), the Coast Ranges in the west (averaging 3,000 feet in elevation), and the Tehachapi Mountains in the south (6,000 to 8,000 feet in elevation). The valley is basically flat with a slight downward gradient to the northwest. The valley opens to the sea at the Carquinez Straits where the San Joaquin-Sacramento Delta empties into the San Francisco Bay. An aerial view of the Basin would simulate a "bowl" opening only to the north. These topographic features restrict air movement through, and out of, the Basin.

Table 4.3.B: Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]		Federal Standards[b]		
		Concentration[c]	Method[d]	Primary[c,e]	Secondary[c,f]	Method[g]
Ozone (O_3)[h]	1-Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.07 ppm (137 µg/m³)		0.070 ppm (137 µg/m³)		
Respirable Particulate Matter (PM_{10})[i]	24-Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		–		
Fine Particulate Matter ($PM_{2.5}$)[i]	24-Hour	-		35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	9.0 µg/m³		
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m³)	–	Non-Dispersive Infrared Photometry (NDIR)
	1-Hour	20 ppm (23 mg/m³)		35 ppm (40 mg/m³)		
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m³)		–	–	
Nitrogen Dioxide (NO_2)[j]	Annual Arithmetic Mean	0.03 ppm (57 µg/m³)	Gas Phase Chemi-luminescence	53 ppb (100 µg/m³)	Same as Primary Standard	Gas Phase Chemi-luminescence
	1-Hour	0.18 ppm (339 µg/m³)		100 ppb (188 µg/m³)	-	
Lead (Pb)[l,m]	30-Day Average	1.5 µg/m³	Atomic Absorption	–	–	High-Volume Sampler and Atomic Absorption
	Calendar Quarter	–		1.5 µg/m³ (for certain areas)[l]	Same as Primary Standard	
	Rolling 3-Month Average[i]	–		0.15 µg/m³		
Sulfur Dioxide (SO_2)[k]	24-Hour	0.04 ppm (105 µg/m³)	Ultraviolet Fluorescence	0.14 ppm (for certain areas)	–	Ultraviolet Fluorescence; Spectro-photometry (Pararosaniline Method)
	3-Hour	–		–	0.5 ppm (1300 µg/m³)	
	1-Hour	0.25 ppm (655 µg/m³)		75 ppb (196 µg/m³)[k]	–	
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas)[k]	–	
Visibility-Reducing Particles[l]	8-Hour	See footnote n	Beta Attenuation and Transmittance through Filter Tape.	No Federal Standards		
Sulfates	24-Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride[j]	24-Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

Table footnotes continued on following page

Source: California Air Resources Board. 2024. Table of Ambient Air Quality Standards. Website: https://ww2.arb.ca.gov/sites/default/files/2024-08/AAQS%20Table_ADA_FINAL_07222024.pdf (accessed March 27, 2026).

[a] California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, 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] National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For $PM_{2.5}$, the 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 USEPA for further clarification and current national policies.

[c] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°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.

[d] Any equivalent measurement method which can be shown to the satisfaction of CARB to give equivalent results at or near the level of the air quality standard may be used.

[e] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[f] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[g] Reference method as described by the USEPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the USEPA.

[h] On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

[i] On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. In 2024, the national annual. $P_{M2.5}$ standard was reduced again to 9 $\mu g/m^3$. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM_{10} standards (primary and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

[j] To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

[k] On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated non-attainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

[l] CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level 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.

[m] The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated non-attainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

[n] In 1989, CARB converted both the general Statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the Statewide and Lake Tahoe Air Basin standards, respectively.

°C = degrees Celsius
CARB = California Air Resources Board
USEPA = United States Environmental Protection Agency
ppb = parts per billion
ppm = parts per million
mg/m^3 = milligrams per cubic meter
$\mu g/m^3$ = micrograms per cubic meter

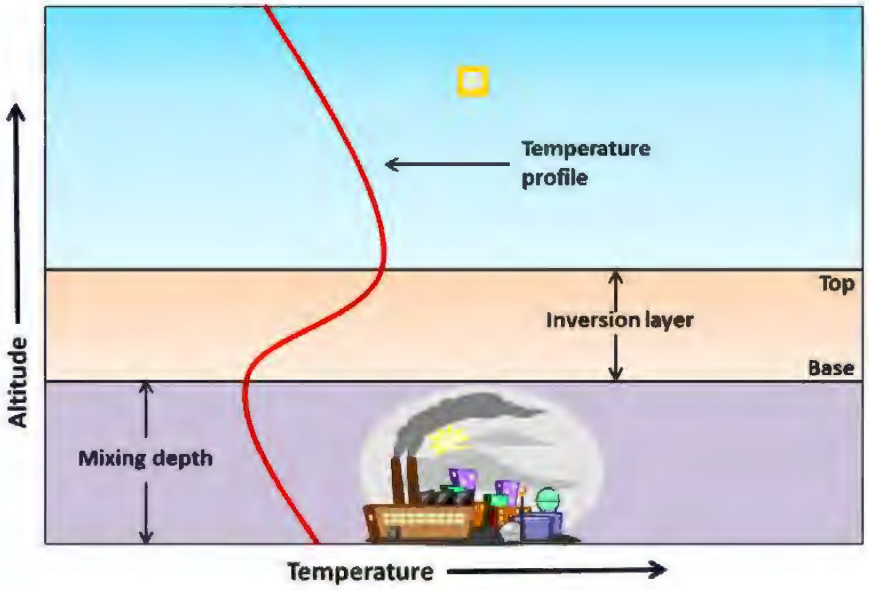
Although marine air generally flows into the basin from the San Joaquin River Delta, the Coast Ranges hinder wind access into the Basin from the west, the Tehachapi Mountains prevent southerly passage of air flow, and the high Sierra Nevada range is a significant barrier to the east. These topographic features result in weak air flow, which becomes blocked vertically by high barometric pressure over the Basin. As a result, the Basin is highly susceptible to pollutant accumulation. Most of the surrounding mountains are above the normal height of summer inversion layers (1,500 to 3,000 feet). Inversion layers are discussed in more detail on the following page.

Local climatological effects, including wind speed and direction, temperature, inversion layers, precipitation and fog, can impair air quality in the Basin. Wind speed and direction play an important role in dispersion and transport of air pollutants. Wind can disperse pollution by mixing pollutants vertically and/or by transporting them to other locations. For example, in the summer, wind usually originates at the north end of the Basin and flows in a south-southeasterly direction through the Tehachapi Pass and into the Southeast Desert Air Basin. In the winter, wind direction is reversed and flows in a north-northwesterly direction. In addition to the seasonal wind flow, a sea breeze flows into the Basin during the day and a land breeze flows out of the Basin at night. The diversified wind flow enhances the pollutant transport capability within Basin.

The majority of annual rainfall in the Basin occurs between November and March. Summer rainfall is minimal and is generally limited to scattered thundershowers in desert regions and slightly heavier showers near the lower portion of the Basin and along the Sierra Nevada mountains to the east. Patterns in monthly and yearly rainfall totals are predictable due to the recognizable differences in seasons within the valley.

The annual average temperature varies throughout the Basin, ranging from the low 40s to high 90s, measured in degrees Fahrenheit (°F). With a more pronounced valley influence, inland areas show more variability in annual minimum and maximum temperatures than coastal areas. The vertical dispersion of air pollutants in the Basin is limited by the presence of persistent temperature inversions. Because of cooling of the atmosphere, air temperature usually decreases with altitude. A reversal of this atmospheric state, where the air temperature increases with height, is termed an inversion. Inversions can exist at the surface, or at any height above the ground. The height of the base of the inversion is known as the “mixing height.” This is the level within which pollutants can mix vertically. Air above and below the inversion base does not mix because of the differences in air density. Semi-permanent systems of high barometric pressure fronts frequently establish themselves over the Basin, preventing low-pressure systems that might otherwise bring rain and winds that clean the air. Refer to Figure 4.3-1, below, for a depiction of inversion conditions.

Figure 4.3-1: San Joaquin Valley Inversion



Source: San Joaquin Valley Air Pollution Control District. 2016. *2016 Plan for the 2008 8-Hour Ozone Standard.* Figure 2-3.

Inversion layers are significant in determining ozone formation, and CO and PM_{10} concentrations. Ozone and its precursors will mix and react to produce higher ozone concentrations under an inversion. The inversion will also simultaneously trap and hold directly emitted pollutants such as CO. PM_{10} is both directly emitted and created in the atmosphere as a chemical reaction. Concentration levels of pollutants are directly related to inversion layers due to the limitation of atmospheric mixing.

Surface or radiation inversions are formed when the ground surface becomes cooler than the air above it during the night. The earth's surface goes through a radiative process on clear nights, where heat energy is transferred from the ground to a cooler night sky. As the earth's surface cools during the evening hours, the air directly above it also cools, while air higher up remains relatively warm. The inversion is destroyed when heat from the sun warms the ground, which in turn heats the lower layers of air; this heating stimulates the ground-level air to float up through the inversion layer.

A combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollutant concentrations are lowest. Periods of low inversions and low wind speeds are conditions favorable to high concentrations of CO and PM_{10}. In the winter, the greatest pollution problems are CO and NO_X because of extremely low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and the brighter sunshine combine to cause a reaction between hydrocarbons and oxides of nitrogen to form photochemical smog.

Attainment Status. The EPA and CARB designate air basins where ambient air quality standards are exceeded as "non-attainment" areas. If standards are met, the area is designated as an "attainment" area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered "unclassified."

Attainment areas are required to maintain their status through moderate, yet effective air quality maintenance plans. Nonattainment areas are imposed with additional restrictions as required by the EPA. In addition, different classifications of attainment, such as marginal, moderate, serious, severe, and extreme, are used to classify each air basin in the State on a pollutant-by-pollutant basis. Different classifications have different mandated attainment dates and are used as guidelines to create air quality management strategies to improve air quality and comply with the NAAQS by the attainment date.

Each standard has a different definition, or "form," of what constitutes attainment, based on specific air quality statistics. For example, the federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring value exceeds the threshold per year. In contrast, the federal annual $PM_{2.5}$ standard is met if the 3-year average of the annual average $PM_{2.5}$ concentration is less than or equal to the standard. A region is determined to be unclassified when the data collected from the air quality monitoring stations do not support a designation of attainment or non-attainment. This could be due to lack of information, or that a conclusion cannot be made with the available data.

The current attainment designations for the Basin are shown in Table 4.3.C. The Basin is designated non-attainment for state and federal ozone and $PM_{2.5}$ standards and for State PM_{10} standards.

Table 4.3.C: Basin Air Quality Attainment Status

Pollutant	State	Federal
Ozone (1-hour)	Severe/Nonattainment	No Federal Standard
Ozone (8-hour)	Non-Attainment	Extreme Non-Attainment
PM_{10}	Non-Attainment	Attainment (Maintenance)
$PM_{2.5}$	Non-Attainment	Non-Attainment
Carbon Monoxide	Attainment	Attainment (Maintenance)
Nitrogen Dioxide	Attainment	Unclassified/Attainment
Lead	Attainment	Unclassified/Attainment
Sulfur Dioxide	Attainment	Unclassified
Sulfates	Attainment	No Federal Standard
Hydrogen Sulfide	Unclassified	No Federal Standard

Source: California Air Resources Board and United States Environmental Protection Agency (2023).
$PM_{2.5}$ = particulate matter less than 2.5 microns in diameter
PM_{10} = particulate matter less than 10 microns in diameter

Air Quality Monitoring Results. Air quality monitoring stations are located throughout the nation and are maintained by the local air pollution control district and State air quality regulating agencies. Ambient air data collected at permanent monitoring stations are used by the EPA to identify regions as attainment or non-attainment depending on whether the regions met the requirements stated in the primary NAAQS.

CARB maintains the iADAM: Air Quality Data Statistics database, which includes a repository of ambient air quality data from monitoring stations across the State. Ambient air quality in the Fresno COG Region from 2022 to 2024 is shown in Table 4.3.D, below.

Table 4.3.D: Ambient Air Quality in Fresno

Pollutant	Standard	2022	2023	2024
Ozone (O_3)[2]				
Maximum 1-hour concentration (ppm)		0.112	0.117	0.121
Number of days exceeded:	State: > 0.09 ppm	4	4	16
Maximum 8-hour concentration (ppm)		0.089	0.088	0.093
Number of days exceeded:	State: > 0.07 ppm	30	30	62
	Federal: > 0.07 ppm	31	35	63
Coarse Particulates (PM_{10})[1]				
Maximum 24-hour concentration (µg/m^3)		116.1	109.3	132.9
Number of days exceeded:	State: > 50 µg/m^3	73	54	60
	Federal: > 150 µg/m^3	0	0	0
Annual arithmetic average concentration (µg/m^3)		37.2	32.3	33.3
Exceeded for the year:	State: > 20 µg/m^3	**Yes**	**Yes**	**Yes**
	Federal: > 50 µg/m^3	**No**	**No**	**No**
Fine Particulates ($PM_{2.5}$)[2]				
Maximum 24-hour concentration (µg/m^3)		55.8	51.3	62.5
Number of days exceeded:	Federal: > 35 µg/m^3	27	11	9
Annual arithmetic average concentration (µg/m^3)		14.8	12.6	13.5
Exceeded for the year:	State: > 12 µg/m^3	**Yes**	**Yes**	**Yes**
	Federal > 9 µg/m^3	**Yes**	**Yes**	**Yes**
Nitrogen Dioxide (NO_2)[2]				
Maximum 1-hour concentration (ppm)		0.062	0.062	0.075
Number of days exceeded:	State: > 0.250 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.019	0.010	0.016
Exceeded for the year:	Federal: > 0.053 ppm	**No**	**No**	**No**

Sources: CARB (2025).

[1] Data summarized on the county scale was not available for PM10. Data taken from the Fresno-Garland monitoring station, located at 3727 North First Street in the City of Fresno.

[2] This table presents a summary of data from several monitoring stations in Fresno. The highest number of days above the standard at any one site is presented.

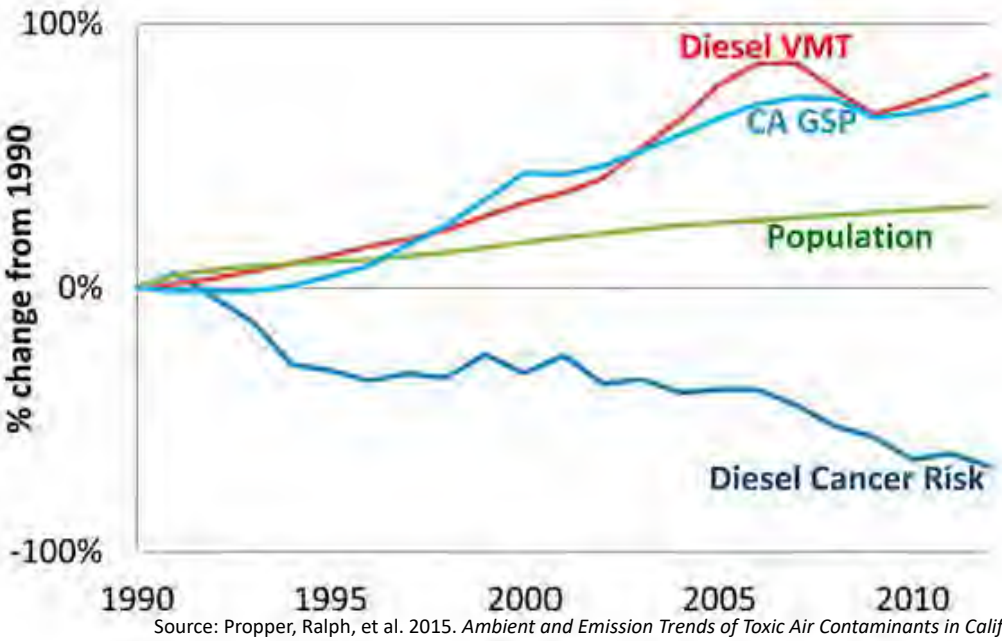
µg/m^3 = micrograms per cubic meter
CARB = California Air Resources Board
ppm = parts per million

Toxic Air Contaminant Emission Trends. In 1984, CARB adopted regulations to reduce TAC emissions from mobile and stationary sources, as well as consumer products. A CARB study showed that ambient concentrations and emissions of the seven TACs responsible for the most cancer risk from airborne exposure declined by 76 percent between 1990 and 2012.[6] Concentrations of DPM, a key TAC, declined by 68 percent between 1990 and 2012, despite a 31 percent increase in State population and an

[6] Propper, Ralph, Patrick Wong, Son Bui, Jeff Austin, William Vance, Álvaro Alvarado, Bart Croes, and Dongmin Luo. 2015. *Ambient and Emission Trends of Toxic Air Contaminants in California.* American Chemical Society: Environmental Science & Technology. Website: pubs.acs.org/doi/full/10.1021/acs.est.5b02766 (accessed November 13, 2025).

81 percent increase in diesel vehicle miles traveled (VMT), as shown on Figure 4.3-2, below. The study also found that the significant reductions in cancer risk to California residents from the implementation of air toxics controls are likely to continue.

Figure 4.3-2: California Population, Gross State Product (GSP), Diesel Cancer Risk, and Diesel Vehicle Miles Traveled (VMT) Regulatory Context



Source: Propper, Ralph, et al. 2015. *Ambient and Emission Trends of Toxic Air Contaminants in California*.

4.3.3.2 Sensitive Receptors

Individuals who are sensitive to air pollution include children, the elderly, and persons with pre-existing respiratory or cardiovascular illness. The SJVAPCD defines a sensitive receptor as any location where children, elderly individuals, people with illnesses, or others particularly vulnerable to air pollution are present or likely to gather. Examples of sensitive receptors include hospitals, residences, convalescent facilities, and schools. There are many sensitive receptors throughout the Fresno COG Region.

4.3.4 Regulatory Setting

Federal, State, and local regulations and programs related to air quality that are applicable to the proposed project are described below.

4.3.4.1 Federal Regulations

Federal Clean Air Act. At the federal level, the USEPA has been charged with establishing and implementing national air quality programs and mandates pursuant to the FCAA, which was enacted in 1963 and subsequently amended in 1970, 1977, and 1990. The FCAA required the EPA to establish NAAQS for the six criteria pollutants and required each state to prepare an air quality control plan

referred to as a State Implementation Plan (SIP) for local areas that do not meet these standards. The FCAA Amendments of 1990 added requirements for states with non-attainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. The FCAA requires demonstration of reasonable progress toward attainment and provides sanctions for failure to attain or meet interim milestones. The EPA has the responsibility to review all SIPs to determine their conformity with the mandates of the FCAA and whether implementation will achieve air quality goals. Failure to submit an approvable SIP or to implement the plan within the mandated timeframe may result in sanctions on transportation funding and stationary air pollution sources in the air basin.

The EPA is also required to develop National Emission Standards for Hazardous Air Pollutants, which are defined as those which may reasonably be anticipated to result in increased deaths or serious illness, and which are not already regulated. An independent science advisory board reviews the health and exposure analyses conducted by the EPA on suspected hazardous pollutants prior to regulatory development.

Transportation Conformity. The Fresno COG must ensure that transportation plans and projects comply with federal transportation conformity. Transportation conformity is a way to ensure that federal funding and approval are given to those transportation activities that are consistent with air quality goals. It ensures that these transportation activities do not worsen air quality or interfere with the "purpose" of the SIP, which is to meet the NAAQS. Meeting the NAAQS often requires emissions reductions from mobile sources. According to the FCAA, transportation plans, programs, and projects cannot:

- Create new NAAQS violations;
- Increase the frequency or severity of existing NAAQS violations; or
- Delay attainment of the NAAQS.

In practice, air quality plans include criteria-pollutant emission budgets required for attainment of air quality standards by mandated deadlines. The budgets must not be exceeded considering projected growth in mobile-source activity. According to the Air Quality Conformity Analysis prepared for the proposed 2026 RTP/SCS (provided in Appendix C to the RTP/SCS document), the conformity tests for ozone, PM_{10}, and $PM_{2.5}$ revealed that all years are projected to be less than the approved emissions budgets and, as a result, the conformity tests are satisfied.

4.3.4.2 State Regulations

California Clean Air Act. In 1988, the California Clean Air Act (CCAA) required that all air quality districts in the State endeavor to achieve and maintain CAAQS for CO, ozone, SO_2, and NO_2 by the earliest practical date. The CCAA provides districts with the authority to regulate indirect sources and mandates that air quality districts focus particular attention on reducing emissions from transportation and areawide emission sources. Each non-attainment district is required to adopt a plan to achieve a 5 percent annual reduction, averaged over consecutive 3-year periods, in districtwide emissions of each non-attainment pollutant or its precursors. A Clean Air Plan, prepared by an air

district, shows how an air district would reduce emissions to achieve air quality standards. Generally, the State standards for these pollutants are more stringent than the national standards.

CARB's Responsibility for Implementing the CCAA. CARB also established the CAAQS for the 10 air pollutants designated in the CCAA. These 10 State air pollutants are the six criteria pollutants designated by the FCAA, as well as four others (visibility-reducing particulates, hydrogen sulfide, sulfates, and vinyl chloride). Generally, the CAAQS are more stringent than the NAAQS. The following are applicable CARB regulations:

- **CARB Regulations Adopted Starting in 1984 (e.g., Assembly Bill [AB] 1807 [Tanner, Statutes of 1983] and the Hot Spots Information and Assessment Act [AB 2588] in 1988):** Various CARB regulations adopted beginning in 1984 require CARB to identify and control toxic air pollutants to reduce the amount of TAC emissions from mobile and area sources, such as cars, trucks, stationary products, and consumer products, including mobile-source emissions of DPM, benzene, and 1,3-butadiene; those that are derived from stationary sources, such as perchloroethylene and hexavalent chromium; and those derived from photochemical reactions of emitted volatile organic compounds (VOCs), such as formaldehyde and acetaldehyde.[7]

- **CARB's 2000 Diesel Risk Reduction Plan (DRRP):** The DRRP involves replacement and retrofit of diesel-fueled engines and the use of ultra-low-sulfur (less than 15 parts per million [ppm]) diesel fuel. As a result, DPM concentrations were expected to decline 71 percent from 2000 to 2020 even though the State's population increased 31 percent and the amount of diesel VMT increased 81 percent.[8]

- **California Code of Regulations (CCR) Title 13, Section 2025:** CCR Title 13, Section 2025, was adopted by CARB in 2008 to reduce emissions of DPM, NO_X, and other criteria pollutants from In-Use Heavy-Duty Diesel-Fueled Vehicles. It applies to all on-road heavy-duty diesel-fueled vehicles with a gross vehicle weight rating greater than 14,000 pounds, agricultural yard trucks with off-road certified engines, and certain diesel-fueled shuttle vehicles of any gross vehicle weight rating. Older, heavier trucks (i.e., those with pre-year 2000 engines and a gross vehicle weight rating greater than 26,000 pounds) are required to have a particulate matter filter installed and replace their engine with a 2010 engine between 2015 and 2020, depending on the model year. Effective December 31, 2014, the regulation was amended to require diesel trucks and buses that operate in California to be upgraded to further reduce emissions by, among other things, requiring mandatory replacement of lighter and older heavier trucks so that by January 1, 2023, nearly all trucks and buses were required to have 2010 model year engines or equivalent.

- **Air Toxics "Hot Spots" Information and Assessment Act.** Under AB 2588, stationary sources of air pollutants are required to report the types and quantities of certain substances that their facilities routinely release into the air. The goals of the Air Toxics "Hot Spots" Act are to collect emission

[7] California Air Resources Board (CARB). 2021. *2020 Mobile Source Strategy.* October. Website: www.arb.ca.gov/sites/default/files/2021-12/2020_Mobile_Source_Strategy.pdf (accessed November 12, 2025).

[8] Since the DRRP was completed in 2000, CARB has adopted Airborne Toxic Control Measures and regulations in alignment with the plan, including the landmark Truck and Bus Regulation, and has achieved a statewide reduction in ambient DPM levels of over 70 percent from 2000 levels.

data, identify facilities having localized impacts, determine health risks, and notify nearby residents of significant risks.

- **Low-Emission Vehicle Program.** CARB first adopted Low-Emission Vehicle (LEV) program standards in 1990. These first LEV standards ran from 1994 through 2003. LEV II regulations, running from 2004 through 2010, represent continuing progress in emission reductions. As the State's passenger vehicle fleet continues to grow and more sport utility vehicles and pickup trucks are used as passenger cars rather than work vehicles, the more stringent LEV II standards were adopted to provide reductions necessary for California to meet federally mandated clean air goals outlined in the 1994 SIP. In 2012, CARB adopted LEV III amendments to California's LEV regulations. These amendments include more stringent emission standards for both criteria pollutants and greenhouse gases (GHG) for new passenger vehicles. As of March 2026, California's authority to regulate mobile-source emissions is currently under review as federal actions seek to reconsider Clean Air Act waivers and the legal basis for vehicle GHG regulations.

- **The California Air Resources Board Handbook.** CARB has developed an *Air Quality and Land Use Handbook*[9] (CARB Handbook) (2005), which is intended to serve as a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process. According to the CARB Handbook, air pollution studies have shown an association between respiratory and other non-cancer health effects and proximity to high-traffic roadways. Other studies have shown that diesel exhaust and other cancer-causing chemicals emitted from cars and trucks are responsible for much of the overall cancer risk from airborne toxics in California. The CARB Handbook recommends that county and city planning agencies strongly consider proximity to these sources when finding new locations for "sensitive" land uses such as homes, medical facilities, daycare centers, schools, and playgrounds.

  Land use designations with air pollution sources of concern include freeways, rail yards, ports, refineries, distribution centers, chrome plating facilities, dry cleaners, and large gasoline service stations. Key recommendations in the CARB Handbook include taking steps to avoid siting new, sensitive land uses:

  - Within 500 feet of a freeway, urban roads with 100,000 vehicles/day or rural roads with 50,000 vehicles/day;
  - Within 1,000 feet of a major service and maintenance rail yard;
  - Immediately downwind of ports (in the most heavily impacted zones) and petroleum refineries;

[9] California Air Resources Board (CARB). 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*. April.

- Within 300 feet of any dry-cleaning operation (for operations with two or more machines, provide 500 feet); and
- Within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater).

The CARB Handbook specifically states that its recommendations are advisory and acknowledges land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality-of-life issues.

The recommendations are generalized and do not consider site-specific meteorology, freeway truck percentages, or other factors that influence risk for a particular project site. The purpose of this guidance is to further examine project sites for actual health risk associated with the location of new sensitive land uses.

California Environmental Quality Act. The SJVAPCD is responsible for air quality regulation within the San Joaquin Valley region. The SJVAPCD also has roles under CEQA, as discussed below.

SJVAPCD's GAMAQI[10] provides guidance and thresholds for CEQA air quality and GHG analyses.

In developing thresholds of significance for criteria pollutants, SJVAPCD considered the emission levels for which a project's individual emissions would be cumulatively considerable.

CCR Title 24 Part 11: The California Green Building Standards Code (CALGreen) is a uniform regulatory code for all residential, commercial, and school buildings. Local jurisdictions may adopt more stringent requirements. The most recent approved update, consisting of the 2025 CALGreen standards, became effective January 1, 2026. The 2025 Title 24 standards will result in less energy use, thereby reducing air pollutant emissions associated with energy consumption in the Basin and across the State of California.

Community Emissions Reductions Program: Assembly Bill 617. AB 617 requires CARB and air districts to develop and implement a Community Emission Reduction Plan (CERP) with additional emissions reporting, monitoring, and reduction plans and measures in an effort to reduce air pollution exposure in disadvantaged communities. Given that 20 of the 30 most disadvantaged communities in California are in the San Joaquin Valley, this process is expected to bring additional clean air resources and strategies to many valley communities.

Senate Bill 375. SB 375, which went into effect in 2009, added statutes to the California Government Code to encourage planning practices that create sustainable communities. It calls for each metropolitan planning organization to prepare an SCS as an integrated element of the RTP that is to be updated every 4 years. The SCS is intended to show how integrated land use and transportation

[10] San Joaquin Valley Air Pollution Control District (SJVAPCD). 2015. *CEQA, Guidance/Policies/Rules, Guidance for Assessing and Mitigating Air Quality Impacts.* March 19. Website: https://ww2.valleyair.org/media/g4nl3p0g/gamaqi.pdf (accessed November 12, 2025).

planning can lead to lower emissions from autos and light trucks. The Fresno COG has included the SCS in its proposed 2026 RTP, consistent with the approved 2022 RTP/SCS.

4.3.4.3 Regional Regulations

SJVAPCD Air Quality Plans. The SJVAPCD is responsible for formulating and implementing the Air Quality Management Plan (AQMP) for the Basin. The main purpose of an AQMP is to bring the area into compliance with federal and State air quality standards. SJVAPCD does not have one single AQMP for criteria pollutants; rather, the SJVAPCD addresses each criteria pollutant with its own plan. The SJVAPCD has the following AQMPs:[11]

- 2024 Plan for the 2012 Annual $PM_{2.5}$ Standard
- 2022 Plan for the 2015 8-Hour Ozone Standard
- 2018 Plan for the 1997, 2006, and 2012 $PM_{2.5}$ Standards
- 2007 PM_{10} Maintenance Plan
- 2004 Revision to the California SIP for Carbon Monoxide

The SJVAPCD's AQMPs incorporate the latest scientific and technological information and planning assumptions, including updated emission inventory methodologies for various source categories. The SJVAPCD's AQMPs included the integrated strategies and measures needed to meet the NAAQS, implementation of new technology measures, and demonstrations of attainment of the 1-hour and 8-hour ozone NAAQS, as well as the latest 24-hour and annual $PM_{2.5}$ standards.

The SJVAPCD's current air quality plans are discussed below.

Ozone Plans. The SJVAPCD's Governing Board approved the 2022 plan for the 2015 8-hour ozone standard on December 15, 2022. The comprehensive strategy in this plan will reduce NO_X emissions by 72 percent by 2037 and will bring the San Joaquin Valley into attainment of EPA's 2015 8-hour ozone standard as expeditiously as practicable by the 2037 attainment deadline.

Particulate Matter Plans. The SJVAPCD adopted the 2007 PM_{10} Maintenance Plan in September 2007 to ensure the Basin's continued attainment of the EPA's PM_{10} standard. The EPA designated the valley as an attainment/maintenance area for PM_{10}.

The SJVAPCD adopted the 2018 Plan for the 1997, 2006, and 2012 $PM_{2.5}$ Standards on November 15, 2018. This plan addresses the EPA federal 1997 annual $PM_{2.5}$ standard of 15 micrograms per cubic meter ($\mu g/m^3$) and 24-hour $PM_{2.5}$ standard of 65 $\mu g/m^3$; the 2006 24-hour $PM_{2.5}$ standard of 35 $\mu g/m^3$; and the 2012 annual $PM_{2.5}$ standard of 12 $\mu g/m^3$. This plan demonstrates attainment of the federal $PM_{2.5}$ standards as expeditiously as practicable. The SJVAPCD adopted the 2024 Plan for the 2012 Annual $PM_{2.5}$ Standard on June 20, 2024, to fulfill remaining federal requirements and to demonstrate expeditious attainment of the 2012 $PM_{2.5}$ standard by 2030. Non-attainment designations for the new $PM_{2.5}$ NAAQS have not yet been issued; as a result, the SJVAPCD has not adopted an associated AQMP.

[11] San Joaquin Valley Air Pollution Control District (SJVAPCD). 2025. Air Quality Attainment Plans. Website: https://ww2.valleyair.org/rules-and-planning/air-quality-plans/ (accessed November 12, 2025).

Rules and Regulations. SJVAPCD rules and regulations that may apply to implementation of the proposed project include, but are not limited to, the following:

- **Rule 2010 – Permits Required.** Any person constructing, altering, replacing or operating any source operation which emits, may emit, or may reduce emissions to obtain an Authority to Construct or a Permit to Operate. This rule also explains the posting requirements for a Permit to Operate and the illegality of a person willfully altering, defacing, forging, counterfeiting or falsifying any Permit to Operate.

- **Rule 2201 – New and Modified Stationary Source Review.** Sets forth Air Pollution Control Officer (APCO) review procedures for all new stationary sources and all modifications to existing stationary sources which are subject to the SVAPCD permit requirements in Regulation II and after construction emit or may emit one or more affected pollutant.

- **Rule 2280 – Portable Equipment Registration.** Portable equipment used at project sites for less than 6 consecutive months must be registered with the SJVAPCD. The SJVAPCD will issue the registrations 30 days after receipt of the application.

- **Rule 2303 – Mobile Source Emission Reduction Credits.** A project may qualify for SJVAPCD vehicle emission reduction credits if it meets the specific requirements of Rule 2303 for any of the following categories:

    - Low-Emission Transit Buses
    - Zero-Emission Vehicles
    - Retrofit Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles
    - Retrofit Heavy-Duty Vehicles

- **Rule 4002 – National Emissions Standards for Hazardous Air Pollutants.** The purpose of the rule is to incorporate the National Emission Standards for Hazardous Air Pollutants from Part 61, Chapter I, Subchapter C, Title 40, Code of Federal Regulations (CFR) and the National Emission Standards for Hazardous Air Pollutants for Source Categories from Part 63, Chapter I, Subchapter C, Title 40, CFR to protect the health and safety of the public from hazardous air pollutants, such as asbestos.

- **Rule 4102 – Nuisance.** The purpose of this rule is to protect the health and safety of the public and applies to any source operation that emits or may emit air contaminants or other materials.

- **Rule 4641 – Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations.** The purpose of this rule is to limit VOC emissions from asphalt paving and maintenance operations. The paving operations for new development and existing paved surfaces will be subject to Rule 4641.

- **Rule 8011—General Requirements: Fugitive Dust Emission Sources.** Fugitive dust regulations are applicable to outdoor fugitive dust sources. Operations, including construction operations, must control fugitive dust emissions in accordance with SJVAPCD Regulation VIII. According to

Rule 8011, the SJVAPCD requires the implementation of control measures for fugitive dust emission sources. For projects in which construction-related activities would disturb equal to or greater than 1 acre of surface area, SJVAPCD recommends that demonstration of receipt of an SJVAPCD-approved Dust Control Plan or Construction Notification Form, before issuance of the first grading permit, be made a condition of approval.

  - **Regulation VIII – Fugitive PM_{10} Prohibitions.** Rules 8011-8081 are designed to reduce PM_{10} emissions (predominantly dust/dirt) generated by human activity, including construction and demolition activities, road construction, bulk materials storage, paved and unpaved roads, carryout and track out, etc. All development projects that involve soil disturbance are subject to at least one provision of the Regulation VIII series of rules.

- **Rule 9410 – Employer-Based Trip Reduction.** The purpose of this rule is to reduce VMT from private vehicles used by employees to commute to and from their worksites in order to reduce emissions of NO_X, VOC, and particulate matter. The rule requires larger employers (those with 100 or more eligible employees) to establish employee trip reduction programs to reduce VMT, reducing emissions associated with work commutes. The rule uses a menu-based Employer Trip Reduction Implementation Plan and periodic reporting requirements to evaluate performance on a phased-in compliance schedule.

- **Rule 9510 – Indirect Source Review.** This rule reduces the impact of NO_X and PM_{10} emissions from new development projects. The rule places application and emission reduction requirements on development projects meeting applicability criteria in order to reduce emissions through on-site mitigation, off-site SJVAPCD-administered projects, or a combination of the two. Compliance with SJVAPCD Rule 9510 reduces emissions impacts through incorporation of on-site measures as well as payment of an off-site fee that funds emission reduction projects in the Basin. The emissions analysis for Rule 9510 is detailed and is dependent on the exact project design that is expected to be constructed or installed. Compliance with Rule 9510 is separate from the CEQA process, although the control measures used to comply with Rule 9510 may be used to mitigate significant air quality impacts.

Odor Impacts. Odor impacts on residential areas and other sensitive receptors, such as hospitals, daycare centers, schools, etc., warrant the closest scrutiny, but consideration could also be given to other land uses where people may congregate, such as recreational facilities, worksites, and commercial areas. While offensive odors rarely cause any physical harm, they can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and SJVAPCD. Two situations create a potential for odor impact. The first occurs when a new odor source is located near an existing sensitive receptor. The second occurs when a new sensitive receptor is located near an existing source of odor. The SJVAPCD has determined the common land use types that are known to produce odors in the Basin. These types, as well as the radius in which odor impacts can typically be experienced, are shown in Table 4.3.E.

Table 4.3.E: Screening Levels for Potential Odor Sources

Odor Generator	Radius Anticipated to Experience Odor
Wastewater Treatment Facilities	2 miles
Sanitary Landfill	1 mile
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	1 mile
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile
Painting/Coating Operations (e.g., auto body shop)	1 mile
Food Processing Facility	1 mile
Feed Lot/Dairy	1 mile
Rendering Plant	1 mile

Source: San Joaquin Valley Air Pollution Control District. 2015.

4.3.4.4 Local Regulations

Local General Plans. The Fresno COG Region contains Fresno County and 15 incorporated cities, each with an individual general plan prepared pursuant to California Government Code Section 65300. Each general plan contains goals and policies related to air quality within the particular jurisdiction. Although general plan element titles may vary, this information is typically found within the general plan air quality/open space/conservation element, or equivalent.

4.3.5 Thresholds of Significance

The following thresholds of significance are based on Appendix G of the *State CEQA Guidelines*. Based on these thresholds, implementation of the proposed project would have a significant adverse impact with respect to air quality if it would:

Threshold 4.3.1: Conflict with or obstruct implementation of the applicable air quality plan;

Threshold 4.3.2: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard;

Threshold 4.3.3: Expose sensitive receptors to substantial pollutant concentrations; or

Threshold 4.3.4: Result in other emissions (such as those leading to odors adversely affecting a substantial number of people).

The SJVAPCD is the applicable air pollution control district for the Basin, which includes the Fresno COG Region. The SJVAPCD has adopted thresholds of significance in its GAMAQI. While the final determination of whether a project is significant is within the purview of the lead agency pursuant to Section 15064(b) of the *State CEQA Guidelines*, the SJVAPCD recommends that its quantitative air pollution thresholds be used to determine the significance of project emissions. In the case of the proposed project, because the design of each transportation improvement and land use development

project facilitated by the proposed project is currently unknown, criteria pollutant emissions during construction and operation of each future project cannot be meaningfully quantified at this time. However, future projects subject to a project-specific CEQA analysis would be subject to the regional emissions and health risk thresholds outlined later in this section. If a future project has the potential to exceed these thresholds, the project would have significant air quality impacts under CEQA.

4.3.5.1 Regional Emissions Thresholds

Non-compliance with a threshold of significance established by SJVAPCD in its GAMAQI[12] means the effect will normally be determined to be significant in the context of CEQA. The SJVAPCD has established thresholds of significance for criteria pollutant emissions generated during construction and operation of projects as shown in Table 4.3.F, below.

Table 4.3.F: SJVAPCD Construction and Operation Thresholds of Significance (Tons per Year)

	CO	NO_X	ROG	SO_X	PM_{10}	$PM_{2.5}$
Construction Thresholds	100	10	10	27	15	15
Operation Thresholds	100	10	10	27	15	15

Source: San Joaquin Valley Air Pollution Control District. 2015. *Guidance for Assessing and Mitigating Air Quality Impacts.*

CO = carbon monoxide
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
ROG = reactive organic gas
SJVAPCD = San Joaquin Valley Air Pollution Control District
SO_X = sulfur oxides

The emissions thresholds in the SJVAPCD GAMAQI were established based on the attainment status of the Basin in regard to air quality standards for specific criteria pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety, these emission thresholds are regarded as conservative.

4.3.5.2 Health Risk Thresholds

For air pollutants without defined significance standards, the definition of substantial pollutant concentrations varies. For TACs, "substantial" is taken to mean that the individual health risk exceeds a threshold considered to be a prudent risk management level. The following limits for maximum individual cancer risk (MICR) and noncancer acute and chronic Hazard Index (HI) from project emissions of TACs are considered appropriate for use in determining the health risk for projects in the Basin:

- **MICR:** MICR is the estimated probability of a maximally exposed individual (MEI) contracting cancer as a result of exposure to TACs over a period of 70 years for adults and 9 years for children in residential locations, 350 days per year. SJVAPCD's *Update to the District's Risk Management*

[12] San Joaquin Valley Air Pollution Control District (SJVAPCD). 2015. *CEQA, Guidance/Policies/Rules, Guidance for Assessing and Mitigating Air Quality Impacts.* March 19. Website: https://ww2.valleyair.org/media/g4nl3p0g/gamaqi.pdf (accessed March 19, 2026).

Policy to Address the OEHHA Revised Risk Assessment Guidance Document[13] states that emissions of TACs are considered significant if a Health Risk Assessment (HRA) shows an increased risk of greater than 20 in 1 million.

- **Chronic HI:** Chronic HI is the ratio of the estimated long-term level of exposure to a TAC for a potential MEI to its chronic reference exposure level. A project would be considered significant if the cumulative increase in total chronic HI for any target organ system would exceed 1.0 at any receptor location.

- **Acute HI:** Acute HI is the ratio of the estimated maximum 1-hour concentration of a TAC for a potential MEI to its acute reference exposure level. A project would be considered significant if the cumulative increase in total acute HI for any target organ system would exceed 1.0 at any receptor location.

4.3.6 Project Impacts

Threshold 4.3.1: Would the project conflict with or obstruct implementation of the applicable air quality plan?

Significant and Unavoidable Impact. An air quality plan describes air pollution control strategies to be implemented by a city, county, or region classified as a non-attainment area. The main purpose of the air quality plan is to bring the area into compliance with the requirements of federal and State air quality standards. The Basin is designated as non-attainment for ozone and $PM_{2.5}$ for federal standards and non-attainment for ozone, PM_{10}, and $PM_{2.5}$ for State standards. SJVAPCD does not have one single air quality plan for criteria pollutants, but instead addresses each criteria pollutant with its own plan.

Construction. For a project to be considered consistent with SJVAPCD air quality plans, the pollutants emitted from a project shall not exceed the SJVAPCD adopted emission thresholds of significance or otherwise cause a significant impact on air quality. As described under Threshold 4.3.2, it cannot be known at this time whether construction of future transportation improvement and land use development projects facilitated by the proposed project would result in the generation of criteria air pollutants that would exceed SJVAPCD thresholds of significance. As such, it cannot be determined whether a related conflict with the SJVAPCD's applicable air quality plans would occur during construction of each individual improvement or development project.

Future projects subject to discretionary approval by the appropriate member agency would be required to comply with the requirements of CEQA. This would include an environmental review to determine if a project would conflict with or obstruct implementation of the applicable air quality plan based on project-specific details, identification of project-specific mitigation measures, and compliance with applicable regulatory requirements. Pursuant to **Project-Specific Mitigation Measure (PMM) AQ-1**, future projects facilitated by the proposed project would prepare an air quality study that quantifies construction emissions and compares those to the

13 San Joaquin Valley Unified Air Pollution Control District (SJVAPCD). 2015. *Final Draft Staff Report, Update to District's Risk Management Policy to Address OEHHA's Revised Risk Assessment Guidance Document.* March 18. Website: https://archive.valleyair.org/notices/Docs/2015/3-18-15_risk/final-draft-risk-policy-sr.pdf (accessed March 20, 2026).

applicable thresholds of significance. Under **PMM AQ-1**, if the analysis demonstrates that emissions would exceed one or more applicable thresholds of significance, the project would be required to identify and implement feasible mitigation measures to reduce construction emissions to the maximum extent practicable.

Further, future projects would be required to adhere to existing SJVAPCD regulations pertaining to construction-period criteria pollutant emissions, including SJVAPCD Regulation VIII (Fugitive PM_{10} Prohibitions) and Rule 9510 (Indirect Source Review), as discussed further under Threshold 4.3.2, below. In addition to SJVAPCD requirements, CARB has adopted regulations for new off-road diesel engines and equipment that result in cleaner construction equipment being used as older, higher-emitting equipment is retired. Adherence to existing regulations and adopted control measures would result in a long-term decline in emission rates associated with construction activities through the proposed project horizon year of 2049, especially given that these measures are assumed to become more stringent over time as new technology emerges.

Overall, without quantitative emissions modeling, it is unknown if construction associated with of future transportation and development projects facilitated by the proposed project would exceed the SJVAPCD thresholds of significance. Therefore, the proposed project could potentially conflict with applicable air quality plans.

Operation. As described below under Threshold 4.3.2, it cannot be known at this time whether operation of future transportation improvement and land use development projects facilitated by the proposed project would result in the generation of criteria air pollutants that would exceed SJVAPCD thresholds of significance. As such, it cannot be determined whether a related conflict with SJVAPCD air quality plans for criteria pollutants would occur during operation of each project.

As described in Chapter 3.0, Project Description, the Fresno COG selected Scenario C (Enhanced Transit and Smart Growth) as the preferred project scenario. A focal point of this scenario is transit system upgrades/improvements. Transportation infrastructure projects generally do not generate new vehicle trips, but rather facilitate travel demand associated with surrounding land uses. Other focal points of Scenario C include sustainable urban growth focused on existing urban centers and established areas and supporting higher-density growth with mixed-use development. All of these strategies would allow for implementation of sustainability efforts that reduce motor vehicle use and associated mobile-source emissions. This would be accomplished with more compact development achieved by increasing development density and by providing a land use pattern and transportation infrastructure more supportive of public transportation, walking, and bicycling. Therefore, on a regional level, growth within the Fresno COG Region under the RTP/SCS is intended to reduce operational mobile-source emissions as compared to regional growth without adoption of the RTP/SCS. Overall, these efforts align with the attainment strategy for the Basin and are generally consistent with the overarching goals of the applicable AQMPs.

Future projects subject to discretionary approval by the appropriate member agency would be required to comply with the requirements of CEQA. This would include an environmental review to determine if a project would conflict with or obstruct implementation of the applicable air quality plan based on project-specific details, the identification project-specific mitigation measures, and compliance with applicable regulatory requirements. Pursuant to **PMM AQ-1**,

future projects facilitated by the proposed project would prepare an air quality study that quantifies operational emissions and compares those to the applicable thresholds of significance. Under **PMM AQ-1**, if the analysis demonstrates that emissions would exceed one or more applicable thresholds of significance, the project would identify and implement all feasible mitigation measures to reduce operational emissions to the maximum extent practicable.

Conformity Analysis. Transportation conformity is required under FCAA Section 176(c) to ensure that federally supported highway and transit project activities are consistent with ("conform to") the purpose and requirements of the SIP. Conformity currently applies to areas that are designated as non-attainment or maintenance for the following transportation-related criteria pollutants: ozone, particulate matter ($PM_{2.5}$ and PM_{10}), CO, and NO_2. As previously stated, the Basin is designated non-attainment for State and federal ozone and $PM_{2.5}$ standards and for State PM_{10} standards. As a result, SJVAPCD has prepared pollutant-specific AQMPs intended to bring the area into compliance with federal and State air quality standards, as listed in Section 4.3.4.3.

The Fresno COG is responsible for ensuring the proposed 2026 RTP/SCS and related programs (e.g., 2027 Federal Transportation Improvement Program [FTIP]) are in conformity with State air quality plans; meaning they would not create new NAAQS violations, increase the frequency or severity of existing NAAQS violations, or delay attainment of the NAAQS. In practice, air quality plans include criteria pollutant emission budgets required for attainment of air quality standards by mandated deadlines. The budgets must not be exceeded considering projected growth in mobile-source activity. The complete Air Quality Conformity Analysis prepared for the 2026 RTP/SCS is provided in Appendix C to the RTP/SCS document, which is incorporated by reference, and is summarized in Table 4.3.G, below.

The Air Quality Conformity Analysis summarizes the applicable air quality implementation plans and conformity tests for ozone, PM_{10}, and $PM_{2.5}$. A regional emissions analysis was conducted for the years 2027, 2029, 2031, 2032, 2035, 2037, 2046, and 2049 as applicable to each pollutant. All analyses were conducted using the latest planning assumptions and emissions model. The major conclusions of the Air Quality Conformity Analysis were as follows:

- For 2008 8-hour ozone, the total regional on-road vehicle-related emissions (ROG and NO_X) associated with implementation of the proposed project and the 2027 FTIP for all years tested are projected to be less than the approved emissions budgets specified in the *2026 Updates to Motor Vehicle Emissions Budgets* for the 75 parts per billion Ozone State Implementation Plan (2026 SIP Update). Based on this, the conformity tests for ozone were satisfied.

- For 2015 8-hour ozone, the total regional on-road vehicle-related emissions (ROG and NO_X) associated with implementation of the proposed project and the 2027 FTIP for all years tested are projected to be less than the approved emissions budgets specified either in the *2026 Updates to Motor Vehicle Emissions Budgets* for the 75 parts per billion Ozone State Implementation Plan (SIP) (Option 1) or in the *2026 Extreme Ozone SIP Revision* released for public comment on April 17, 2026 (Option 2). Based on this, the conformity tests for ozone were satisfied.

Table 4.3.G: Proposed Project Air Quality Conformity Analysis

Standard	Analysis Year	Emissions Total		DID YOU PASS?	
		PM-10 (tons/day)	NOx (tons/day)	PM-10	NOx
PM-10	2020 Budget	7.0	25.4		
	2027	5.9	6.8	YES	YES
	2020 Budget	7.0	25.4		
	2037	5.0	5.3	YES	YES
	2020 Budget	7.0	25.4		
	2046	5.7	5.3	YES	YES
	2020 Budget	7.0	25.4		
	2049	5.9	5.4	YES	YES

Standard	Analysis Year	Emissions Total		DID YOU PASS?	
		PM2.5 (tons/day)	NOx (tons/day)	PM2.5	NOx
1997 24-Hour PM2.5 Standard	2020 Budget	0.9	25.3		
	2027	0.3	5.9	YES	YES
	2020 Budget	0.9	25.3		
	2037	0.3	5.3	YES	YES
	2020 Budget	0.9	25.3		
	2046	0.4	5.4	YES	YES
	2020 Budget	0.9	25.3		
	2049	0.4	5.5	YES	YES

Standard	Analysis Year	Emissions Total		DID YOU PASS?	
		ROG (tons/day)	NOx (tons/day)	ROG	NOx
2008 Ozone and Option 1 2015 Ozone	2026 Budget	4.4	8.4		
	2027	4.2	8.5	YES	YES
	2029 Budget	3.9	7.8		
	2029	3.8	5.9	YES	YES
	2031 Budget	3.6	7.6		
	2031	3.5	5.6	YES	YES
	2037	2.9	5.0	YES	YES
	2046	2.4	5.1	YES	YES
	2049	2.3	5.2	YES	YES

Table 4.3.G: Proposed Project Air Quality Conformity Analysis (Continued)

Standard	Analysis Year	Emissions Total		DID YOU PASS?	
		PM2.5 (tons/day)	NOx (tons/day)	PM2.5	NOx
1997 Annual PM2.5 Standard	2023 Budget	0.8	15.1		
	2027	0.3	6.9	YES	YES
	2023 Budget	0.8	15.1		
	2037	0.3	5.3	YES	YES
	2023 Budget	0.8	15.1		
	2046	0.4	5.4	YES	YES
	2023 Budget	0.8	15.1		
	2049	0.4	5.5	YES	YES

Standard	Analysis Year	Emissions Total		DID YOU PASS?	
		PM2.5 (tons/day)	NOx (tons/day)	PM2.5	NOx
2006 PM2.5 Winter 24-Hour Standard	2024 Budget	0.8	15.0		
	2027	0.3	7.2	YES	YES
	2024 Budget	0.8	15.0		
	2037	0.3	5.5	YES	YES
	2024 Budget	0.8	15.0		
	2046	0.4	5.6	YES	YES
	2024 Budget	0.8	15.0		
	2049	0.4	5.7	YES	YES

Standard	Analysis Year	Emissions Total		DID YOU PASS?	
		PM2.5 (tons/day)	NOx (tons/day)	PM2.5	NOx
2012 Annual PM2.5 Standard (Moderate)	2022 Budget	0.9	21.2		
	2027	0.3	6.9	YES	YES
	2022 Budget	0.9	21.2		
	2037	0.3	5.3	YES	YES
	2022 Budget	0.9	21.2		
	2046	0.4	5.4	YES	YES
	2022 Budget	0.9	21.2		
	2049	0.4	5.5	YES	YES

Source: Fresno Council of Governments (COG). 2026. Draft Conformity Analysis for the 2027 Federal Transportation Improvement and the 2026 Regional Transportation Plan. June 12.

- For PM_{10}, the total regional vehicle-related emissions (PM_{10} and NO_X) associated with implementation of the proposed project and the 2027 FTIP for all years tested are either (1) = projected to be less than the approved emissions budgets, or (2) less than the emission budgets using the approved PM_{10} and NO_X trading mechanism[14] for transportation conformity purposes from the 2007 PM_{10} Maintenance Plan (as revised in 2015).

- For the 1997 24-hour $PM_{2.5}$ standard, the total regional on-road vehicle-related emissions associated with implementation of the proposed project and the 2027 FTIP for the analysis years are either (1) projected to be less than the approved emission budgets, or (2) less than the emission budgets using the approved $PM_{2.5}$ and NO_X trading mechanism for transportation conformity purposes from the 2018 Plan for the 1997, 2006, and 2012 $PM_{2.5}$ Standards (2018 $PM_{2.5}$ Plan) for the 1997 $PM_{2.5}$ 24-hour serious area requirements (2020 attainment year). Based on this, the conformity tests for the 1997 24-hour $PM_{2.5}$ standard were satisfied.

- For the 1997 annual $PM_{2.5}$ standard, the total regional on-road vehicle-related emissions associated with implementation of the proposed project and the 2027 FTIP for the analysis years are projected to be less than the approved emission budgets from the 2021 revision to the 2018 Plan for the 1997, 2006, and 2012 $PM_{2.5}$ Standards (2018 $PM_{2.5}$ Plan) for the 1997 annual $PM_{2.5}$ serious area requirements (2023 attainment year). Based on this, the conformity tests for the 1997 annual $PM_{2.5}$ standard were satisfied.

- For the 2006 24-hour $PM_{2.5}$ standard, the total regional on-road vehicle-related emissions associated with implementation of the proposed project and the 2027 FTIP for the analysis years are either (1) projected to be less than the approved emission budgets, or (2) less than the emission budgets using the approved $PM_{2.5}$ and NO_X trading mechanism for transportation conformity purposes from the 2018 Plan for the 1997, 2006, and 2012 $PM_{2.5}$ Standards (2018 $PM_{2.5}$ Plan). Based on this, the conformity tests for the 2006 $PM_{2.5}$ standard were satisfied.

- For the 2012 annual $PM_{2.5}$ standard (moderate and serious), the total regional on-road vehicle-related emissions associated with implementation of the 2027 FTIP and the 2026 RTP for the analysis years are either (1) projected to be less than the approved emission budgets, or (2) less than the emission budgets using the approved $PM_{2.5}$ and NO_X trading mechanism for transportation conformity purposes from the 2018 Plan for the 1997, 2006, and 2012 $PM_{2.5}$ Standards (2018 $PM_{2.5}$ Plan) for 2012 $PM_{2.5}$ moderate area requirements.

  Based on the conclusions of the Air Quality Conformity Analysis presented above, the conformity tests for all criteria pollutants were satisfied. The proposed project and the 2027 FTIP would not impede and would support timely implementation of the transportation control measures (TCMs) that have been adopted as part of applicable air quality implementation plans. Therefore, the proposed project conforms to the applicable SIP and all applicable sections of the EPA's Transportation Conformity Rule.

[14] A trading mechanism allows an agency responsible for demonstrating transportation conformity in the San Joaquin Valley to supplement the budget for one pollutant with a portion of another pollutant, and use these adjusted motor vehicle emissions budgets to demonstrate transportation conformity with the applicable SIP.

Conclusion. As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. With adherence to regulatory air quality requirements and implementation of **PMM AQ-1**, project impacts related to conflicts with or obstruction of implementation of the applicable air quality plan would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether the potential impact related to consistency with the applicable AQMPs would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to the California Department of Transportation (Caltrans), local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts related to conflicts with or obstruction of implementation of the applicable air quality plan are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.3.2: Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Significant and Unavoidable Impact. The Basin is designated as non-attainment for ozone and $PM_{2.5}$ for federal standards and non-attainment for ozone, PM_{10}, and $PM_{2.5}$ for State standards. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in non-attainment of ambient air quality standards. Instead, a project's individual emissions contribute cumulatively to the air quality in the Basin. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant. The SJVAPCD's adopted thresholds of significance for criteria pollutants are the levels at which an individual development project is considered to result in a cumulatively considerable net increase of emissions.

Construction. Construction activities associated with future transportation improvement and land use development projects under the proposed project could include demolition, grading, site preparation, building construction, architectural coating, paving, and other activities. Short-term degradation of air quality may occur due to emissions generated by these activities. Emissions from construction equipment could include CO, NO_X, ROG, directly emitted particulate matter ($PM_{2.5}$ and PM_{10}), and TACs such as DPM.

Construction-related effects on air quality from each future project would be greatest during the site preparation phase due to the disturbance of soils. If not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils. Unless properly controlled, vehicles leaving each site would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions would depend on soil moisture, silt content of soil, wind

speed, and the amount of operating equipment. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Water or other soil stabilizers could be used to control dust, resulting in emission reductions of 50 percent or more. SJVAPCD has implemented Regulation VIII measures for reducing fugitive dust emissions (PM_{10}). Consistent with SJVAPCD Regulation VIII (Fugitive PM_{10} Prohibitions), the following controls would be included as specifications for each future proposed project and implemented during construction:

- All disturbed areas, including storage piles, that are not being actively utilized for construction purposes shall be effectively stabilized of dust emissions using water or a chemical stabilizer/suppressant, and covered with a tarp or other suitable cover or vegetative ground cover.

- All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or a chemical stabilizer/suppressant.

- All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by pre-soaking.

- When materials are transported off site, all material shall be covered or effectively wetted to limit visible dust emissions, and at least 6 inches of freeboard space from the top of the container shall be maintained.

- All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.

- Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or a chemical stabilizer/suppressant.

SJVAPCD Regulation VIII requires commercial projects over 5 acres and residential projects over 10 acres to file a Dust Control Plan. If measures included in the Dust Control Plan prove inadequate to control fugitive dust, construction contractors must implement additional controls or cease dust-generating construction activities. Projects smaller than the Dust Control Plan size thresholds must still comply with most other Regulation VIII requirements. The SJVAPCD indicates that the control measures in Regulation VIII are required by regulation for all construction sites to reduce fugitive dust emissions. These control measures are intended to reduce the amount of PM_{10} emissions during construction. Implementation of the fugitive dust control measures outlined in Regulation VIII would reduce short-term construction-period air quality impacts from the proposed project to the extent feasible.

In addition to fugitive dust-related PM_{10} emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO_2, NO_x, VOCs and some soot particulate ($PM_{2.5}$ and PM_{10}) in exhaust emissions. If construction activities would increase traffic congestion, CO and other emissions from traffic would increase slightly due to vehicle idling. These emissions would be temporary in nature and limited to the immediate area surrounding each construction site.

CARB has adopted regulations for new off-road diesel engines and equipment that result in cleaner equipment being placed in service as older, higher-emitting equipment is retired. CARB also adopted the in-use off-road diesel vehicle regulation requiring NO_X and PM_{10} emission reductions from equipment and vehicles currently in operation. CARB requires retrofits of existing equipment to reduce particulate emissions that will help reduce emissions from older equipment. Regulations are normally implemented over a 5- to 10 year period, at which time a new round of regulations are proposed if they are still needed to attain the air quality standards. CARB has a history of tightening regulations as technology advances increase the feasibility of additional controls. Large individual projects that exceed SJVAPCD project thresholds would be required to include all feasible mitigation measures to reduce the significant impact to the maximum extent. The measures could include additional on-site controls or off-site mitigation fees that reduce emissions to less than significant levels. Furthermore, Rule 9510 – Indirect Source Review requires projects to reduce exhaust-related construction emissions by 20 percent for NO_X and by 50 percent for PM_{10}.

Potential pollutant emissions during construction of each future transportation improvement and land use development project under implementation of the proposed project cannot be meaningfully quantified at this time. Information regarding specific development projects and the location of sensitive receptors in relation to the various projects would be needed in order to determine localized impacts associated with construction activity. However, future projects subject to discretionary approval by the appropriate member agency are required to comply with the requirements of CEQA, including an environmental review, as applicable, to determine whether a project would result in a cumulatively considerable net increase of any criteria pollutant for which the Basin is in non-attainment. Pursuant to **PMM AQ-1**, future projects facilitated by the proposed project would be required to prepare an air quality study that quantifies construction emissions and compares those to the applicable thresholds of significance. Under **PMM AQ-1**, if the analysis demonstrates that emissions would exceed one or more applicable thresholds of significance, the project sponsor would be required to identify and implement all feasible mitigation measures to reduce construction emissions to the maximum extent practicable.

Overall, without quantitative emissions modeling, it is unknown if construction activities associated with implementation of future transportation and development projects facilitated by the proposed project would exceed the SJVAPCD thresholds of significance and, therefore, be determined to result in a cumulatively considerable net increase of any criteria pollutant for which the Basin is in non-attainment.

Operation. Long-term air pollutant emission impacts are those associated with mobile sources (e.g., vehicle trips), energy sources (e.g., electricity and natural gas), and area sources (e.g., architectural coatings and the use of landscape maintenance equipment). Mobile-source

emissions include VOC and NO_X emissions that contribute to the formation of ozone. Additionally, PM_{10} emissions result from vehicle exhaust, tire and brake wear, and the entrainment of dust into the atmosphere from vehicles traveling on paved roadways. Energy-source emissions result from activities in buildings for which electricity and natural gas are used. The quantity of emissions is the product of usage intensity (i.e., the amount of electricity or natural gas) and the emission factor of the fuel source. It cannot be known at this time whether future land use developments facilitated by the proposed project would utilize natural gas. Area-source emissions include VOCs and other pollutants generated by the use of consumer products, architectural coating off-gassing, and landscape equipment exhaust.

As described in Section 4.8, Greenhouse Gas Emissions, future land use developments would be required to incorporate project design measures consistent with the 2022 Scoping Plan GHG requirements, including limiting the use of natural gas in new development.

As described in Section 3.0, the proposed project would promote sustainable urban growth focused on existing urban centers and established areas and supporting higher-density growth with mixed-use development. Rezoning by member agencies to allow for such development would be encouraged by the Fresno COG, pursuant to **Fresno COG Mitigation Measure (FMM) EN-2** (refer to Section 4.6, Energy, of this Draft EIR). This would continue to promote the walkability of the Fresno COG Region and reduction of VMT while allowing for greater residential development. The proposed project would prioritize transit system upgrades/improvements, which would encourage the use of alternative modes of transportation to automobiles and thus would reduce mobile-source emissions associated with automobile travel. Specific transportation improvements included in the proposed 2026 RTP/SCS that would promote clean transportation alternatives include improved solar lighting at bus stops, electric bus replacement, electric street sweeper replacement, bicycle lane installation, sidewalk/trail improvements, and electric vehicle (EV) charging for member agency vehicle fleets. Further, under **FMM EN-1**, the Fresno COG would encourage member agencies to increase the number of alternative fuel vehicles within agency fleets, as feasible, which would further promote clean transportation.

Due to the expected reduction in VMT, it is anticipated that operational mobile-source emissions, at the Fresno COG level, would be reduced under the Scenario C as compared to the no-project scenario. However, potential pollutant emissions during operation of each future transportation improvement and land use development project under implementation of the proposed project cannot be meaningfully quantified at this time. Nevertheless, future projects subject to discretionary approval by the appropriate member agency are required to comply with the requirements of CEQA, including an environmental review, as applicable, to determine if a project would result in a cumulatively considerable net increase of any criteria pollutant for which the Basin is in non-attainment. Pursuant to **PMM AQ-1**, future projects facilitated by the proposed project would be required to prepare an air quality study that quantifies operational emissions and compares those to the applicable thresholds of significance. Under **PMM AQ-1**, if the analysis demonstrates that emissions would exceed one or more applicable thresholds of significance, the implementing agency would require that all feasible mitigation measures be identified and implemented to reduce operational emissions to the maximum extent practicable.

Further, indirect energy-source criteria pollutant emissions are expected to be reduced through the 2026 RTP/SCS horizon year of 2049 due to increasingly stringent regulations that apply to the generation of electricity. Expanded use of renewable fuels and zero-emission vehicles, and replacing combustion sources with electrically powered alternatives would further result in reductions in mobile-source criteria pollutant emissions. Buildings and structures associated with implementation of the proposed project would also be required to adhere to applicable federal, State, and local requirements for energy efficiency. This includes current Title 24 and CALGreen standards that establish minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building insulation and roofing, and lighting, which would reduce energy-source emissions. In addition, under **FMM EN-4**, the Fresno COG would encourage member agencies to go beyond standard sustainability requirements by adopting their own "Green Building Programs" to promote green building standards beyond those established by Title 24, further reducing energy-source emissions associated with future projects.

Conclusion. As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. With adherence to the regulatory air quality requirements and project-specific mitigation identified in subsequent environmental analyses, project impacts associated with a cumulatively considerable net increase of any criteria pollutant for which the Basin is in non-attainment would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether potential impacts related to generating a cumulatively considerable net increase in criteria pollutants would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts associated with the cumulatively considerable net increase of any criteria pollutant for which the Basin is in non-attainment are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.3.3: Would the project expose sensitive receptors to substantial pollutant concentrations?

Significant and Unavoidable Impact. The SJVAPCD considers a sensitive receptor to be a location that children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants are known to occupy. There are many sensitive receptors throughout the Fresno COG Region. For example, schools and daycare facilities are considered sensitive receptor locations.

Scenario C (Enhanced Transit and Smart Growth), or the preferred project scenario, emphasizes transit improvements, sustainable urban growth focused on existing urban centers and established areas, and higher-density growth with mixed-use development. These strategies would generally result in reduced mobile-source emissions resulting from the reduced demand for automobile travel. However, infill development and locating future projects in close proximity to existing urban land uses, including

sensitive receptors, increase the potential for impacts from construction-period and operational air pollutant emissions.

Projects with sensitive receptors proposed near localized sources of TAC emissions (e.g., residents to be located near major roadways or stationary sources) could expose new sensitive populations to TACs and other air pollutants. According to CARB and the SJVAPCD, exposure to elevated levels of TACs contributes to elevated health risks. CARB recommends that buffers be included to avoid exposure of sensitive receptors to TAC sources. Risk levels drop dramatically beyond 500 feet from a source as pollutants decrease with distance.

Public Health Impacts from Criteria Pollutant Emissions. Regional emissions of criteria pollutants contribute to known health effects. The SJVAPCD is the primary agency responsible for ensuring the health and welfare of sensitive individuals and that they are not exposed to elevated concentrations of criteria pollutants in the Basin. The SJVAPCD's numeric regional mass daily emission thresholds are based in part on Section 180 (e) of the FCAA and are intended to provide a means of consistency in significance determination within the environmental review process. Notwithstanding, simply exceeding the SJVAPCD's numeric regional mass daily emission thresholds does not constitute a particular health impact to a nearby sensitive receptor. The reason for this is that the mass daily emission thresholds are in tons/year emitted into the air, whereas health effects are determined based on the concentration of a pollutant in the air at a particular location (e.g., ppm by volume of air or $\mu g/m^3$ of air). Additionally, the formation of secondary pollutants, including ozone or particulate matter, from chemical reactions in the atmosphere further complicates the relationship between total emissions and localized pollutant concentrations experienced by receptors.

CAAQS and NAAQS were developed to protect the most susceptible population groups from adverse health effects and were established in terms of ppm or $\mu g/m^3$ for applicable emissions. It should be noted that the CAAQS and NAAQS represent levels at which the most susceptible persons (i.e., children and the elderly) are protected. In other words, the CAAQS and NAAQS are purposefully set low to protect children, the elderly, and those with existing respiratory problems. Additionally, air quality trends for emissions of NO_X, VOCs, and ozone (which is a byproduct of NO_X and VOCs) have been going downward within the Basin even as development has increased over the last several years.

The SJVAPCD has acknowledged that currently available modeling tools are not equipped to provide a meaningful analysis between an individual development project's air emissions and specific human health impacts.[15] Specifically, the SPVAPCD states "…the Air District is simply not equipped to analyze and to what extent the criteria pollutant emissions of an individual CEQA

[15] Supreme Court of California. 2015. Application for Leave to File Amicus Curiae Brief of San Joaquin Valley Unified Air Pollution Control District in Support of Defendant and Respondent, County of Fresno and Real Party in Interest and Respondent, Friant Ranch, L.P., Page 4. Filed April 13. Website: https://supreme.courts.ca.gov/sites/default/files/supremecourt/default/documents/7-s219783-ac-san-joaquin-valley-unified-air-pollution-control-dist-041315.pdf (accessed March 23, 2026).

project directly impact human health in a particular area…even for projects with relatively high levels of emissions of criteria pollutant precursor emissions."[16]

Additionally, the SJVAPCD acknowledges that health effects quantification from ozone, as an example, is related with the increases in ambient level of ozone in the air (concentration) that an individual person breathes. The SJVAPCD indicates that it would take a large amount of additional emissions to result in a modeled increase in ambient ozone levels in the Basin. As such, it is not possible to accurately quantify ozone-related health impacts caused by NO_X or VOC emissions from relatively small projects (defined as projects with a regional scope) due to regional model limitations.

The SJVAPCD prepared and filed a Brief of Amicus Curiae[17] with the Supreme Court of California in April 2015 in support of the County of Fresno and Friant Ranch, L.P., in the case of *Sierra Club, Revive the San Joaquin, and League of Women Votes of Fresno, v. County of Fresno, Friant Ranch, L.P.* The brief was intended to assist the court in determining whether an Environmental Impact Report (EIR) was adequate in identifying the health impacts of air pollution and quantifying a project's expected emissions, or whether CEQA further requires an EIR to correlate a project's air quality emissions to specific health impacts. The Brief of Amicus Curiae is hereby incorporated by reference into this PEIR. Current scientific, technological, and modeling limitations prevent the relation of expected adverse air quality impacts to likely health consequences. Future CEQA documentation would include an analysis of whether each future project's construction and operational emissions would exceed significance criteria, therefore resulting in a cumulatively considerable net increase of any criteria pollutant for which the region is in non-attainment under an applicable NAAQS or CAAQS. The CAAQS and NAAQS were established to protect public health; therefore, future CEQA documents may discuss this nexus in their discussions of whether future projects would generate construction or operational emissions that would result in impacts to public health.

Public Health Impacts from Toxic Air Contaminant Emissions. During construction and operation, future projects could result in emissions of several TACs that could potentially impact nearby sensitive receptors. SJVAPCD has defined health risk significance thresholds. These thresholds are represented as a cancer risk to the public and a non-cancer hazard from exposures to TACs. Cancer risk represents the probability (in terms of risk per million individuals) that an individual would contract cancer resulting from exposure to TACs continuously over a period of several years. The SJVAPCD's threshold of significance for TAC emissions is an increase in cancer risk for the MEI of 20 in 1 million (formerly 10 in 1 million). Exposures to TACs can also result in both short-term (acute) or long-term (chronic) non-cancer health impacts. Such impacts could include illnesses related to reproductive effects, respiratory effects, eye sensitivity, immune effects, kidney effects, blood effects, central nervous system, or birth defects.

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16 Supreme Court of California. 2015. Application for Leave to File Amicus Curiae Brief of San Joaquin Valley Unified Air Pollution Control District in Support of Defendant and Respondent, County of Fresno and Real Party in Interest and Respondent, Friant Ranch, L.P., Page 8. Filed April 13. Website: https://supreme.courts.ca.gov/sites/default/files/supremecourt/default/documents/7-s219783-ac-san-joaquin-valley-unified-air-pollution-control-dist-041315.pdf (accessed March 23, 2026).

17 Ibid. Page 4.

Construction of future projects would involve the use of diesel-fueled vehicles and equipment that emit DPM, which is considered a TAC. Future land use developments facilitated by the proposed project, including commercial and industrial land uses, could also generate substantial DPM emissions from off-road equipment use and truck idling. Land use projects are required to comply with AB 2588 and CARB standards for diesel engines. Since it is not possible to determine TAC concentrations at the time of this analysis, it is not possible to calculate the risks for particular health effects within the Fresno COG Region. The proposed project is a programmatic project and until specific future projects are proposed, the associated TAC emissions cannot be modeled. Future development projects subject to environmental review under CEQA would be required to analyze potential TAC emissions and include mitigation, as appropriate.

In addition, during construction of each project, workers and sensitive receptors in each project site vicinity could be exposed to valley fever through fugitive dust. However, the dust control measures required under SJVAPCD Regulation VIII would minimize the exposure of workers and sensitive receptors to valley fever spores suspended with dust.

Construction of future projects could require disturbance of rock and soil that naturally contain asbestos or the demolition of existing buildings/structures that may include materials containing asbestos. Exposure to asbestos is a health threat that could result in health issues such as lung cancer, mesothelioma, and asbestosis. However, CARB has an Air Toxics Control Measure for construction, grading, quarrying, and surface mining operations requiring the implementation of mitigation measures to minimize emissions of asbestos-laden dust. The measure applies to road construction and maintenance, construction and grading operations, and quarries and surface mines when the activity occurs in an area where naturally occurring asbestos is likely to be found. Adherence to CARB's Air Toxics Control Measure would minimize the exposure of workers and sensitive receptors to asbestos. In addition to these requirements, some Fresno COG member agencies have adopted local ordinances or requirements regulating excavation and grading activities in areas likely to contain naturally occurring asbestos. Lastly, in the event that asbestos-containing materials are present in building materials planned for demolition under a future project, the project sponsor would submit specifications signed by a certified asbestos consultant for the removal, encapsulation, or enclosure of the identified asbestos-containing materials in accordance with CCR Title 8; Business and Professions Code; Division 3; California Health and Safety Code Section 25915-25919.7; and other local regulations. Any asbestos-containing materials disturbed during demolition activities would be handled in accordance with such specifications, which would minimize risks to workers and sensitive receptors.

Future transportation improvement and land use development projects facilitated by the proposed project that would emit TACs would require review under SJVAPCD rules and regulations or review under CEQA, especially if located near sensitive receptors. Specifically, pursuant to **PMM AQ-2**, if any future project is proposed within 500 feet of an existing sensitive receptor, the project sponsor shall prepare a Construction HRA prior to project approval. The HRA would model TAC emissions, pollutant dispersion, and potential cancer and non-cancer hazards, and prescribe TAC exposure reduction measures, as necessary. As such, project-specific health risks would be addressed through measures identified in each HRA.

Siting of Sensitive Receptors. CARB developed and approved the *2005 Air Quality and Land Use Handbook*[18] to address the siting of sensitive land uses in the vicinity of freeways, distribution centers, rail yards, ports, refineries, chrome-plating facilities, dry cleaners, and gasoline-dispensing facilities. This guidance document was developed to assess compatibility and associated health risks when placing sensitive receptors near existing pollution sources.

CARB's recommendations for the siting of new sensitive land uses were based on a compilation of studies that evaluated data on the adverse health effects from proximity to air pollution sources. The key observation from these studies was that proximity to air pollution sources substantially increases both exposure and the potential for adverse health effects. Respiratory and cardiovascular problems, including asthma, lung cancer, and premature death, have been associated with living near major roadways and freeways.[19] Children who live near these have been found to have higher asthma rates and reduced lung function.[20] There are three carcinogenic TACs that constitute the majority of the known health risks from motor vehicle traffic: DPM from trucks, and benzene and butadiene from passenger vehicles. Exposure to DPM accounts for more than 80 percent of the total carcinogenic risk in the Basin.[21] It has been found that outdoor concentrations are highest near the roadway and decrease with increasing distance downwind of the source.[22]

CARB recommends avoiding siting new sensitive land uses within 500 feet of urban roads with more than 100,000 vehicles per day or rural roads with more than 50,000 vehicles per day. Table 4.3.H summarizes other CARB recommendations for siting new sensitive land uses in the vicinity of air pollutant sources. Recommendations in the table are based on data that show that localized air pollution exposures can be reduced by as much as 80 percent by following CARB minimum distance separations.

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18 California Air Resources Board (CARB). 2005. *Air Quality and Land Use Handbook: A Community Health Perspective.* April. Website: https://www.aqmd.gov/docs/default-source/ceqa/handbook/california-air-resources-board-air-quality-and-land-use-handbook-a-community-health-perspective.pdf (accessed March 23, 2026).

19 Balmes, J.R., G. Earnest, P.P. Katz, E.E. Yelin, M.D. Eisner, H. Chen, L. Trupin, F. Lurmann, and P.D. Blanc. 2009. Exposure to traffic: Lung function and health status of adults with asthma. *The Journal of Allergy and Clinical Immunology,* 123(3):626–631.

20 California Air Resources Board (CARB). 2013. Overview of the Children's Health Study. Website: https://ww2.arb.ca.gov/resources/documents/childrens-health-study (accessed March 23, 2026).

21 South Coast Air Quality Management District (SCAQMD). 2008. *Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES III).* September

22 Zhu, Y., W.C. Hinds, S. Kim, S. Shen, and C. Sioutas. 2002. Study of ultrafine particles near a major roadway with heavy-duty diesel traffic. *Atmospheric Environment,* 36(27):4323-4335.

Table 4.3.H: CARB Recommendations for Siting New Sensitive Land Uses

Source/Category	Advisory Recommendations
Freeways and High-Traffic Roads	Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day.
Distribution Centers	Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units [TRUs] per day, or where TRU unit operations exceed 300 hours per week). Take into account the configuration of existing distribution centers and avoid locating residences and other sensitive land uses near entry and exit points.
Rail Yards	Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. Within 1 mile of a rail yard, consider possible siting limitations and mitigation approaches.
Ports	Avoid siting new sensitive land uses immediately downwind of ports in the most heavily affected zones. Consult with local air districts or CARB on the status of pending analyses of health risks.
Refineries	Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
Chrome Platers	Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners using Perchloroethylene	Avoid siting new sensitive land uses within 300 feet of any dry-cleaning operation. For operations with two or more machines, provide 500 feet. For operations with three or more machines, consult with the local air district. Do not site new sensitive land uses in the same building with perchloroethylene dry cleaning operations.
Gasoline Dispensing Facilities	Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50-foot separation is recommended for typical gas dispensing facilities.

Source: California Air Resources Board (CARB). 2005.

New sensitive receptors, such as residential uses facilitated by the proposed project, could be sited within the recommended buffer distances (shown in Table 4.3.H) to TAC sources associated with areas designated for commercial and industrial operations. CEQA does not require an agency to consider the effects of existing environmental conditions on a proposed project's future users or residents. However, as with other laws and regulations enforced by other agencies that protect public health and safety, a member agency has authority other than CEQA to require measures to protect public health and safety.

Future development associated with the implementation of the proposed project would be required to comply with AB 2588 and CARB standards for diesel engines. While existing Fresno COG and member agency policies and regulations are intended to minimize impacts associated with sensitive receptors, mitigation measures for future project developments that implement these policies and regulations are identified to ensure that the intended environmental protections are achieved.

Conclusion. As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. With adherence to SJVAPCD and CARB requirements and **PMM AQ-2**, project impacts associated

with exposing sensitive receptors to substantial pollutant concentrations would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts associated with expose sensitive receptors to substantial pollutant concentrations are considered significant and unavoidable for the purposes of this analysis.

Threshold 4.3.4: Would the project result in other emissions (such as those leading to odors adversely affecting a substantial number of people)?

Significant and Unavoidable Impact. The Fresno COG Region has many sources with the potential to generate odors, including wastewater treatment facilities, landfills, transfer stations, recycling centers, manufacturing plants, food processors, painting operations, and rendering plants.

Construction. Odors from the operation of diesel-powered equipment during construction of future transportation improvement and land use development projects may be facilitated by the proposed project. However, these odors would be temporary in nature, as they would be limited to the construction period and would disperse quickly. Therefore, construction of future projects is not anticipated to result in other emissions, such as odors adversely affecting a substantial number of people.

Operation. As described in Section 4.3.4.3, the potential for odor impacts can occur when a new odor source is located near an existing sensitive receptor or when a new sensitive receptor is located near an existing source of odor. Implementation of the proposed project could result in the odor sources being located near sensitive receptors, and therefore could result in significant impacts on sensitive receptors. Transportation improvement projects, by nature, are not considered substantial odor-generating uses. Similarly, the types of land use developments facilitated by the proposed project are unlikely to be odor-generating in nature. However, it is possible that the project could direct growth in a manner that locates new sensitive receptors near existing odor-generating uses, as shown in Table 4.3.E.

Future projects subject to discretionary approval by the appropriate member agency are required to comply with the requirements of CEQA, including an environmental review, as applicable, to determine if a project would result in significant odor impacts. During this process, each member agency would assess new and existing odor sources in the project vicinity to determine whether sensitive receptors would be exposed to objectionable odors. If odor exposure is anticipated, the agency would recommend applicable project-specific mitigation measures as defined by the applicable local air district and best practices.

Further, SJVAPCD addresses odor issues through Rule 4102 – Nuisance. Facilities creating nuisance odors generating public complaints can result in SJVAPCD enforcement action, including requiring the owner of each odor-generating source to take actions that would reduce impacts.

Conclusion. As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, this analysis represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. With adherence to SJVAPCD requirements, project impacts associated with other impacts, such as odors, would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts associated with other impacts, such as odors, are considered **significant and unavoidable** for the purposes of this analysis.

4.3.7 Level of Significance Prior to Mitigation

Prior to mitigation, implementation of the proposed project would have potentially significant impacts related to air quality.

4.3.8 Mitigation Measures

4.3.8.1 Fresno COG Measures

The following mitigation measures would be applied on a regional scale by the Fresno COG to reduce potentially significant impacts related to air quality to the extent feasible:

FMM EN-1 *See Section 4.6, Energy.*

FMM EN-2 *See Section 4.6, Energy.*

FMM EN-4 *See Section 4.6, Energy.*

4.3.8.2 Project-Specific Measures

The following mitigation measures would be applied to future transportation improvement and land use development projects to reduce potentially significant impacts related to air quality to the extent feasible:

PMM AQ-1 Implementing agencies shall consider mitigation measures to address potential air quality impacts that would conflict with or obstruct implementation of the applicable air quality plan, as applicable and feasible:

Prior to approval of individual RTP/SCS projects, each individual project shall conduct a project-level air quality analysis consistent with the requirements of the California Environmental Quality Act (CEQA) and applicable guidance from the San Joaquin Valley Air Pollution Control District (SJVAPCD) for review and approval by the appropriate member agency. The analysis shall quantify construction and operational

emissions of criteria air pollutants and precursors and evaluate those emissions against the applicable thresholds of significance adopted by the SJVAPCD.

If analysis demonstrates that project emissions would exceed one or more applicable thresholds of significance, the implementing agency shall require that all feasible mitigation measures to reduce emissions to the maximum extent practicable be identified and implemented. Such measures may include, but are not limited to, the following:

Construction Measures:

- All off-road diesel-powered construction equipment ≥50 horsepower shall meet or exceed Tier 4 Final emission standards.
- For projects where electrical grid power is available, construction shall minimize the use of diesel generators.
- Low-volatile-organic-compound (VOC) architectural coatings, paints, adhesives, and sealants shall be used to the extent feasible.

Operational Measures:

- Projects shall be designed to minimize or eliminate the use of natural gas in buildings, prioritizing all-electric building systems where feasible.
- Electric vehicle (EV) charging infrastructure shall be installed consistent with, or exceed, applicable code requirements to support zero-emission vehicle use.
- Zero-emission landscaping equipment, or the requirement for electric-powered maintenance equipment, shall be incorporated into project design where feasible.

PMM AQ-2 Implementing agencies shall consider mitigation measures to address potential air quality impacts that would expose sensitive receptors to substantial pollutant concentrations, as applicable and feasible:

- For projects proposed within 500 feet of existing sensitive receptors, the implementing agency shall require the preparation of a Construction Health Risk Assessment (HRA) prior to project approval. The HRA shall:
    - Estimate emissions of toxic air contaminants (TACs), including diesel particulate matter (DPM), from construction equipment and activities.
    - Model pollutant dispersion to determine project-specific concentrations at nearby sensitive receptor locations.
    - Evaluate potential cancer and non-cancer hazards in comparison to the SJVAPCD's adopted health risk thresholds.

- If it is determined that the unmitigated health risk would exceed applicable thresholds, measures to reduce TAC exposure may include, but are not limited to, the following:
    - The project shall use Tier 4, or cleaner, off-road equipment during construction.
    - For projects where electrical grid power is available, construction shall minimize the use of diesel generators to the extent feasible.
    - Construction shall be phased to reduce simultaneous heavy equipment activity near sensitive receptors, where feasible.

4.3.9 Level of Significance After Mitigation

Implementation of **FMMs EN-1, EN-2,** and **EN-4** and **PMMs AQ-1** and **AQ-2** would assist the Fresno COG and member agencies in reducing impacts of future transportation improvement and land use development projects to related to air quality to the extent feasible. However, the analysis presented in this section is general in nature and, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future transportation improvement and land use development projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. As appropriate and feasible, the Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified. Nevertheless, impacts related to air quality are considered significant and unavoidable for the purposes of this analysis.

4.3.10 Cumulative Impacts

As defined in Section 15130 of the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for air quality. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. The study area for the analysis of cumulative regional air quality impacts is the Basin, which includes the counties of San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, and Tulare, as well as a portion of Kern County.

Under the FCAA, any monitoring location within an air basin that exceeds ambient air quality standards for criteria pollutants results in the entire air basin being designated as in non-attainment. Therefore, an exceedance in any jurisdiction in the Fresno COG Region would affect the attainment status of the rest of the Basin even if no other location exceeded one of the standards. This means that air quality plans must provide reductions that demonstrate attainment at the location with the highest concentration in the Basin and that cleaner locations would attain the standards earlier. Therefore, attainment status designations are cumulative and conservative in nature.

Air pollutants can remain in the atmosphere for long periods and can build to unhealthful levels when stagnant conditions that are common in the Basin occur. Pollutants are transported downwind from urban areas, but also are recirculated to urban areas by winds. Therefore, emissions from large urban areas like the Fresno-Clovis Metropolitan Area have the potential to create regional air quality impacts for ozone and particulate matter in addition to localized impacts for CO, NO_2, and particulate matter.

In developing thresholds of significance for air pollutants, the SJVAPCD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Therefore, if a future transportation improvement or land use development project results in annual emissions of construction- or operation-related criteria air pollutants that exceed any applicable threshold established by the SJVAPCD, the project would result in a considerable contribution to a cumulatively significant impact.

As demonstrated in the analysis, cumulative growth within the Fresno COG Region could result in potential TAC health risks exceeding applicable standards and cumulatively contributing to elevated health risks in the Basin. However, cumulative projects in the Fresno COG Region must also comply with the requirements of CEQA. The appropriate member agencies for these projects would quantify criteria pollutant emissions during construction and operation for each project during individual environmental review. Based on the extent of identified impacts, each cumulative project would implement standard conditions and/or the mitigation measures (as necessary) to reduce cumulatively significant impacts. While existing member agency policies and regulations are in place to protect public health, project-specific mitigation measures would be key to reducing potential impacts that cannot be addressed through regulatory compliance alone.

As stated under Section 4.3.9, impacts of the proposed project on air quality are considered significant and unavoidable given the programmatic nature of the proposed project, the scale of the Fresno COG Region, and the inability of the Fresno COG to enforce project-specific mitigation or make land use approvals. Because the proposed project would result in significant adverse environmental impacts, its impacts would represent an incremental contribution to the environmental impacts in the cumulative impact study area, ultimately leading to a cumulatively considerable and significant and unavoidable impact related to air quality.

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4.4 BIOLOGICAL RESOURCES

This section of the Draft Program Environmental Impact Report (PEIR) describes how implementation of the proposed 2026 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (proposed project) may affect biological resources that are known to occur within the Fresno Council of Governments (COG) Region, including vegetation communities, special-status plant and wildlife species and their associated habitats, and special-status natural communities, including riparian communities and wetlands. This section also addresses local, State, and federal regulations as they pertain to project impacts on biological resources.

4.4.1 Scoping Process

Potential impacts related to biological resources were not identified during the public scoping meeting held for the proposed project on May 28, 2025.

The Fresno COG received one comment letter in response to the Notice of Preparation (NOP) issued for the proposed project between May 13 and June 12, 2025, concerning the proposed project's potential impacts related to biological resources. For copies of the NOP comment letters, refer to Appendix A of this Draft PEIR. NOP comments related to biological resources included the following:

- **California Department of Fish and Wildlife (CDFW),** June 12, 2025, recommended the consideration of special-status species, botanical survey requirements, California Endangered Species Act (CESA) compliance, United States Fish and Wildlife Service (USFWS) consultation, lake and streambed alteration impacts, nesting bird impacts, and CDFW filing fees.

4.4.2 Methodology

This section provides a general characterization of existing biological resources in the Fresno COG Region and analyzes the potential biological resource impacts of future transportation and land use development projects facilitated by the proposed project to the extent feasible. Biological resource impacts are highly localized. As a result, specific and detailed analyses are most appropriate at the individual improvement project and new development project levels rather than the programmatic level. Subsequent project-specific California Environmental Quality Act (CEQA) documents may be required to further analyze the specific projects facilitated by the proposed project to determine the magnitude of biological resource impacts and to identify appropriate potential mitigation measures.

4.4.2.1 Key Concepts

Listed Species. "Listed species" includes those species that are:

1. Listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (FESA) or candidates for possible future listing as threatened or endangered under FESA (50 Code of Federal Regulations [CFR] §17.12); and/or

2. Listed or candidates for listing by the State of California as threatened or endangered under CESA (Fish and Game Code §2050 et seq.).

Other Special-Status Species. "Other special-status species" include those species that are:

1. Listed as rare under the California Native Plant Protection Act (Fish and Game Code §1900 et seq.).
2. Meet the definition of rare or endangered under CEQA §15380(b) and (d). Species that may meet the definition of rare or endangered include the following:
    a. Species considered by the California Native Plant Society (CNPS) to be "rare, threatened or endangered in California" (California Rare Plant Ranks [CRPR] 1A, 1B, 2A, and 2B); or
    b. Species that may warrant consideration on the basis of local significance or recent biological information.
3. Considered a locally significant species (that is, a species that is not rare from a statewide perspective but is rare or uncommon in a local context such as within a county or region (CEQA §15125 (c)) or is so designated in local or regional plans, policies, or ordinances (*State CEQA Guidelines,* Appendix G). Examples include a species at the outer limits of its known range or a species occurring on an uncommon soil type.
4. Listed as "Species of Special Concern" or as a California Fully Protected Species by the CDFW.

Special-Status Natural Communities. In general, "special-status natural communities" include those communities that are of limited distribution statewide or within a county or region; communities that are of special concern to resource agencies; and communities that, because they are vulnerable to the environmental effects of projects, are assessed or protected under CEQA, Section 1600 of the California Fish and Game Code, and/or Section 404 of the Clean Water Act (CWA), among others. The most current version of the CDFW's List of Vegetation Alliances and Associations (or "Natural Communities List"), published in February 2025, indicates which natural communities are considered "special-status" in the State of California.[1]

Wetlands. The federal government defines wetlands in CWA Section 404 as "areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support (and do support, under normal circumstances) a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR §328.3(b) and 40 CFR §230.3). The federal definition of wetlands requires three wetland identification parameters to be present: wetland hydrology, hydric soils, and hydrophytic vegetation. On March 12, 2025, the United States Army Corps of Engineers (USACE) and United States Environmental Protection Agency (EPA) issued *Memorandum to the Field Between the U.S. Department of the Army, U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency Concerning the Proper Implementation of "Continuous Surface Connection" Under the Definition of "Waters of the United States" Under the Clean Water Act*, in which it was clarified that a wetland "must have a continuous surface connection to a requisite covered water making it difficult to determine where the water ends and the wetland begins."

[1] California Department of Fish and Wildlife (CDFW). 2025. California Natural Community List. February 27. Website: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=153398&inline (accessed November 18, 2025).

Under the Porter-Cologne Water Quality Control Act (Porter-Cologne Act) (Section 1305(e)), wetlands are defined as "an area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation." Connectivity to other wetlands or waters is not required for State regulatory authority.

Other Waters of the United States. "Other waters of the United States" refers to those hydric features that are regulated by the CWA but are not wetlands (33 CFR §328.4). To be considered jurisdictional, these features must exhibit a defined bed and bank and an ordinary high-water mark. Examples of other waters of the United States include rivers, creeks, intermittent and ephemeral channels, ponds, and lakes. Human-made wetland areas that are not regulated under this act include stock watering ponds and water treatment facilities.

Other Waters of the State. All waters of the United States, including those that meet the current and any historic definition, are also considered waters of the State (CCR 23 3831 (w)). Therefore, "waters of the State" includes features that have been determined by the EPA or the USACE to be "waters of the United States" in an approved jurisdictional determination; "waters of the United States" identified in an aquatic resource report verified by the USACE upon which a permitting decision was based; and features that are consistent with any current or historic final judicial interpretation of "waters of the United States" or any current or historic federal regulation defining "waters of the United States under the CWA.

Additionally, the CDFW regulates all activities (e.g., construction, discharge, dredge, diversion) within rivers, streams, and lakes, and associated riparian vegetation, under California Fish and Game Code Section 1600 et seq. This includes all such features on public and private lands throughout California. The regulatory limits of CDFW jurisdiction are generally considered to include all area within the bed, bank, and channel of a river, stream, or lake, plus the outer extent of riparian vegetation immediately adjacent to these aquatic features. Recently the CDFW has asserted jurisdiction as far out as limits of the 100-year floodplain around rivers, streams, and lakes. This also includes man-made and/or channelized streams located where natural streams historically occurred, or that are connected to natural streams. Isolated wetlands that are not located within the jurisdictional limits described here are not regulated by the CDFW.

4.4.3 Existing Environmental Setting

This section describes the existing environmental setting of the Fresno COG Region pertaining to biological resources. Given the size of the Fresno COG Region and its wide range of biological resources, the County's General Plan Background Report[2] divides the Fresno COG Region into four "ecoregions," as described below:

[2] County of Fresno. 2024. *Fresno County General Plan Background Report. General Plan Review.* Website:https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/planning-and-land-use/general-plan/background-report-2024.pdf (accessed April 1, 2026).

- **Central Western California:** This ecoregion is located along the western edge of the Fresno COG Region and contains grasslands, oak woodlands, blue oak-foothill pine woodland, riparian woodlands, and chaparral ecosystems.

- **Great Central Valley:** This ecoregion is in the central portion of the Fresno COG Region and consists largely of agricultural land, although it also contains isolated and marginal grasslands, marshes, vernal pools, alkali scrub, and riparian woodlands.

- **Sierra Nevada Foothills:** This ecoregion is located just west of the Sierra Nevada mountains and contains grasslands, chaparral, serpentine chaparral, blue oak woodlands, blue oak-foothill pine woodlands, and riparian woodlands.

- **High Sierra Nevada:** This ecoregion consists of the Sierra Nevada mountain range and contains a variety of montane conifer and hardwood forest types, montane riparian woodlands, montane chaparral, and alpine scrub.

It should be noted that all four ecoregions contain natural areas, protected by various agencies such as the CDFW, that serve as wildlife hotspots, as shown on Figure 4.4-1.

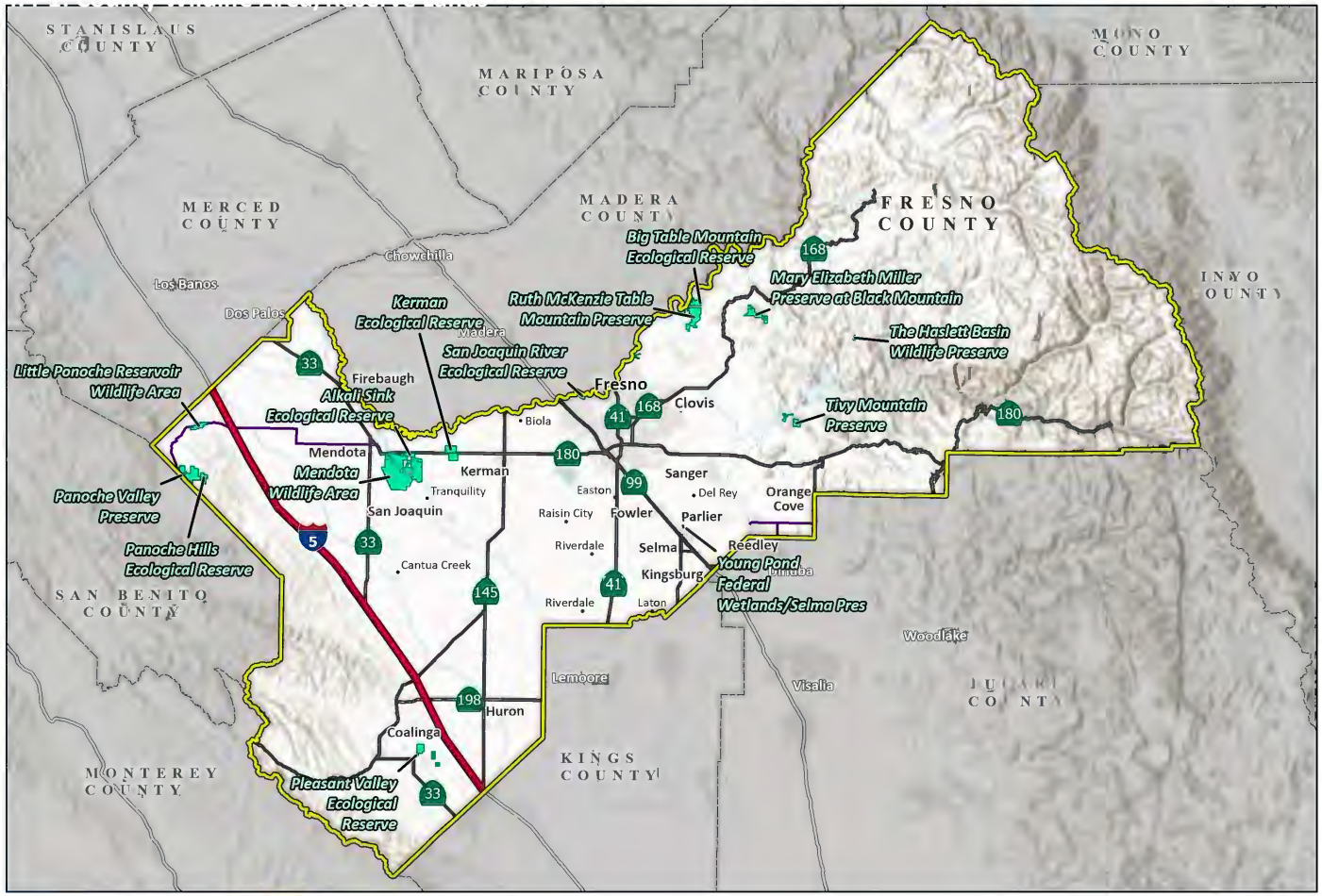
4.4.3.1 Critical Habitat

Critical habitat is defined in Section 3(5)(A) of FESA as: (1) areas within the geographic range of a species that are occupied by individuals of that species and contain the primary constituent elements (physical and biological features) essential to the conservation of the species, thus warranting special management consideration or protection; and (2) areas outside of the geographic range of a species at the time of listing but that are considered essential to the conservation of the species.

Impacts to critical habitat must be assessed for any project that involves a federal agency action, such as federal funding or approvals required from a federal agency. Further study of these areas would be required, as not all areas within mapped critical habitat include the primary constituent elements.

According to the literature review conducted for the proposed project, the Fresno COG Region contains 12 federally designated critical habitats for the following species (see Figure 4.4-2):

- California tiger salamander (*Ambystoma californiense*)
- Fleshy owl's-clover (*Castilleja campestris* ssp. *succulenta)*
- Fresno kangaroo rat (*Dipodomys nitratoides exilis*)
- Hairy orcutt grass (*Orcuttia pilosa*)
- Keck's checker-mallow (*Sidalcea keckii*)



LSA

Fresno COG Region
County Wildlife Area/Reserve Lands

FIGURE 4.4-1

0 9 18
Miles

SOURCE: Esri, USGS (2024), CNRA (2024)

I:\2025\20252196\GIS\Pro\Fresno COG RTP EIR\Fresno COG EIR for 2026 RTP SCS.aprx (3/4/2026)

Regional Transportation Plan/Sustainable Communities Strategy
County Wildlife Area/Reserve Lands

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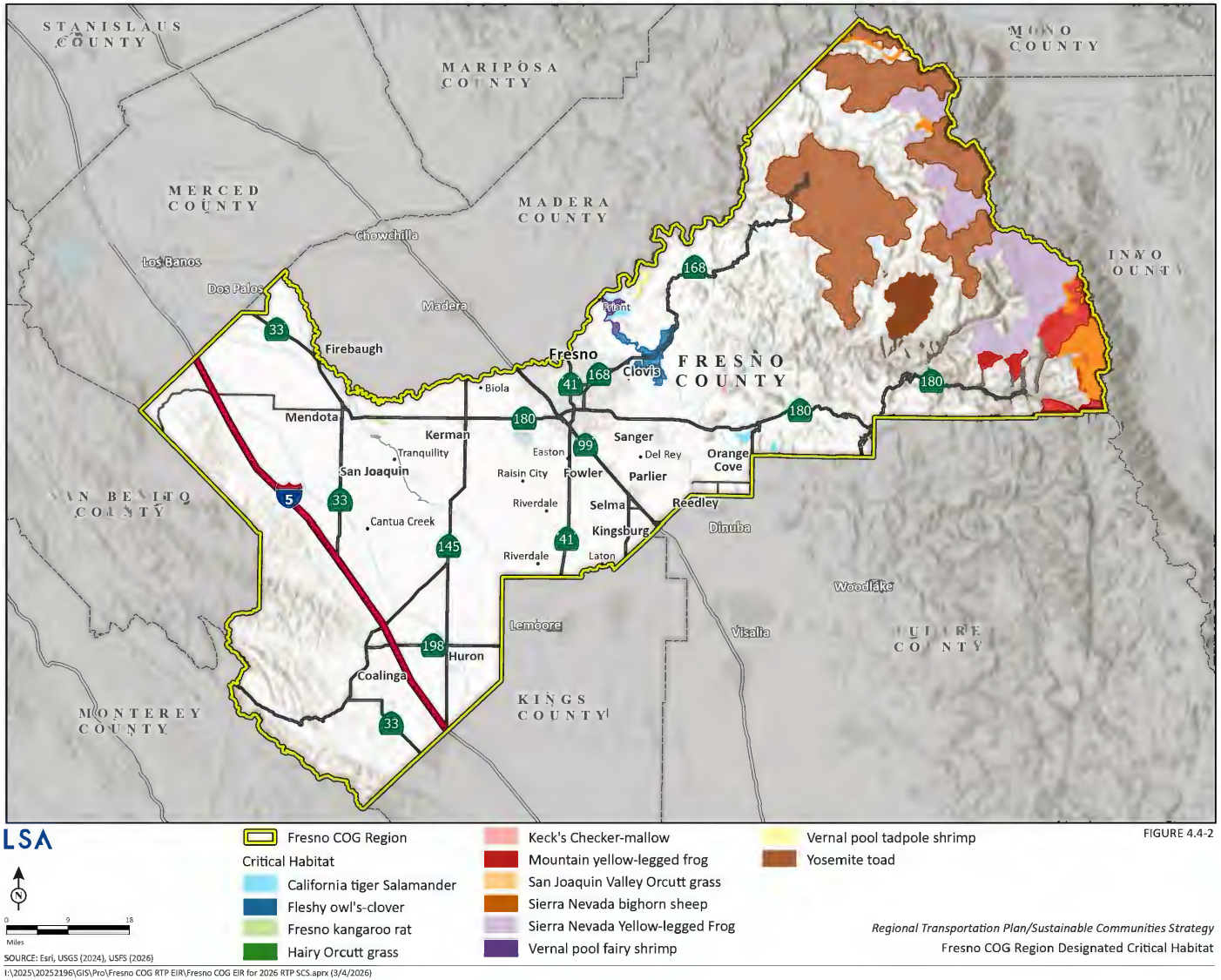


FIGURE 4.4-2

Regional Transportation Plan/Sustainable Communities Strategy
Fresno COG Region Designated Critical Habitat

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- Mountain yellow-legged frog (*Rana muscosa*)
- San Joaquin Valley orcutt grass (*Orcuttia inaequalis*)
- Sierra Nevada bighorn sheep (*Ovis canadensis sierrae*)
- Sierra Nevada yellow-legged frog (*Rana sierrae*)
- Vernal pool fairy shrimp (*Branchinecta lynchi*)
- Vernal pool tadpole shrimp (*Lepidurus packardi*)
- Yosemite toad (*Anaxyrus canorus*)

4.4.3.2 Special-Status Species

The literature review identified special-status species known to occur, or with the potential to occur, within the Fresno COG Region. Figure 4.4-3, Fresno COG Region Federally and State-Listed Species , shows recorded occurrences of special-status species throughout the Fresno COG Region based on data from the CDFW. This figure breaks down species by taxonomic category (e.g., birds, plants, reptiles).

Table 4.4.A, below, provides a list of special-status plant species that occur or could potentially occur within the Fresno COG Region that could be affected by implementation of the proposed project.

Table 4.4.A: Special-Status Plant Species Present or Potentially Present Within the Fresno COG Region

Species	Status		
	Federal	State	CRPR
Abrams' onion (*Allium abramsii*)	—	—	1B.2
Alkali-sink goldfields (*Lasthenia chrysantha*)	—	—	1B.1
Alpine jewelflower (*Streptanthus gracilis*)	—	—	1B.3
American manna grass (*Glyceria grandis*)	—	—	2B.3
Aparejo grass (*Muhlenbergia utilis*)	—	—	2B.2
Arizona pholistoma (*Pholistoma auritum* var. *arizonicum*)	—	—	2B.3
Aromatic canyon gooseberry (*Ribes menziesii* var. *ixoderme*)	—	—	1B.2
Blandow's bog moss (*Elodium blandowii*)	—	—	2B.2
Bodie Hills rockcress (*Boechera bodiensis*)	—	—	1B.3
Bog sandwort (*Sabulina stricta*)	—	—	2B.3
Boggs Lake hedge-hyssop (*Gratiola heterosepala*)	—	—	1B.2
Bolander's clover (*Trifolium bolanderi*)	—	—	1B.2
Bolander's woodreed (*Cinna bolanderi*)	—	—	1B.2
Bristly sedge (*Carex comosa*)	—	—	1B.1
Brittlescale (*Atriplex depressa*)	—	—	1B.2
Broad-nerved hump moss (*Meesia uliginosa*)	—	—	2B.2
California alkali grass (*Puccinellia simplex*)	—	—	1B.2
California jewelflower (*Caulanthus californicus*)	E	E	1B.1
California satintail (*Imperata brevifolia*)	—	—	2B.1
Chaparral harebell (*Ravenella exigua*)	—	—	1B.2
Chaparral ragwort (*Senecio aphanactis*)	—	—	1B.2
Congdon's lewisia (*Lewisia congdonii*)	—	R	1B.3
Copper-flowered bird's-foot trefoil (*Hosackia oblongifolia* var. *cuprea*)	—	—	1B.3
Diablo Range hare-leaf (*Lagophylla diabolensis*)	—	—	1B.2
Dwarf downingia (*Downingia pusilla*)	—	—	2B.2

Table 4.4.A: Special-Status Plant Species Present or Potentially Present Within the Fresno COG Region

Species	Status		
	Federal	State	CRPR
Earlimart orache (*Atriplex cordulata* var. *erecticaulis*)	—	—	1B.2
Eastwood's buckwheat (*Eriogonum eastwoodianum*)	—	—	1B.3
Fell-fields claytonia (*Claytonia megarhiza*)	—	—	2B.3
Field ivesia (*Ivesia campestris*)	—	—	1B.2
Flat-leaved bladderwort (*Utricularia intermedia*)	—	—	2B.2
Forked hare-leaf (*Lagophylla dichotoma*)	—	—	1B.1
Grassland suncup (*Camissonia lacustris*)	—	—	1B.2
Greene's tuctoria (*Tuctoria greenei*)	E	R	1B.1
Grey-leaved violet (*Viola pinetorum* spp. *grisea*)	—	—	1B.2
Hairy orcutt grass (*Orcuttia pilosa*)	E	E	1B.1
Hall's daisy (*Erigeron aequifolius*)	—	—	1B.3
Hall's tarplant (*Deinandra halliana*)	—	—	1B.2
Hartweg's golden sunburst (*Pseudobahia bahiifolia*)	E	E	1B.1
Heartscale (*Atriplex cordulata* var. *cordulata*)	—	—	1B.2
Hockett Meadows lupine (*Lupinus Lepidus* var. *culbertsonii*)	—	—	1B.3
Hoover's cryptantha (*Cryptantha hooveri*)	—	—	1A
Howell's tauschia (*Tauschia howellii*)	—	—	1B.3
Indian Valley bushmallow (*Malacothamnus aboriginum*)	—	—	1B.2
Kaweah monkeyflower (*Erythranthe norrisii*)	—	—	1B.3
Keck's checkerbloom *(Sidalcea keckii)*	E	—	1B.1
Keil's daisy (*Erigeron inornatus* var. *keilii*)	—	—	1B.3
Kings River buckwheat (*Eriogonum nudum* var. *regirivum*)	—	—	1B.2
Lemmon's jewelflower (*Caulanthus lemmonii*)	—	—	1B.2
Lesser saltscale (*Atriplex minuscula*)	—	—	1B.1
Letterman's blue grass (*Poa lettermanii*)	—	—	2B.3
Lost Hills crownscale (*Atriplex coronata* var. *vallicola*)	—	—	1B.2
Madera leptosiphon (*Leptosiphon serrulatus*)	—	—	1B.2
Marble rockmat (*Petrophytum caespitosum* spp. *acuminatum*)	—	—	1B.3
Mariposa pussypaws (*Calyptridium pulchellum*)	T	—	1B.1
Monarch buckwheat (*Eriogonum ovalifolium* var. *monarchense*)	—	—	1B.1
Monarch gilia (*Gilia yorkii*)	—	—	1B.1
Monarch golden-aster (*Heterotheca monarchensis*)	—	—	1B.1
Mono Hot Springs evening-primrose (*Camissonia sierrae* ssp. *alticola*)	—	—	1B.2
Mt. Diablo phacelia (*Phacelia phacelioides*)	—	—	1B.2
Mt. Whitney draba (*Draba sharsmithii*)	—	—	1B.3
Mud sedge (*Carex limosa*)	—	—	2B.2
Muir's tarplant (*Carlquistia muirii*)	—	—	1B.3
Munz's tidy-tips (*Layia munzii*)	—	—	1B.2
North American moonwort (*Botrychium neolunaria*)	—	—	2B.3
Orange lupine (*Lupinus citrinus* var. *citrinus*)	—	—	1B.2
Oval-leaved viburnum (*Viburnum ellipticum*)	—	—	2B.3
Pale-yellow layia (*Layia heterotricha*)	—	—	1B.1
Palmate-bracted bird's-beak (*Chloropyron palmatus*)	E	E	1B.1
Panoche navarretia (*Navarretia panochensis*)	—	—	1B.3
Panoche pepper-grass (*Lepidium jaredii* ssp. *album*)	—	—	1B.2

Table 4.4.A: Special-Status Plant Species Present or Potentially Present Within the Fresno COG Region

Species	Status		
	Federal	State	CRPR
Pierpoint Springs dudleya (*Dudleya cymosa* ssp. *costatifolia*)	—	—	1B.2
Prairie wedge grass (*Sphenopholis obtusata*)	—	—	2B.2
Prostrate vernal pool navarretia (*Navarretia prostrata*)	—	—	1B.2
Pygmy pussypaws (*Calyptridium pygmaeum*)	—	—	1B.2
Raven's milk-vetch (*Astragalus ravenii*)	—	—	1B.3
Rayless layia (*Layia discoidea*)	—	—	1B.1
Rayless mountain ragwort (*Packera indecora*)	—	—	2B.2
Recurved larkspur (*Delphinium recurvatum*)	—	—	1B.2
Robbins' pondweed (*Potamogeton robbinsii*)	—	—	2B.3
Rocky Mountain bulrush (*Schoenoplectiella saximontana*)	—	—	2B.1
San Benito evening-primrose (*Camissonia benitensis*)	—	—	1B.1
San Benito fritillary (*Fritillaria viridea*)	—	—	1B.2
San Benito onion (*Allium howellii* var. *sanbenitense*)	—	—	1B.3
San Joaquin adobe sunburst (*Pseudobahia peirsonii*)	T	E	1B.1
San Joaquin spearscale (*Extriplex joaquinana*)	—	—	1B.2
San Joaquin Valley orcutt grass (*Orcuttia inaequalis*)	T	E	1B.1
San Joaquin woollythreads (*Monolopia congdonii*)	E	—	1B.2
Sanford's arrowhead (*Sagittaria sanfordii*)	—	—	1B.2
Scalloped moonwort (*Botrychium crenulatum*)	—	—	2B.2
Scribner's wheat grass (*Elymus scribneri*)	—	—	2B.3
Sharsmith's stickseed (*Hackelia sharsmithii*)	—	—	2B.3
Shevock's copper moss (*Mielichhoferia shevockii*)	—	—	1B.2
Shining navarretia (*Navarretia nigelliformis* ssp. *radians*)	—	—	1B.2
Short-leaved hulsea (*Hulsea brevifolia*)	—	—	1B.2
Showy golden madia (*Madia radiata*)	—	—	1B.1
Sierra draba (*Draba sierrae*)	—	—	1B.3
Slender moonwort (*Botrychium lineare*)	—	—	1B.1
Slender-stalked monkeyflower (*Erythranthe gracilipes*)	—	—	1B.2
Spicate calycadenia (*Calycadenia spicata*)	—	—	1B.3
Spiny-sepaled button-celery (*Eryngium spinosepalum*)	—	—	1B.2
Stanislaus monkeyflower (*Erythranthe marmorata*)	—	—	1B.1
Subtle orache (*Atriplex subtilis*)	—	—	1B.2
Succulent owl's-clover (*Castilleja campestris* var. *succulenta*)	T	E	1B.2
Tall draba (*Draba praealta*)	—	—	2B.3
Tehipite Valley jewelflower (*Streptanthus fenestratus*)	—	—	1B.1
Tree-anemone (*Carpenteria californica*)	—	T	1B.2
Tulare cryptantha (*Cryptantha incana*)	—	—	1B.3
Tulare rockcress (*Boechera tularensis*)	—	—	1B.3
Tundra thread moss (*Pohlia tundrae*)	—	—	2B.3
Upswept moonwort (*Botrychium ascendens*)	—	—	2B.2
Watershield (*Brasenia schreberi*)	—	—	2B.3
Western goblin (*Botrychium montanum*)	—	—	2B.1
Western Heermann's buckwheat (*Eriogonum heermannii* var. *occidentale*)	—	—	1B.2
Wheat sedge (*Carex atherodes*)	—	—	2B.2
Whitebark pine (*Pinus albicaulis*)	T	—	—
Winter's sunflower (*Helianthus winteri*)	—	—	1B.2

Table 4.4.A: Special-Status Plant Species Present or Potentially Present Within the Fresno COG Region

Species	Status		
	Federal	State	CRPR
Yosemite bog orchid (*Platanthera yosemitensis*)	—	—	1B.2
Yosemite lewisia (*Lewisia disepala*)	—	—	1B.2
Yosemite popcornflower (*Plagiobothrys torreyi* var. *torreyi*)	—	—	1B.2

Sources: CDFW 2026; CNPS 2026; USFWS 2026.

Notes:

Status

E Listed as endangered
T Listed as threatened
R State Rare
US United States
CA California
CDFW California Department of Fish and Wildlife
CNPS California Native Plant Society
USFWS United States Fish and Wildlife Service

California Rare Plant Rank

1A Presumed Extinct in California
1B Rare, Threatened, or Endangered in California and elsewhere
2A lants presumed extirpated in California, but more common elsewhere
2B Plants Rare, Threatened, or Endangered in California, but more common elsewhere

CRPR Threat Code Extension

.1 Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 Fairly endangered in California (20–80% occurrences threatened)
.3 Not very endangered in California (<20% of occurrences threatened)

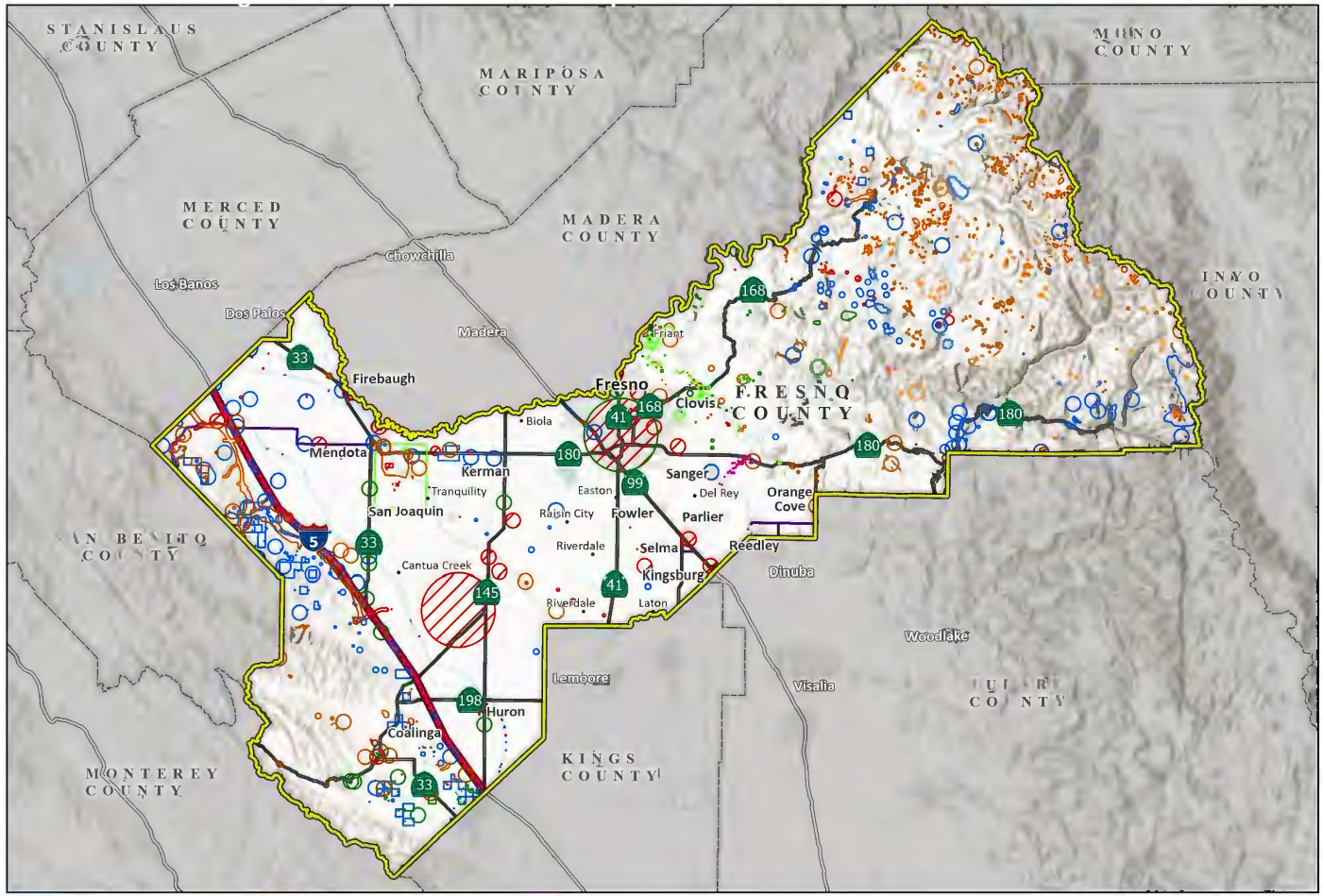


FIGURE 4.4-3

Regional Transportation Plan/Sustainable Communities Strategy
Fresno COG Region Federally and State-Listed Species

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Table 4.4.B, below, provides a list of special-status animal species that occur or could potentially occur within the Fresno COG Region that could be affected by implementation of the proposed project.

Table 4.4.B: Special-Status Animal Species Present or Potentially Present Within Fresno COG Region

Species	Status	
	Federal	State
Invertebrates		
Conservancy fairy shrimp (*Branchinecta conservatio*)	E	—
Crotch's bumble bee (*Bombus crotchii*)	—	CE
Longhorn fairy shrimp (*Branchinecta longiantenna*)	E	—
Monarch butterfly (*Danaus plexippus*)	PT	—
Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)	T	—
Vernal pool fairy shrimp (*Branchinecta lynchi*)	T	—
Vernal pool tadpole shrimp (*Lepidurus packardi*)	E	—
Western bumble bee (*Bombus occidentalis*)	—	—
Fish		
Hardhead (*Mylopharodon conocephalus*)	—	SSC
Lahontan cutthroat trout (*Oncorhynchus clarkii [=henshawi] henshawi*)	T	SSC
Owens pupfish (*Cyprinodon radiosus*)	E	E, FP
Owens Tui chub (*Gila bicolor* ssp. *snyderi*)	E	E
Paiute cutthroat trout (*Oncorhynchus clarkii [=henshawi] seleniris*)	T	SSC
Steelhead – Central Valley DPS (*Oncorhynchus mykiss irideus* pop. 11)	T	SSC
Amphibians		
California red-legged frog (*Rana draytonii*)	T	SSC
California tiger salamander – central California DPS (*Ambystoma californiense* pop. 1)	T	T
Foothill yellow-legged frog – central coast DPS (*Rana boylii* pop. 4)	T	E
Foothill yellow-legged frog – south Sierra DPS (*Rana boylii* pop. 5)	E	E
Sierra Nevada yellow-legged frog (*Rana sierrae*)	E	T
Southern mountain yellow-legged frog (*Rana muscosa*)	E	E
Western spadefoot (*Spea hammondii*)	PT	SSC
Yosemite toad (*Anaxyrus canorus*)	T	SSC
Reptiles		
Blunt-nosed leopard lizard (*Gambelia sila*)	E	E, FP
California glossy snake (*Arizona elegans occidentalis*)	—	SSC
Coast horned lizard (*Phrynosoma blainvillii*)	—	SSC
Giant garter snake (*Thamnophis gigas*)	T	T
Northern California legless lizard (*Anniella pulchra*)	—	SSC
Northwestern pond turtle (*Actinemys marmorata*)	PT	SSC
San Joaquin coachwhipwhip (*Masticophis flagellum ruddocki*)	—	SSC
Southwestern pond turtle (*Actinemys pallida*)	PT	SSC
Temblor legless lizard (*Anniella alexanderae*)	—	CE, SSC
Two-striped gartersnake (*Thamnophis hammondii*)	—	SSC
Birds		
American goshawk (*Astur atricapillus*)	—	SSC
Bald eagle (*Haliaeetus leucocephalus*)	D	E, FP
Bank swallow (*Riparia riparia*)	—	T
Burrowing owl (*Athene cunicularia*)	—	CE, SSC
California spotted owl (Strix occidentalis occidentalis)	PT	SSC
Golden eagle (*Aquila chrysaetos*)	—	SSC, FP

Table 4.4.B: Special-Status Animal Species Present or Potentially Present Within Fresno COG Region

Species	Status	
	Federal	State
Great gray owl (*Strix nebulosa*)	—	E
Le Conte's thrasher (*Toxostoma lecontei*)	—	SSC
Least Bell's vireo (*Vireo bellii pusillus*)	E	E
Loggerhead shrike (*Lanius ludovicianus*)	—	SSC
Long-eared owl (*Asio otus*)	—	SSC
Mountain plover (*Anarhynchus montanus*)	—	SSC
Northern harrier (*Circus cyaneus*)	—	SSC
Short-eared owl (*Asio flammeus*)	—	SSC
Swainson's hawk (*Buteo swainsoni*)	—	T
Tricolored blackbird (*Agelaius tricolor*)	—	T, SSC
Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)	T	E
Willow flycatcher (*Empidonax traillii*)	—	E
Yellow warbler (*Setophaga petechia*)	—	SSC
Yellow-headed blackbird (*Xanthocephalus xanthocephalus*)	—	SSC
Mammals		
Alpine chipmunk (*Neotamias alpinus*)	E	T, SSC
American badger (*Taxidea taxus*)	—	SSC
Buena Vista Lake ornate shrew (*Sorex ornatus relictus*)	E	SSC
Fisher - southern Sierra Nevada ESU (*Pekania pennanti* pop. 2)	—	T, SSC
Fresno kangaroo rat (*Dipodomys nitratoides exilis*)	E	SSC
Giant kangaroo rat (*Dipodomys ingens*)	E	E
Gray wolf (*Canus lupus*)	E	E
Nelson's (=San Joaquin) antelope squirrel (*Ammospermophilus nelsoni*)	—	E
Pallid bat (*Antrozous pallidus*)	—	SSC
San Joaquin kit fox (*Vulpes macrotis mutica*)	E	T
Short-nosed kangaroo rat (*Dipodomys nitratoides brevinasus*)	—	SSC
Sierra Nevada bighorn sheep (*Ovis canadensis sierrae*)	E	E, FP
Sierra Nevada red fox - Sierra Nevada DPS (*Vulpes vulpes necator* pop. 2)	E	T
Spotted bat (*Euderma maculatum*)	—	SSC
Townsend's big-eared bat (*Corynorhinus townsendii*)	—	SSC
Tulare grasshopper mouse (*Onychomys torridus tularensis*)	—	SSC
Western mastiff bat (*Eumops perotis californicus*)	—	SSC
Western red bat (*Lasiurus frantzii*)	—	SSC
Wolverine (*Gulo gulo*)	T	T

Sources: CDFW 2026a; CNPS 2026; USFWS 2026

Notes:

Status

E Listed as endangered
T Listed as threatened
PT Proposed Threatened
CE Candidate for Endangered
FP California Fully Protected
SSC California Species of Special Concern

CDFW = California Department of Fish and Wildlife
CNPS = California Native Plant Society
DPS = Distinct Population Segment
USFWS = United States Fish and Wildlife Service

4.4.3.3 Vegetation

The Fresno COG Region contains a variety of vegetative/natural communities, including the following categories derived from the CDFW California Wildlife Habitat Relationship (CWHR) classification system:[3]

- **Tree-Dominated Habitats:** Occur in all four ecoregions. Tree-dominated habitats present within the Fresno COG Region include oak woodlands, riparian woodlands, eucalyptus forests, hardwood stands, aspen stands, juniper woodlands, and conifer forests.

- **Shrub-Dominated Habitats:** Occur in all four ecoregions. Shrub-dominated habitats present within the Fresno COG Region include desert and alkali scrub, chaparral, and alpine dwarf-shrub.

- **Herbaceous-Dominated Habitats:** Occur in all four ecoregions and generally consist of grasses and other non-woody vegetative communities. Herbaceous-dominated habitats present within the Fresno COG Region include annual grassland and perennial grassland.

More information regarding each habitat type is provided below.

Tree-Dominated Habitats. The Fresno COG Region is home to a variety of conifer and hardwood forests and woodlands that occur in all four ecoregions. These tree-dominated habitats can support diverse wildlife populations. Riparian woodlands are generally the terrestrial areas adjacent to freshwater bodies forming a vegetated corridor from stream edge to floodplain edge or along shorelines of lakes, ponds, and other open water. Riparian woodlands occur in and along the San Joaquin River and Kings River and their tributaries, as well as along the many creeks, streams, and ravines in the Fresno COG Region. The following are descriptions of types of tree-dominated habitats that occur in each ecoregion.

Oak Woodlands. The Fresno COG Region supports several types of oak (*Quercus* spp.) woodlands in three of the four ecoregions. Valley oak (*Quercus lobata*) woodlands occur in patchy distribution throughout most major lowland valleys, including the Sacramento-San Joaquin Valley and the Central Western California ecoregion. Blue oak-foothill pine (*Pinus sabiniana*) woodland is located along the western edge of the Fresno COG Region and in the Sierra Nevada Foothills ecoregion. Oak woodland habitats provide foraging, nesting, and shelter habitat for a wide variety of birds, amphibians, reptiles, and mammals. Large trees provide suitable nesting and roosting habitat for birds and bats, including special-status species such as white-tailed kite (*Elanus leucurus*) and western mastiff bat (*Eumops perotis californicus*).

Riparian Woodlands. Riparian woodlands in the Fresno COG Region occur in all four ecoregions. Valley foothill riparian woodland is associated with drainages, particularly those with low-velocity flows, floodplains, and gentle topography. This habitat is generally dominated by cottonwoods (*Populus* sp.), sycamore (*Platanus racemosa*) and/or valley oak, and willows (*Salix* spp.) and/or

[3] County of Fresno. 2024. *Fresno County General Plan Background Report. General Plan Review.* Website:https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/planning-and-land-use/general-plan/background-report-2024.pdf (accessed April 1, 2026).

mulefat (*Baccharis salicifolia*). Valley foothill riparian woodland is distributed across most of the Fresno COG Region, except in the High Sierra Nevada ecoregion, where the montane riparian woodlands replace valley foothill riparian woodlands at increasing elevations. Black cottonwood (*Populus trichocarpa*) is often a dominant tree species in this habitat, and, in the High Sierra Nevada ecoregion, it is associated with aspen (*Populus tremuloides*), willows, and other riparian trees. Riparian woodlands are rich in wildlife species, providing foraging, migration, roosting, and nesting/breeding habitat. Many migratory birds and raptors nest in riparian woodlands, including special-status Swainson's hawks (*Buteo swainsoni*), least Bell's vireos (*Vireo bellii pusillus*), western yellow-billed cuckoos (*Coccyzus americanus occidentalis*), and yellow warblers (*Setophaga petechia*).

Eucalyptus Forest. Eucalyptus forests are often planted in the South Coast Ranges (e.g., the western margins of the Fresno COG Region) and the Central Valley Region as windrows. This habitat ranges from single-species thickets with little or no shrubby understory to scattered trees over a well-developed herbaceous and shrubby understory. In most cases, eucalyptus forms a dense stand with a closed canopy. Blue gum (*Eucalyptus globulus*) and red gum eucalyptus (*E. camaldulensis*) are the most common species in these stands.

Aspen Stands. Aspen (*Populus tremuloides*) stands are generally located in the High Sierra Nevada ecoregion at an elevation range of 6,500 to 9,850 feet. They usually occur along seeps, streams, and meadows. These stands have relatively open canopies and are associated with other deciduous and conifer species, except in climax communities where aspen is the dominant tree species in the canopy.

Juniper Woodland. Juniper habitats were characterized as woodlands of open to dense aggregations of junipers (*Juniperus* sp.) in the form of arborescent shrubs or small trees. Juniper woodlands generally occur in the Fresno COG Region in the South Coast Range and the High Sierra Nevada ecoregion at middle elevations, forming a transition between habitats at higher elevations. These woodlands occurred on virtually all exposures and slopes but were most common on level to gently rolling topography.

Conifer Forests. Conifer-dominated forests are located in the High Sierra Nevada ecoregion. Forest habitats at lower montane elevations included ponderosa pine (*Pinus ponderosa*) and white fir (*Abies concolor*). At upper montane elevations, forest habitats included Jeffrey pine (*Pinus jeffreyi*), lodgepole pine (*Pinus contorta*), and red fir (*Abies magnifica*). Subalpine conifer forests were open stands that supported Engelmann spruce (*Picea engelmannii*), subalpine fir (*Abies lasiocarpa*), mountain hemlock (*Tsuga mertensiana*), and various *Pinus* species. The shrub layer in subalpine forests was often sparse, resulting in low wildlife diversity. Conifer forests provided habitat for nesting birds and roosting bats, including special-status species such as the western mastiff bat (*Eumops perotis californicus*), great gray owl (*Strix nebulosa*), and northern goshawk (*Accipiter gentilis*).

Shrub-Dominated Habitats. ***Desert and Alkali Scrub.*** The South Coast Range (Central Western California ecoregion) supports two types of scrub habitats: coastal and desert scrub. Coastal scrub is present along the far western margins of the Fresno COG Region. California sagebrush (*Artemisia californica*) tends to be common in all coastal scrub habitats. Black sage (*Salvia mellifera*) and

California buckwheat (*Eriogonum fasciculatum*) become more abundant in mesic areas. Desert scrub and alkali desert scrub occur along the western edge of the San Joaquin Valley in the western portion of the Fresno COG Region. Desert scrub is characterized by open stands of broad-leaved evergreen or deciduous microphyll shrubs with a hardpan subsurface of high salt concentrations. Creosote bush (*Larrea tridentata*) is a dominant component of this habitat. Alkali desert scrub typically consists of open stands of very low to moderately high subshrubs and shrubs, which are physiognomically uniform. Shrub composition in this habitat type is typically dominated by chenopods, most notably saltbush species (*Atriplex* spp.), such as four-winged (*Atriplex canescens*) saltbush and allscale (*Atriplex polycarpa*).

Chaparral. Chaparral communities are restricted to the Coast Ranges and Sierra Nevada foothill regions of the Fresno COG Region, where they occur in three general categories: montane chaparral, mixed chaparral, and chamise-redshank chaparral. Mixed chaparral and chamise-redshank chaparral (*Adenostoma fasciculatum*, *A. sparsifolium*) occur in the Sierra foothills and Coast Ranges. Mixed chaparral is structurally homogeneous, dominated by shrubs with evergreen leaves. At maturity, cismontane mixed chaparral typically is a dense, nearly impenetrable thicket. Mature chamise-redshank chaparral is single layered, and shrub canopies often overlap. In the Sierra Nevada Foothills ecoregion, montane chaparral is associated with evergreen shrubs such as *Ceanothus* spp., manzanita (*Arctostaphylos* spp.), and bitter cherry (*Prunus emarginata*), and can include deciduous or semi-deciduous shrubs.

Alpine Dwarf-Shrub. Alpine dwarf-shrub occurs in the High Sierra Nevada ecoregion, where it is present above timberline, typically above 8,500 feet. Common shrub species are ocean spray (*Holodiscus discolor*), Greene goldenweed (*Ericameria greenei*), and mountain white heather (*Cassiope mertensiana*).

Herbaceous-Dominated Habitats. Herbaceous-dominated habitats generally consist of communities primarily comprising grasses and other non-woody species. The most common of these communities is non-native grassland, which is widespread throughout the Fresno COG Region. Native perennial grasslands dominated by perennial bunch grasses, such as purple needlegrass (*Stipa pulchra*), were historically abundant in much of the Fresno COG Region (and throughout California) but are now patchy in distribution.

Annual Grassland. Annual grassland habitat is composed primarily of non-native annual herbs and forbs and typically lacks shrub or tree cover. Common grass species include wild oat (*Avena* spp.), soft chess brome (*Bromus hordeaceus*), ripgut brome (*B. diandrus*), and red brome (*B. madritensis*). Common forb species include non-native species such as filaree (*Erodium* spp.) and bur clover (*Medicago polymorpha*). California poppy (*Eschscholzia californica*) can also be quite common in this habitat type.

Perennial Grassland. Perennial grassland habitats are dominated by perennial grass species such as California oatgrass (*Danthonia californica*), Pacific hairgrass (*Deschampsia holciformis*), and sweet vernal grass (*Anthoxanthum odoratum*). Perennial grassland habitat typically occurs on ridges and south-facing slopes, alternating with forest and scrub in the valleys, and on north-facing slopes. Relic perennial grasses in annual grassland habitat occur in patches throughout California and likely are present in the Fresno COG Region. Annual and perennial grasslands provide foraging

and nesting habitat for a wide variety of wildlife species, including raptors, seed-eating birds, small mammals, amphibians, and reptiles. Wildlife species typically associated with grasslands include black-tailed jackrabbit (*Lepus californicus*), California ground squirrel (*Otospermophilus beecheyi*), Botta's pocket gopher (*Thomomys bottae*), American badger (*Taxidea taxus*), coyote, common garter snake (*Thamnophis sirtalis*), deer mouse, western harvest mouse (*Reithrodontomys megalotis*), California vole (*Microtus californicus*), mule deer (*Odocoileus hemionus*), western meadowlark (*Sturnella neglecta*), and savannah sparrow (*Passerculus sandwichensis*). Grasslands also provide important foraging habitat for raptors such as the American kestrel (*Falco sparverius*) and red-tailed hawk, and the special-status white-tailed kite and northern harrier (*Circus cyaneus*). The endangered San Joaquin kit fox (*Vulpes macrotis mutica*) and threatened California tiger salamander (*Ambystoma californiense*) are also found in and adjacent to this habitat. Grasslands can also provide important foraging habitat for golden eagles (*Aquila chrysaetos*) and Swainson's hawks.

Developed and Non-Vegetated Habitats. Developed and sparsely/non-vegetated habitats are abundant in the Fresno COG Region. Developed habitats are usually sparsely vegetated or non-vegetated, associated with urban and agricultural areas, and highly disturbed. Species that occur in these areas are typically adapted to disturbance and/or are ornamental species. Sparsely vegetated habitats also tend to be associated with rock outcrops and cliffs. Developed habitats in the region include rice fields, dryland grain crops, irrigated hayfields, irrigated row and field crops, deciduous orchards, evergreen orchards, vineyards, residential developments, commercial developments, and industrial developments. Plant species in urban habitats typically consist of ornamental and other non-native invasive plant species, with large, developed areas lacking vegetation. In addition, ornamental landscaping and built environment features, such as trees, shrubs, herbaceous plants, parklands, and abandoned structures, can also provide temporary habitats for wildlife that are not sensitive to human presence. As described further in Section 4.4.3.3, a variety of special-status wildlife species are present throughout the Fresno COG Region, including various bird and mammal species, although areas that may provide habitat for special-status species in the Fresno COG Region are generally located in the Fresno COG Region's open space and undeveloped areas. Furthermore, both native and ornamental trees throughout the region can serve as nesting habitat for migratory avian species during the breeding season. The barren habitat type is defined by the absence of vegetation. Any habitat with less than 2 percent total vegetation cover and less than 10 percent cover by tree or shrub species is defined as barren.

Figure 4.4-4 shows the natural community types within the Fresno COG Region that are recognized as sensitive natural communities by the CDFW for their rarity, ecological importance, and vulnerability to threats.

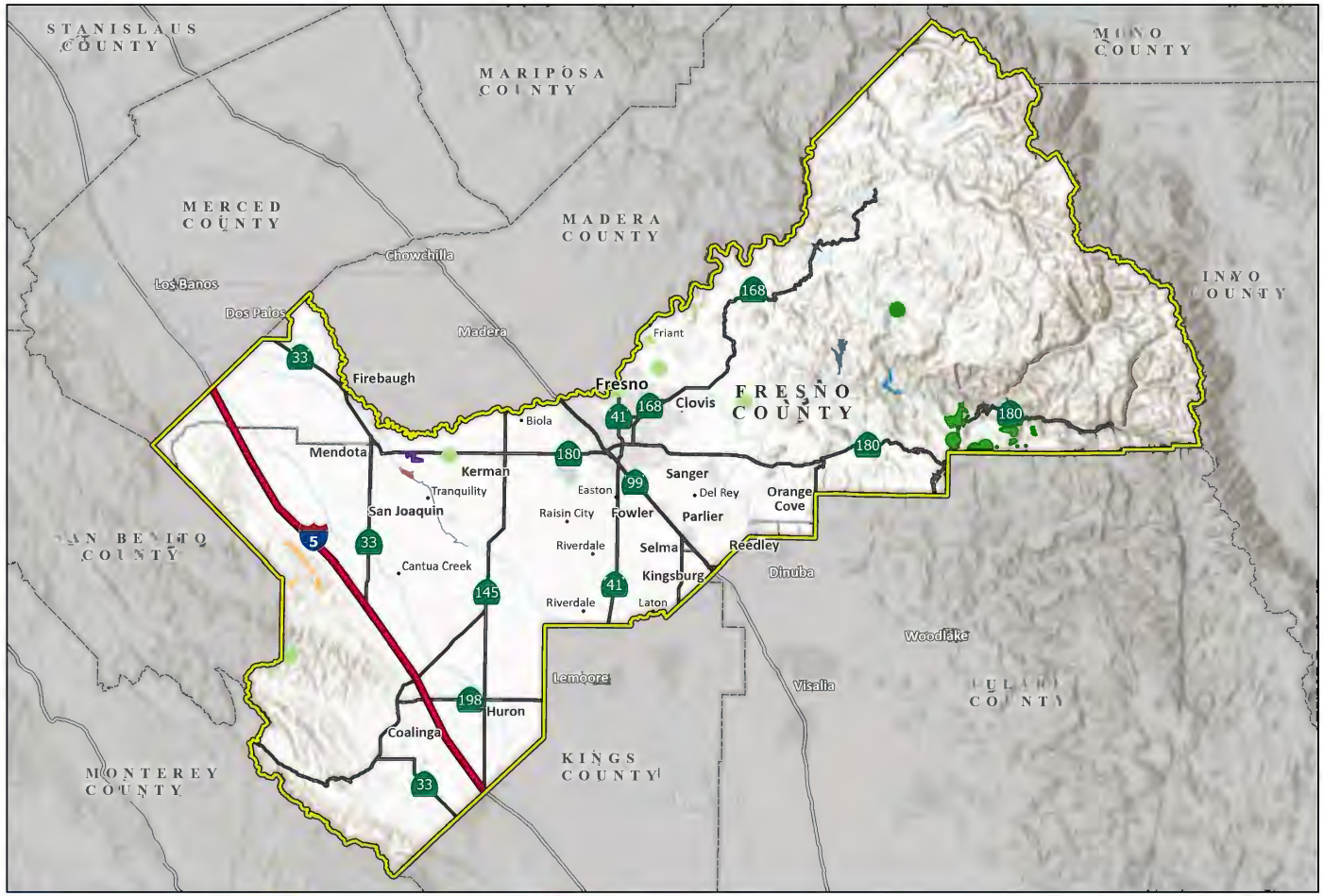


FIGURE 4.4-4

Regional Transportation Plan/Sustainable Communities Strategy
CDFW Sensitive Natural Communities in the Region

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4.4.3.4 Aquatic Resources

Aquatic resources include wetlands, freshwater sloughs, marshes, vernal pools, wet meadows, springs and seeps, portions of lakes, ponds, rivers and streams, and all other areas that are periodically or permanently covered by shallow water, are dominated by hydrophilic vegetation, or have soils that are predominantly hydric in nature.[4] As shown on Figure 4.4-5, the Fresno COG Region contains the following aquatic resource types according to the National Wetlands Inventory (NWI):

- **Freshwater Emergent Wetlands:** Freshwater wetlands characterized by emergent[5] herbaceous plant species, mosses, and/or lichens.
- **Freshwater Forested/Shrub Wetlands:** Freshwater wetlands characterized largely by trees and shrubs, followed by emergent herbaceous plants, mosses, and/or lichens.
- **Lakes:** Wetlands and deep-water habitats generally spanning more than 20 acres, characterized by standing water and minimal vegetation in the form of emergent or surface vegetation.
- **Freshwater Ponds:** Freshwater wetlands or deep-water habitats characterized by standing water and vegetative cover along the edges.
- **Rivers:** Wetlands or deep-water habitats characterized by channels containing running water.

4.4.3.5 Wildlife Movement Corridors

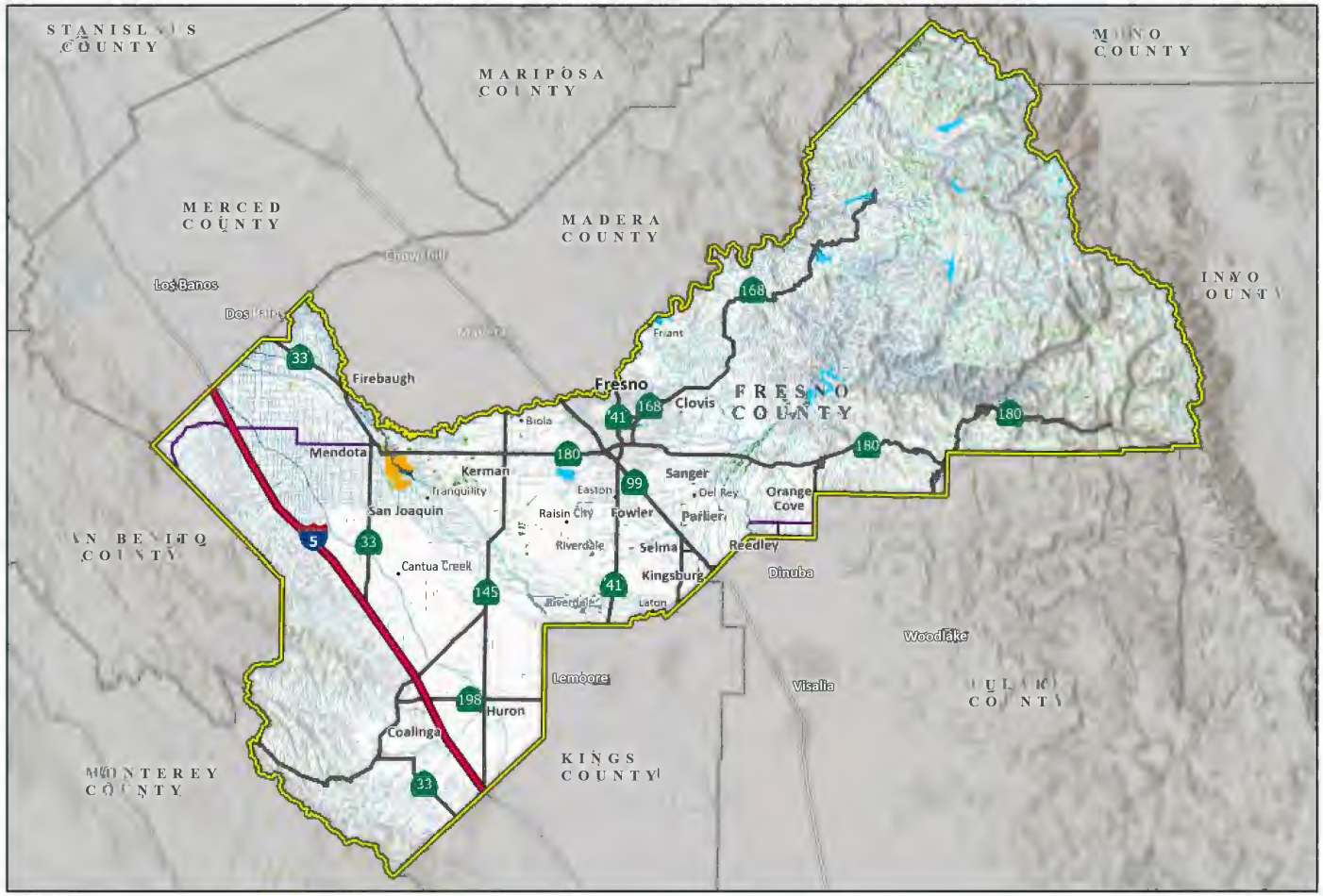
Wildlife movement corridors, or habitat linkages, are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as providing a linkage between foraging and denning areas, or they may be regional in nature. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Others may be important as dispersal corridors for young animals. A group of habitat linkages in an area can form a wildlife corridor network. Habitats in a linkage are not necessarily the same as those being linked. Rather, the linkage needs only contain sufficient cover and forage to allow temporary use by species during periods of movement between or among larger areas of suitable habitat. Typically, habitat linkages are contiguous strips of natural areas, although dense plantings of landscape vegetation can be used by certain disturbance-tolerant species. Depending on the species, a linkage may require specific minimum physical characteristics (e.g., rock outcroppings, vernal pools, specific vegetation cover) to function as an effective wildlife corridor and allow those species to traverse the linkage. For highly mobile or aerial species, habitat linkages may be discontinuous patches of suitable resources spaced sufficiently close together to permit travel along a route in a relatively short period of time.

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4 County of Fresno. 2024. *General Plan Background Report.* February. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/planning-and-land-use/general-plan/background-report-2024.pdf (accessed November 24, 2025).

5 Emergent vegetation is rooted in aquatic environments but extends above the water surface.

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LSA

Fresno COG Region

National Wetland Inventory
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine

0 9 18
Miles

SOURCE: Esri, USGS (2024), USFWS (2026)

I:\2025\20252196\GIS\Pro\Fresno COG RTP EIR\Fresno COG EIR for 2026 RTP SCS.aprx (3/5/2026)

FIGURE 4.4-5

Regional Transportation Plan/Sustainable Communities Strategy
Fresno COG Region National Wetland Inventory

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The CDFW Biogeographic Information and Observation (BIOS) database includes information from a variety of sources on known and potential wildlife movement corridors throughout California.[6] As shown on Figure 4.4-6, the Fresno COG Region contains contiguous strips of natural areas (referred to in the figure as Natural Landscape Blocks), as well as Essential Connectivity Areas. These areas are designated as important wildlife movement areas for long-term conservation of California's special-status wildlife species by connecting the remaining natural habitat areas in both a north-south direction along the foothills and mountains in the eastern and western portions of Fresno County, as well as preserving cross-valley connectivity.

Local wildlife movement corridors may also be used by a range of wildlife and can be formed by drainages, including irrigation canals, uninterrupted riparian corridors, more extensive areas of fallow agriculture lands, and other natural areas. These smaller local movement corridors may provide for access to foraging areas, localized movement associated with breeding and dispersal among isolated populations, and local migrations.

4.4.4 Regulatory Setting

This section includes applicable federal, State, regional, and local policies and regulations.

4.4.4.1 Federal Regulations

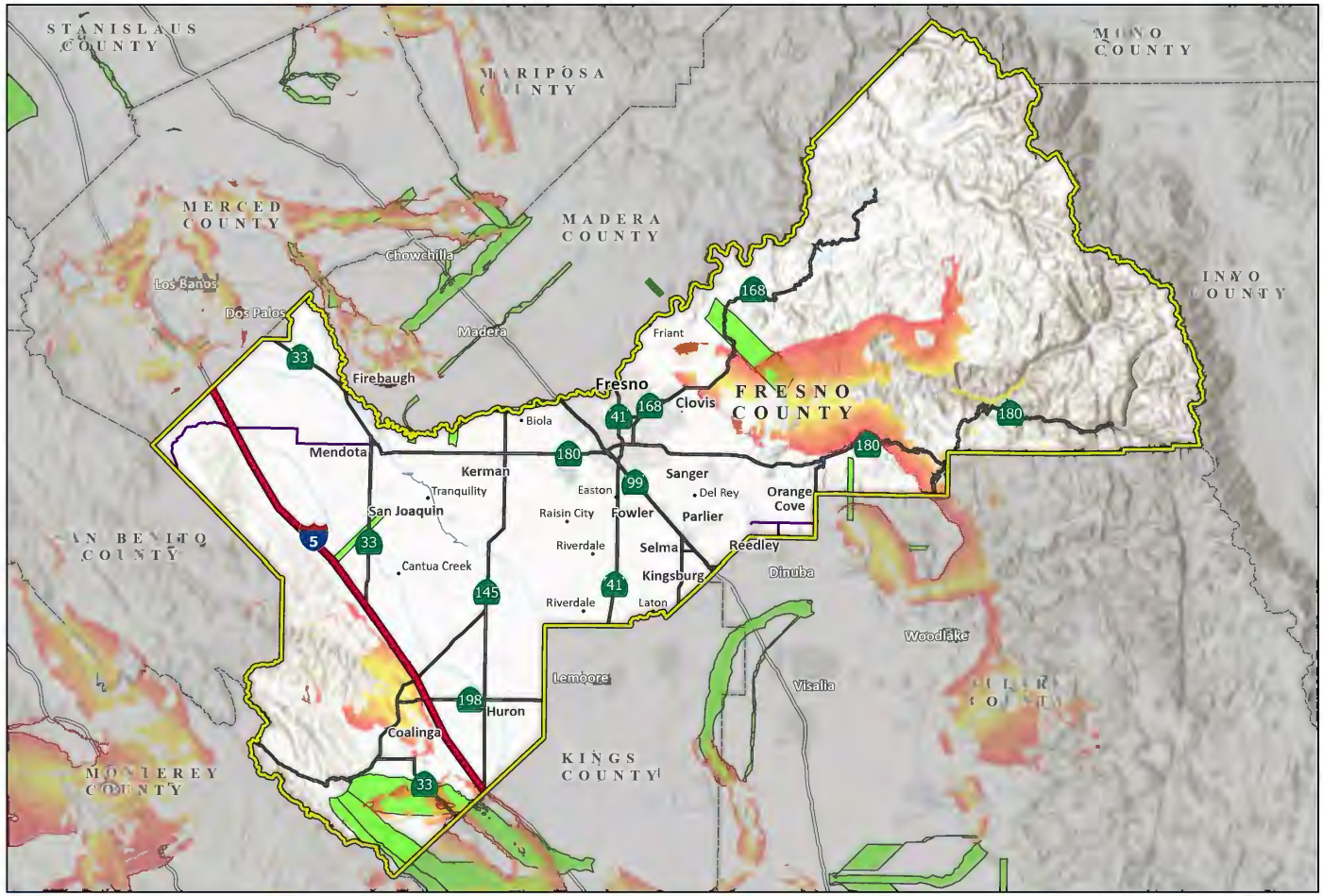
Federal Endangered Species Act. The USFWS administers FESA. FESA provides a process for listing species as either threatened or endangered, as well as methods of protecting listed species. FESA defines as "endangered" any plant or animal species that is in danger of extinction throughout all or a significant portion of its known geographic range. A "threatened" species is a species that is likely to become endangered. A "proposed" species is one that has been officially proposed by the USFWS for addition to the federal threatened and endangered species list.

Per Section 9 of FESA, "take" of threatened or endangered species is prohibited. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct (codified at 16 USC §1532(19). "Take" can include disturbance to habitats used by a threatened or endangered species during any portion of its life history. The presence of any federally threatened or endangered species in a project area generally imposes severe constraints on development, particularly if development would result in "take" of the species or its habitat. Under the regulations of FESA, the USFWS may authorize "take" when it is incidental to, but not the purpose of, an otherwise lawful act.

Federal Clean Water Act, Section 404. The CWA provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. Section 404 establishes a permit program administered by the USACE that regulates the discharge of the dredged or fill material into waters of the United States, including wetlands. The USACE implementing regulations are found in CFR Title 33, Sections 320 and 330.

[6] Spencer, W., et.al. 2010. *California Essential Habitat Connectivity Project: A strategy for conserving connected California.* February.

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LSA

Fresno COG Region

Wildlife Corridors - San Joaquin Valley

Important Connectivity Areas*

Less Cost

More Cost

*Cumulative cost to ecological flows

0 9 18
Miles

SOURCE: Esri, USGS (2024), CDOC (2022)

I:\2025\20252196\GIS\Pro\Fresno COG RTP EIR\Fresno COG EIR for 2026 RTP SCS.aprx (4/2/2026)

FIGURE 4.4-6

Regional Transportation Plan/Sustainable Communities Strategy
Fresno COG Region Essential Wildlife Connectivity Areas

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The guidelines for implementation are referred to as the Section 404(b)(1) Guidelines, which were developed by the EPA in conjunction with USACE (40 CFR 230). The guidelines allow the discharge of dredged or fill material into the aquatic system only if there is no practicable alternative that would have less adverse impacts.

The USACE has primary federal responsibility for administering regulations that concern "waters of the United States." The USACE acts under two statutory authorities: the Rivers and Harbors Act (Sections 9 and 10), which governs specified activities in "navigable waters of the United States," and the CWA (Section 404), which governs specified activities in "non-navigable waters of the United States." The USACE requires that a permit be obtained if a project proposes placing structures within, over, or under navigable waters or discharging dredged or fill material into waters of the United States below the ordinary high-water mark in non-tidal waters. The EPA, the USFWS, the National Marine Fisheries Service (NMFS), and several other agencies can provide comments on USACE permit applications.

The federal government defines wetlands in CWA Section 404 as "areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support (and do support, under normal circumstances) a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR §328.3(b) and 40 CFR §230.3). The federal definition of wetlands requires three wetland identification parameters to be present: wetland hydrology, hydric soils, and hydrophytic vegetation. On March 12, 2025, the USACE and EPA issued *Memorandum to the Field Between the U.S. Department of the Army, U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency Concerning the Proper Implementation of "Continuous Surface Connection" Under the Definition of "Waters of the United States" Under the Clean Water Act*, in which it was clarified that a wetland "must have a continuous surface connection to a requisite covered water, making it difficult to determine where the water ends and the wetland begins."

"Other waters of the United States" refers to those hydric features that are regulated by the CWA but are not wetlands (33 CFR §328.4). To be considered jurisdictional, these features must exhibit a defined bed and bank and an ordinary high-water mark. Examples of other waters of the United States include rivers, creeks, intermittent and ephemeral channels, ponds, and lakes.

Federal Rivers and Harbors Act, Section 10. Under Section 10 of the River and Harbors Act, the USACE regulates the construction of any structure in or over any navigable water of the United States. Navigable waters are defined as "those waters of the U.S. that are subject to the ebb and flow of the tide shoreward to the mean high water mark, and/or are presently used, or have been used in the past, or may be susceptible to use to transport interstate or foreign commerce."

Federal Clean Water Act, Section 401. Per Section 401 of the CWA, "any applicant for a Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters, shall provide the licensing or permitting agency a certification from the State in which the discharge originates or will originate, or, if appropriate, from the interstate water pollution control agency having jurisdiction over the navigable waters at the point where the discharge originates or will originate, that any such discharge will comply with the applicable provisions of sections 1311, 1312, 1313, 1316, and 1317 of this title" (33 USC §1341(a)(1)). The State Water Resources Control Board administers the certification program in

California, primarily through its Regional Water Quality Control Boards (RWQCBs). Section 402 establishes a permitting system for the discharge of any pollutant (except dredged or fill material) into waters of the United States.

Migratory Bird Treaty Act. The Migratory Bird Treaty Act (MBTA) protects all common wild birds found in the United States except the house sparrow, the starling, the feral pigeon, and resident game birds such as pheasant, grouse, quail, and wild turkey. Resident game birds are managed separately by each state. Under the MBTA, "it shall be unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill, attempt to take, capture, or kill, possess, offer for sale, sell, offer to barter, barter, offer to purchase, purchase, deliver for shipment, ship, export, import, cause to be shipped, exported, or imported, deliver for transportation, transport or cause to be transported, carry or cause to be carried, or receive for shipment, transportation, carriage, or export, any migratory bird, any part, nest, or egg of any such bird, or any product, whether or not manufactured, which consists, or is composed in whole or part, of any such bird or any part, nest, or egg thereof …" (16 USC §703(a)).

4.4.4.2 State Regulations

California Endangered Species Act. The CDFW administers CESA. CESA applies to "endangered" or "threatened" birds, mammals, fish, amphibians, reptiles, and plants, but it does not apply to insects (see 81 Cal. Op. Gen. 222 (1998)). The State of California considers an "endangered" species one whose prospects of survival and reproduction are in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease. Any species determined by the commission as "endangered" on or before January 1, 1985, is an "endangered species." A "threatened" species is one present in such small numbers throughout its range that it is likely to become an endangered species in the foreseeable future in the absence of special protection or management. The California Endangered Species Act of 1970 created the categories of "Endangered" and "Rare." The California Endangered Species Act of 1984 created the categories of "Endangered" and "Threatened." On January 1, 1985, all animal species designated as "Rare" were reclassified as "Threatened" (see California Fish and Game Code §2067).

Section 2080 of the Fish and Game Code prohibits "take" of any species that the California Fish and Game Commission determines to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful development projects. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate mitigation planning to offset project-caused losses of listed species populations and their essential habitats.

"Candidate species" means a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the California Fish and Game Commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to either list (California Fish and Game Code §2068).

The CDFW exercises authority over mitigation projects involving State-listed species, including those resulting from CEQA mitigation requirements. Lead agencies are directed by CESA to consult with the CDFW on projects or actions that could affect listed species. A "taking" may be authorized by the CDFW if an approved habitat management plan or management agreement that avoids or compensates for possible jeopardy is implemented. In addition, the CDFW requires preparation of mitigation plans in accordance with published guidelines.

California Environmental Quality Act. "Species of Special Concern" (SSC) is an administrative designation that carries no formal legal status per se, but signifies that the species is recognized as sensitive by the CDFW. Section 15380 of the *State CEQA Guidelines* clearly indicates that species of special concern should be included in an analysis of project impacts if they can be shown to meet the criteria of sensitivity outlined therein. The CDFW designates certain animal species as SSCs based on factors such as declining populations, restricted distribution, or habitat loss. SSCs are not formally listed under CESA and do not receive the same statutory protections as listed or fully protected species. Instead, the SSC designation is used by the CDFW as a management and planning tool to focus conservation attention and inform land use decision making. SSC is an administrative designation that carries no formal legal status, per se, but signifies that the species is recognized as sensitive by the CDFW.

California Native Plant Protection Act. California's Native Plant Protection Act (NPPA) requires all State agencies to use their authority to carry out programs to conserve endangered and rare native plants. Provision of the NPPA prohibits the taking of listed plants from the wild and requires notification of the CDFW at least 10 days in advance of any change in land use. This allows the CDFW to salvage listed plant species that otherwise would be destroyed. A project proponent is required to conduct botanical inventories and consult with the CDFW during project planning to comply with the provisions of this act and sections of CEQA that apply to rare or endangered plants.

Lake or Streambed Alteration – California Fish and Game Code, Sections 1600 to 1603. The CDFW regulates all activities (e.g., construction, discharge, dredge, diversion) within rivers, streams, and lakes and associated riparian vegetation under California Fish and Game Code Section 1600 et seq. This includes all such features on public and private lands throughout California. The regulatory limits of the CDFW's jurisdiction are generally considered to include all areas within the bed, bank, and channel of a river, stream, or lake, plus the outer extent of riparian vegetation immediately adjacent to these aquatic features. Recently, the CDFW has asserted jurisdiction as far out as limits of the 100-year floodplain around rivers, streams, and lakes. This also includes man-made and/or channelized streams located where natural streams historically occurred, or that are connected to natural streams. Isolated wetlands that are not located within the jurisdictional limits described here are not regulated by the CDFW.

Porter-Cologne Water Quality Control Act. The RWQCB regulates actions that would involve "discharging waste, or proposing to discharge waste, within any region that could affect the water of the state" (Water Code Section 13260(a)), pursuant to provisions of the Porter-Cologne Act. "Waters of the State" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (Water Code Section 13050 (e)).

All waters of the United States, including those that meet the current and any historic definition, are also considered waters of the State (CCR 23 3831 (w)). Therefore, waters of the State includes features that have been determined by the EPA or the USACE to be "waters of the United States" in an approved jurisdictional determination; "waters of the United States" identified in an aquatic resource report verified by the USACE upon which a permitting decision was based; and features that are consistent with any current or historic final judicial interpretation of "waters of the United States" or any current or historic federal regulation defining "waters of the United States" under the CWA.

The State's definition of a wetland deviates from the USACE procedures in that a lack of vegetation does not disqualify a feature from identification as a wetland water of the State, otherwise referred to as a non-federal water of the State.

The State is further required comply with Executive Order W-59-93, published August 23, 1993, which states that the "Water Boards' regulation of dredge and fill activities must ensure 'no net loss' and long-term net gain in the quantity, quality, and permanence of wetlands acreages and values…"

Native Nesting Birds – California Fish and Game Code Sections 3503 and Section 3511. The CDFW administers the California Fish and Game Code. There are particular sections of the Fish and Game Code that are applicable to natural resource management. For example, Section 3503 of the Fish and Game Code states it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird that is protected under the MBTA. Fish and Game Code Section 3503.5 further protects all birds in the orders Falconiformes and Strigiformes, birds of prey such as hawks and owls, and their eggs and nests, from any form of take. Disturbance that causes nest abandonment and/or loss of reproductive effort is also considered a "taking" by the CDFW. Fish and Game Code Section 3511 lists fully protected bird species where the CDFW is unable to authorize the issuance of permits or licenses to take these species.

Fully Protected Species – California Fish and Game Code Sections 3511, 4700, 5050, and 5515. The 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. The CDFW is unable to authorize incidental take of fully protected species, except as allowed for in an approved Natural Communities Conservation Plan, or through direct legislative action. In July 2023, Senate Bill (SB) 147 was signed into law granting the CDFW the ability to issue a permit under CESA for the take of fully protected species for specific infrastructure projects, including those related to the State Water Project, critical regional or local water agency infrastructure, transportation projects that do not increase highway or street capacity, and wind and solar projects within the State that provide electricity to a California-based balancing authority. Take permits may be issued under this law until December 31, 2033.

Natural Community Conservation Planning Act – Fish and Game Code Sections 2800 et seq. The State of California has adopted the Natural Community Conservation Planning and Habitat Conservation Planning (NCCP/HCP) program to focus on creating a multiple-species, multiple-habitat subregional Reserve System and implementing a long-term "adaptive management" program. To accomplish this, the NCCP/HCP creates a subregional habitat reserve system and implements a coordinated program to manage biological resources within the habitat reserve. The creation of a defined reserve system provides certainty to the public and affected landowners with respect to the location of future

development and open space within the subregion. The NCCP/HCP was developed with coordination through the CDFW and the USFWS in order to account for CESA and FESA. There are no adopted regional NCCPs or HCPs within the Fresno COG Region that would apply to the project.

4.4.4.3 Regional Regulations

There are no regional regulations that apply to the proposed project with respect to biological resources.

4.4.4.4 Local Regulations

Local General Plans. The Fresno COG Region contains Fresno County and 15 incorporated cities, each with an individual general plan prepared pursuant to California Government Code Section 65300. Each general plan contains goals and policies related to biological resources within the particular jurisdiction. Although general plan element titles may vary, this information is typically found within the general plan open space/conservation element, or equivalent.

Local Municipal Codes. Fresno County and cities within the Fresno COG Region may have adopted local codes to address biological resources, such as tree protection ordinances.

4.4.5 Thresholds of Significance

The following thresholds of significance are based on Appendix G of the *State CEQA Guidelines*. Based on these thresholds, implementation of the proposed project would have a significant adverse impact with respect to biological resources if it would:

Threshold 4.4.1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;

Threshold 4.4.2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;

Threshold 4.4.3: 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;

Threshold 4.4.4: 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;

Threshold 4.4.5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or

Threshold 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.

4.4.6 Project Impacts

Implementation of the proposed project would facilitate a range of future transportation improvement and land use development projects that could result in substantial adverse effects to special-status species. Future projects contemplated under the proposed project include improvements across all transportation modes, including motor vehicles, transit (commuter and local), rail (commuter and interregional), goods movement (rail freight and trucking), bicycle and pedestrian facilities, aviation systems, and transportation systems management (TSM) programs. Additionally, as growth and development occur under the proposed project, member agencies would review and approve development proposals for consistency with applicable plans, policies, and regulations.

Threshold 4.4.1: Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Significant and Unavoidable Impact. The literature review identified 119 special-status plants and 71 special-status animals that are known to have the potential to occur within the Fresno COG Region (see Tables 4.4.1 and 4.4.2). The Fresno COG Region contains federally designated critical habitats for 12 species: California tiger salamander (*Ambystoma californiense*), fleshy owl's-clover (*Castilleja campestris* ssp. *succulenta*), Fresno kangaroo rat (*Dipodomys nitratoides exilis*), hairy orcutt grass (*Orcuttia pilosa*), Keck's checker-mallow (*Sidalcea keckii*), mountain yellow-legged frog (*Rana muscosa*), San Joaquin Valley orcutt grass (*Orcuttia inaequalis*), Sierra Nevada bighorn sheep (*Ovis canadensis sierrae*), Sierra Nevada yellow-legged frog (*Rana sierrae*), vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardi*), and Yosemite toad (*Anaxyrus canorus*). Proposed critical habitat has been identified for fisher (*Pekania pennanti*) and for both the South Sierra and Central Coast Distinct Population Segments (DPSs) of foothill yellow-legged frog (*Rana boylii*).

Direct impacts to special-status species during construction of future projects could include direct injury or mortality of special-status plants and wildlife; entrapment of wildlife in open trenches; temporary removal or conversion of vegetation and habitat necessary for breeding, feeding, dispersal, or sheltering; and general disturbance from noise or vibration during pile driving, earthmoving, and other construction activities. Construction-generated fugitive dust on surrounding vegetation, as well as erosion, runoff, and sedimentation, could degrade adjacent habitats and reduce their ability to support special-status plants and wildlife as well.

Indirect impacts potentially jeopardizing the continued existing of special-status species at the local and regional levels could result from spread of invasive species displacing native species, habitat fragmentation, increased human and domestic animal intrusion into wildland areas, and disruption of migratory corridors, all of which could lead to a reduction in regional biological diversity. Additionally,

long-term increases in vehicular traffic and major expansions of existing roads (or development of new roads in rural areas) would increase vehicle-related wildlife mortality and injuries.

The level of impact to special-status species would vary on a project-by-project basis. For example, grade separation or rail projects located in areas with natural habitats would be expected to have greater potentially adverse impacts than traffic signal synchronization or lane-restriping projects in urban environments. The specific attributes of projects under each proposed project scenario are currently unknown. As such, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur under implementation of the proposed project.

Project-Specific Mitigation Measure (PMM) BIO-1 would require a variety of avoidance and minimization measures, such as biological site assessments and consistency analyses for individual projects under the proposed project. The measures would further require implementation of project design features specific to biological resources, pre-construction surveys, implementation of a Worker Environmental Awareness Program (WEAP), and others. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to a less than significant level. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to the California Department of Transportation (Caltrans), local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts to special-status species are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.4.2: Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Significant and Unavoidable Impact. Sensitive natural communities are those that have limited distribution statewide, or within a county or region, and are vulnerable to environmental effects of projects. The Fresno COG Region is home to numerous sensitive natural communities, including 13 tracked in the California Natural Diversity Database (CNDDB): Big Tree Forest, Central Valley Drainage Hardhead/Squawfish Stream, Coastal and Valley Freshwater Marsh, Great Valley Mesquite Scrub, Great Valley Mixed Riparian Forest, Monvero Residual Dunes, Northern Basalt Flow Vernal Pool, Northern Claypan Vernal Pool, Northern Hardpan Vernal Pool, Northern Vernal Pool, Sycamore Alluvial Woodland, Valley Needlegrass Grassland, and Valley Sink Scrub. Most of these sensitive natural communities are located in unincorporated areas, particularly in the foothill/mountain areas and the valley floor. Additionally, there are riparian habitats throughout the region.

Direct impacts to sensitive natural communities during construction of future projects could include habitat loss, degradation, and fragmentation. Indirect impacts could result from the spread of invasive species displacing native species and increased human and domestic animal intrusion into wildland areas. Impacts to federally designated critical habitat may be significant for future projects. However, the degree to which the proposed project could impact sensitive natural communities is unknown. Many future projects would be concentrated along existing transportation corridors and in urban

areas, where habitats have already been changed by past and ongoing disturbances. Projects most likely to affect riparian habitat and sensitive nature communities are those in rural areas.

The proposed project would include policies and strategies that would encourage compact growth and development patterns within existing urban areas to shift growth away from agricultural and rural areas of the Fresno COG Region. **PMM BIO-2** would require that sensitive natural communities and riparian habitats be avoided where feasible. This measure would also require implementation of appropriate avoidance, minimization, and compensatory mitigation measures to reduce potential impacts in accordance with federal and State regulations.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, this analysis represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. With the implementation of **PMM BIO-2** and in adherence to local, State, and federal regulations, potential impacts to riparian habitat and other sensitive natural communities would be reduced. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to a less than significant level. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts to riparian habitat or other sensitive natural communities are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.4.3: Would the project 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?

Significant and Unavoidable Impact. According to the National Wetlands Inventory,[7] the Fresno COG Region contains more than 119,120 acres of aquatic resources subject to State and possibly federal regulatory authority. Aquatic resources include freshwater and saline wetlands, vernal pools, ponds, lakes, and streams. The proposed 2026 RTP/SCS includes policies and strategies to encourage compact growth and development within existing urban areas. Nevertheless, development of future projects facilitated under the proposed project could result in the loss and degradation of aquatic resources and disruption of hydrology supporting these features. Note that the exact acreage of aquatic resources that could be affected by future projects is unknown at this time.

Direct and indirect impacts to wetlands and jurisdictional waters under construction and operation of future projects could include placement of fill material, hydrological alteration, and degradation of water quality. Where impacts to aquatic resources are unavoidable, coordination with State and federal regulatory agencies may be required, along with compensatory mitigation for loss of waters, as outlined in **PMM BIO-3.**

[7] United States Fish and Wildlife Service (USFWS). 2026. National Wetlands Inventory. Website: https://www.fws.gov/program/national-wetlands-inventory/wetlands-mapper (accessed March 23, 2026).

Regulatory compliance under Sections 404 and 401 of the CWA, Section 1602 of the California Fish and Game Code, and the Porter-Cologne Act would generally require delineation, permitting, and compensatory mitigation. However, as exemplified in recent substantial changes in regulatory definitions, it is not possible to definitively predict the regulations that will be in place at the time of a particular project is advanced. Further, while these regulatory mechanisms are mandated to require no net loss of wetland function and acreage, overlapping construction periods between future projects could result in significant impacts to wetlands and jurisdictional waters, especially at the local level.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, this analysis represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. With the implementation of **PMM BIO-3**, and in compliance with local, State, and federal regulations, potential impacts to wetlands and other aquatic resources would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts associated with wildlife corridors are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.4.4: Would the project 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?

Significant and Unavoidable Impact. Wildlife movement corridors, also referred to as dispersal corridors or landscape linkages, are generally linear features along which animals can travel from one habitat or resource area to another. Wildlife movement corridors can be large tracts of land that connect regionally important habitats that support wildlife in general. Examples include stop-over habitat that supports migrating birds or large, contiguous natural habitats that support animals with very large home ranges (e.g., coyotes [*Canis latrans*], mule deer [*Odocoileus hemionus californicus*]). However, corridors can also be small scale, such as riparian zones, that provide connectivity and cover to support movement at a local scale.

Under CEQA, a wildlife nursery site refers to specific unique locations that a group of animals return to year after year to breed, reproduce, or raise their young. Examples of nursery sites include bat maternity roosts and white-tailed kite (*Elanus leucurus*) rookeries. While individual bird nests are necessary to facilitate successful reproduction, a single nest is not considered a wildlife nursery site under CEQA, nor is it an area of suitable nesting habitat.

The Fresno COG Region contains numerous important wildlife movement corridors identified by experts across the State. As shown on Figure 4.4-6, several of these corridors are found along the foothills of the Sierra Nevada and Coast Ranges, where natural lands are more abundant and north-

south movement is better facilitated for some species. Additional corridors are shown on the valley floor, largely where protected natural habitat exists and to encourage east-west movement across the valley.

Direct impacts to wildlife movement corridors and nursery sites could include loss of habitat and increased noise, vibration, lighting, dust, and human disturbance, which may temporarily or permanently affect wildlife movement, disrupt habitat connectivity, or result in the loss of wildlife movement corridors and/or nursery sites. The extent of these impacts would vary on a project-by-project basis. Although future projects would generally be focused within existing urban areas or adjacent to established transportation corridors, some development may occur in previously undisturbed or natural areas. Impacts to wildlife movement and habitat functions are more likely to be affected in more natural locations. In such cases, where avoidance of impacts to wildlife movement corridors or nursery sites is infeasible, future projects would be required to incorporate conservation measures developed in coordination with appropriate resource agencies, consistent with applicable general plans, to minimize and mitigate impacts to habitat connectivity and wildlife movement to the extent feasible.

Implementation of **PMM BIO-4** includes pre-construction surveys, adherence to avoidance and minimization measures during construction, and incorporation of design features to establish buffers that protect wildlife to reduce potential impacts. Furthermore, all future projects facilitated by the proposed project would be required to the adhere to the MBTA and California Fish and Game Code Sections 3500–3516. **PMM-BIO-4** also recommends coordination with applicable agencies, such as the United States Forest Service (USFS), USFWS, CDFW, NMFS, or other local jurisdictions when projects may impact these resources.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, this analysis represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. With the implementation of **PMM BIO-4**, and in compliance with local and State regulations, including the MBTA and the California Fish and Game Code, potential impacts to wildlife corridors and nursery sites would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts associated with wildlife corridors are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.4.5: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Significant and Unavoidable Impact. Most cities in the Fresno COG Region have local ordinances and policies in place that protect trees in urban landscapes. Fresno County ordinances and policies are applicable in unincorporated portions of the County. These ordinances and policies vary in their

definitions of protected trees (e.g., certain species, minimum diameter at breast height [dbh], trees that form riparian corridors) and in the requirements for ordinance or policy compliance.

Development of future transportation and land use development projects facilitated by the proposed project could result in conflicts with local policies and ordinances intended to protect biological resources (e.g., tree protection ordinances, riparian setback requirements, and sensitive habitat protections). However, the level of impact would vary on a project-by-project basis. Future projects facilitated by the proposed project would generally occur within existing urban areas to accommodate infill development and reduce conversion of agricultural and rural lands, and transportation improvements would typically be located within or adjacent to existing transportation corridors. As infill development increases, there may be pressure to develop on sites with protected trees. Although many tree preservation ordinances require planting new trees (i.e., at one-to-one or greater ratios) to replace the removed trees, smaller infill sites do not always have sufficient space to accommodate more or larger trees.

Some future projects may occur in previously undisturbed natural areas, which would also have potential to impact to conflict with ordinances protecting biological resources. Projects in areas with a high density of native trees have the potential to result in conflicts with tree preservation policies/ordinances.

Implementation of **PMM BIO-5**, which requires coordination with appropriate agencies responsible for tree policies; prioritization of tree retention; monitoring of construction activities occurring near trees designated as “Protected Trees,” “Landmark Trees,” or “Heritage Trees”; and obtaining tree removal permits from the appropriate local agency, if required, would reduce impacts to the extent feasible.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, this analysis represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. Implementation of **PMM BIO-5** would require adherence to local regulations, including the local tree ordinances, and other regulations pertaining to biological resources. Conflicts with local policies or ordinances would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts associated with conflict with local policies or ordinances pertaining to biological resources are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.4.6: Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. The Pacific Gas & Electric Company (PG&E) has prepared two HCPs that cover the Fresno COG Region: a Multiple Region Operation and Maintenance Habitat Conservation Plan,[8] which covers the mountain region in eastern Fresno County, and the San Joaquin Valley Operation and Maintenance HCP,[9] which covers the rest of the County. These HCPs apply exclusively to PG&E operations and maintenance activities and associated minor construction, and do not apply to the proposed project. There are no adopted regional HCPs or NCCPs in the Fresno COG Region.

4.4.7 Level of Significance Prior to Mitigation

Prior to mitigation, the proposed project would have potentially significant impacts related to biological resources. However, the proposed project would not result in impacts to an HCP or NCCP, as there are no adopted regional HCPs or NCCPs in the Fresno COG Region.

4.4.8 Mitigation Measures

4.4.8.1 Fresno COG Measures

FMM BIO-1 The Fresno Council of Governments (COG) shall support research, programs, and policies that identify, protect, and restore natural habitat corridors and continue support for preserving wildlife corridors and wildlife crossings through information sharing, such as showcasing best practices and regional collaboration forums.

4.4.8.2 Project-Specific Measures

The following mitigation measures would be applied to future transportation improvement and land use development projects to reduce potentially significant impacts related to biological resources to the extent feasible:

PMM BIO-1 Implementing agencies for a project shall consider mitigation measures to reduce substantial adverse effects related to threatened and endangered species, as applicable and feasible:

- Occupied habitat and potentially suitable habitat for threatened, endangered, or rare species, as well as designated critical habitat in project design, shall be avoided during project design wherever practicable and feasible.

- Where projects impact suitable habitat for special-status species and/or listed or sensitive species that have specific field survey protocols/guidelines outlined by the United States Fish and Wildlife Service (USFWS), the California Department of Fish and Wildlife (CDFW), or other local agency, focused species surveys shall be conducted prior to construction. If appropriate, surveys shall follow applicable protocols and guidelines and be conducted by qualified personnel. If sensitive

[8] ICF. 2020. *Multiple Region Operations and Maintenance Habitat Conservation Plan. Final.* May. (ICF 00647.17.) Sacramento, CA. Prepared for Pacific Gas & Electric Company, San Francisco, CA.

[9] Jones & Stokes. 2006. *Pacific Gas & Electric Company San Joaquin Valley operations and maintenance habitat conservation plan (includes updated Chapter 4 and Tables 5-3, 5-4 and 5-5, December 2007)*. December. (J&S 02-067.) Sacramento, CA.

plants or wildlife are present, qualified staff shall identify species-specific measures to avoid, minimize, and/or mitigate for potential impacts in consultation with the USFWS or CDFW.

- Where avoidance is infeasible for species protected under the federal Endangered Species Act (FESA), the California Endangered Species Act (CESA), or local/regional ordinances and policies, conservation measures to mitigate the loss of habitat and fulfill the requirements of the applicable authorization for incidental take pursuant to Section 7 or 10(a) of FESA, Section 2081 of CESA to support issuance of an incidental take permit, and/or as identified in local/regional plans shall be implemented. Conservation strategies to protect the survival and recovery of federally and State-listed endangered and local special-status species may include:

    - Impact minimization strategies
    - Contribution of in-lieu fees
    - Use of in-kind mitigation bank credits
    - Habitat restoration, creation, rehabilitation, and/or enhancement
    - Establishment of conservation easements

- Temporary access roads and staging areas shall not be located within areas containing sensitive plants, wildlife species, or native habitat wherever feasible.

- A worker environmental awareness program (environmental education) shall be implemented during construction to inform project workers of their responsibilities and avoid/minimize impacts on sensitive biological resources.

- A qualified botanist shall evaluate the project area during design to document the presence or absence of special status plant species.

- A qualified biologist shall monitor construction activities within or adjacent to occupied special-status species habitat to facilitate the avoidance of resources not permitted for impact.

- Highly visible markers and/or temporary fencing shall be installed prior to the start of construction to keep project activities within the cleared disturbance footprint.

- Construction shall be temporarily halted if protected wildlife enter work areas to allow wildlife to move through the work area unharmed.

- If special status-species or sensitive habits are identified, a qualified biologist shall be used to monitor implementation of mitigation measures during construction.

- Construction activities shall be scheduled to avoid sensitive time periods for biological resources (e.g., steelhead spawning periods during the winter and spring, the nesting bird season).
- An invasive species control plan shall be developed for areas of high-quality native habitat disturbed by project construction.
- Appropriate sound attenuation measures and other BMPs shall be implemented, where needed, to protect sensitive wildlife species.
- Pre-construction surveys shall be conducted prior to construction by a qualified biologist to delineate sensitive species habitat to facilitate avoidance.
- During design, existing habitat on both sides of the proposed project shall be considered and design features included to retain/improve wildlife connectivity where feasible.

PMM BIO-2 Implementing agencies shall consider mitigation measures to reduce substantial adverse effects related to riparian habitats and other sensitive natural communities, as applicable and feasible:

- During project design, implementing agencies shall consult with the USFWS and/or National Marine Fisheries Service (NMFS) where riparian or sensitive habitats provide potential for occupied habitat for federally listed rare, threatened, and endangered species afforded protection pursuant to FESA.
- During project design, implementing agencies shall consult with the United States Forest Service (USFS) where sensitive or riparian habitats provide potential for occupied habitat for Forest Sensitive Species for the four national forests in the Fresno COG Region.
- During project design, implementing agencies shall consult with the CDFW where such State-designated sensitive or riparian habitats provide potential for occupied habitat for State-listed rare, threatened, and endangered species afforded protection pursuant to CESA, or Fully Protected Species afforded protection pursuant to the California Fish and Game Code.
- During project design, implementing agencies shall consult with the CDFW pursuant to the provisions of Section 1600 of the State Fish and Game Code as they relate to impacts to lakes and streambeds.
- During project design, implementing agencies shall consult with the USFWS, USFS, and CDFW, as appropriate, where State-designated sensitive or riparian habitats are occupied by birds afforded protection pursuant to the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code during the breeding season.

- Sensitive natural communities and riparian habitats shall be avoided, wherever practicable and feasible, during project design. Where practicable and feasible, upland buffers shall be included in the project to minimize impacts to riparian corridors.

- Where avoidance is infeasible, sufficient conservation measures shall be developed through coordination with local agencies and the regulatory agency (i.e., USFWS or CDFW), as appropriate, to protect sensitive natural communities and riparian habitats and develop appropriate compensatory mitigation where required.

- A qualified biologist shall monitor construction activities that may occur in, or adjacent to, sensitive and riparian habitats and implementation of mitigation measures.

- When construction activities require stream crossings, work shall be scheduled during dry conditions and use rubber-wheeled vehicles, when feasible. A qualified wetland scientist or regulatory specialist shall determine if potential project impacts require regulatory permits from the United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and/or CDFW prior to construction.

- Temporary construction fencing, or other suitable markings, shall be installed around the perimeter of sensitive and riparian habitat prior to construction.

- Topsoil (the surface material from 6 to 12 inches deep) and perennial native plants, when recommended by a qualified ecologist/biologist, shall be salvaged and stockpiled for use in restoring native vegetation to areas of temporary disturbance within the project area. Salvage of soils containing invasive species, seeds, and/or rhizomes shall be avoided as identified by a qualified ecologist/biologist.

- Appropriate, locally native vegetation shall be installed following the completion of construction activities, as identified by a qualified ecologist/biologist.

- BMPs shall be used at construction sites to minimize erosion and sediment transport from the area. BMPs include encouraging growth of native vegetation in disturbed areas, using straw bales or other silt-catching devices, and using settling basins to minimize soil transport.

PMM BIO-3 Implementing agencies shall consider mitigation measures to reduce substantial adverse effects related to aquatic resources, as applicable and feasible,

- An aquatic resources delineation shall be completed by a qualified biologist or regulatory specialist during project design to identify and map the extent of State and federally protected aquatic resources. Impacts to these aquatic resources

shall be avoided or minimized in project design, consistent with the provisions of Sections 404 and 401 of the Clean Water Act (CWA), the Porter-Cologne Water Quality Control Act, and/or Section 1600 of Fish and Game Code.

- Where avoidance of aquatic resources is infeasible and authorizations from the USACE, RWQCB, and/or CDFW are required, sufficient conservation measures and/or mitigation shall be developed to fulfill the requirements of those authorizations.

PMM BIO-4 Implementing agencies for a project shall consider mitigation measures to reduce substantial adverse effects related to wildlife movement, as applicable and feasible:

- During project design, implementing agencies shall consult with the USFS where impacts to migratory wildlife corridors may occur in an area afforded protection by an adopted Forest Land Management Plan or Resource Management Plan for the four national forests in the region.

- During project design, implementing agencies shall consult with counties, cities, and/or other local organizations, as appropriate, when impacts may occur to open space areas that have been designated as important for wildlife movement related to local ordinances or conservation plans.

- A qualified biologist shall conduct surveys to identify active migratory/native bird nests no more than 7 days before the start of construction at project sites from February 1 through August 31.

- Construction activities shall be prohibited within 250 feet of active raptor nests and 50 feet of active non-raptor nests.

- When feasible and practicable during project design, impacts shall be minimized to wildlife movement and existing functional wildlife corridors shall be preserved. Site-specific analyses of opportunities to preserve or improve habitat linkages shall be conducted during project design, if appropriate.

- Long, linear projects with the possibility of impacting wildlife movement shall analyze habitat linkages/wildlife movement corridors on a broad scale to avoid critical choke points that could reduce the function of recognized movement corridors.

- Construction drawings and habitat connectivity mapping shall be reviewed by a qualified biologist during design to determine the risk of habitat fragmentation.

- When practicable and feasible, projects shall be designed to promote wildlife corridor redundancy by including multiple connections between habitat patches.

- During project design, the potential for overpasses, underpasses, and culverts shall be evaluated to create wildlife crossings where a project may interrupt the movement of species. Wildlife crossings shall be provided in accordance with proven standards, such as the Federal Highway Administration's (FHWA) *Critter Crossings*, and in consultation with wildlife corridor authorities.

- Directional wildlife fencing shall be installed, where appropriate, to minimize wildlife injury due to direct interaction between wildlife and roads or construction.

- Where avoidance is infeasible, sufficient conservation measures shall be designed through coordination with local agencies and the regulatory agency (i.e., USFWS or CDFW) and in accordance with the respective County and cities' general plans to mitigate for the temporal or permanent loss of fish and wildlife movement corridors and/or wildlife nursery sites. The consideration of conservation measures may include the following measures where applicable:

    - Wildlife movement buffer zones
    - Corridor realignment
    - Appropriately spaced breaks in center barriers
    - Stream rerouting
    - Culverts
    - Creation of artificial movement corridors such as freeway under- or overpasses
    - Acquisition of contiguous adjacent land parcels to be protected in perpetuity from encroachment and development
    - Other comparable measures

- Applicable and appropriate guidance (e.g., FHWA HEP 16 059), as well as BMPs, shall be incorporated into project design to benefit pollinators, with a focus on native plants.

- During design, berms and sound/sight barriers at wildlife crossings shall be evaluated to encourage wildlife to utilize crossings. Sound and lighting shall be minimized, particularly in areas adjacent to natural habitats.

- Lighting impacts on sensitive species shall be reduced through implementation of mitigation measures, such as, but not limited to:

  - High-pressure sodium and/or cut-off fixtures shall be incorporated into project design instead of typical mercury-vapor fixtures for outdoor lighting.
  - Exterior lighting shall be designed to confine illumination to the project site. Structural and/or vegetative screening shall be provided for light-sensitive uses where feasible.
  - Non-reflective glass, or glass treated with a non-reflective coating, shall be specified for all exterior windows and glass used on building surfaces.
  - Architectural lighting onto building surfaces shall be directed to minimize glare and limit light intrusion onto adjacent properties.

- Noise impacts to sensitive species shall be minimized through implementation of mitigation measures. Some measures from **PMM NOI-1** (see Section 4.13, Noise) may also be applicable where they support these objectives, including, but not limited to:
  - Temporary noise barriers shall be installed around sensitive habitat during construction.
  - Where feasible, structural and/or vegetative screening shall be provided for noise sensitive habitats.
  - Construction equipment shall be properly maintained per manufacturers' specifications and fitted with the best available noise suppression devices.
  - Hydraulically or electrically powered tools shall be used during construction to avoid noise associated with compressed air exhaust from pneumatic tools. Where pneumatic tools are unavoidable, exhaust mufflers and tool jackets shall be used to reduce noise.
  - Quieter procedures (e.g., drills rather than impact equipment) shall be used during construction, when feasible.
  - Equipment and trucks with the best available noise control techniques shall be used during construction.
- Where feasible, include buffers as large as possible between sensitive habitats and freeways in project design.
- To the extent practicable, construction at night and during dawn and dusk, when wildlife activity is highest, shall be avoided.

PMM BIO-5 Implementing agencies shall consider mitigation measures to reduce conflicts with local policies and ordinances protecting biological resources, such as trees, as applicable and feasible:

- During design, implementing agencies shall consult with the appropriate local agency responsible for the administration of the policy or ordinance protecting biological resources.
- Existing trees shall be retained on site consistent with local regulations. Adequate protection during construction shall be provided for any trees that are to remain, as recommended by an International Society of Arboriculture (ISA) Certified Arborist.
- During design, if specific project area trees are designated as "Protected Trees," "Landmark Trees," or "Heritage Trees," approval for encroachment or removals shall be obtained through the appropriate entity. Appropriate mitigation measures shall be developed to ensure that the trees are replaced. Mitigation trees shall be locally sourced native species, as directed by a certified arborist.
- An ISA-Certified Arborist shall monitor construction activities that may occur in areas with trees designated as "Protected Trees," "Landmark Trees," or "Heritage Trees" to facilitate avoidance of resources not permitted for impact. Before the start of any clearing, excavation, construction, or other work on the site, fencing shall be installed for every protected tree deemed to be potentially endangered by said site work. Fences shall be left in place for the duration of all such work. All trees to be removed shall be clearly marked.
- The removal and disposal of logs, brush, earth, and other debris shall be planned to avoid injury to any protected tree. Where proposed development or other site work could encroach upon the dripline of any protected tree, special measures to allow the roots to breathe and obtain water and nutrients shall be implemented. Excavation, cutting, filling, or compaction of the existing ground surface shall be minimized within the dripline. No change in existing ground level shall occur from the base of any protected tree. No burning or use of equipment with an open flame shall occur near or within the protected perimeter of any protected tree.
- No storage or dumping of oil, gas, chemicals, or other substances that may be harmful to trees shall occur within the dripline of any protected trees or any other location on the site from which such substances might enter the protected perimeter. No heavy construction equipment or construction materials shall be operated or stored within the dripline of any protected trees. Wires, ropes, or other devices shall not be attached to any protected tree, except as needed for support of the tree.

- The leaves of protected trees shall be periodically sprayed with water during construction to prevent buildup of dust and other pollution that would inhibit leaf transpiration, as directed by the certified arborist.

- If any damage to a protected tree occurs during construction, the appropriate local agency shall be immediately notified of such damage. If the damaged tree cannot be preserved in a healthy state, as determined by the certified arborist, the tree shall be replaced with another tree or trees on the same site as deemed adequate by the local agency to compensate for the loss of the tree that is removed.

- Where avoidance is infeasible, sufficient conservation measures shall be developed to fulfill the requirements of the applicable policy or ordinance, such as to support issuance of a tree removal permit. The consideration of conservation measures may include:

    - Avoidance strategies
    - Contribution of in-lieu fees
    - Planting of replacement trees
    - Re-landscaping areas with native vegetation post-construction
    - Other comparable measures developed in consultation with the local agency and certified arborist.

4.4.9 Level of Significance After Mitigation

While implementation of **FMM BIO-1** and **PMMs BIO-1** through **BIO-5** would assist the Fresno COG and lead agencies of future transportation improvement and land use development projects in reducing impacts related to biological resources to the extent feasible, the analysis presented in this section is general in nature, and given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future transportation improvement and land use development projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. As appropriate and feasible, the Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified. Nevertheless, impacts related to biological resources, with the exception of conflicts with an HCP or NCCP, are considered **significant and unavoidable** for the purposes of this analysis.

4.4.10 Cumulative Impacts

As defined in Section 15130 of the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for biological resources.

The cumulative impact analysis for biological resources considers the larger context of future land use development and transportation projects as envisioned by the proposed project and relies upon Fresno COG projections. Cumulative impacts on biological resources would be those impacts that result from incremental changes that degrade habitat or affect other biological resources within the Fresno COG Region.

Cumulative impacts to biological resources would result from incremental changes that degrade habitat, reduce habitat connectivity, or otherwise affect special-status species, sensitive natural communities, wetlands, and wildlife movement within the region. Development within the Fresno COG Region and surrounding areas is anticipated to continue to convert agricultural lands and undeveloped areas to urban uses, in addition to intensification of development within existing urban areas. As a result, the availability of suitable habitat for special-status species, including foraging and nesting habitat for raptors and other wildlife, would be expected to decrease over time. When combined with other past, present, and reasonably foreseeable future projects, these effects would contribute to a cumulatively significant impact on special-status species and their habitats Implementation of **PMM BIO-1** through **PMM BIO-3** would reduce impacts to biological resources through measures such as pre-construction surveys, biological monitoring during construction, worker environmental awareness training, avoidance and minimization protocols, and species-specific mitigation planning to the extent feasible. In addition, individual discretionary projects facilitated by the proposed project would be required to evaluate project-specific impacts and incorporate mitigation measures consistent with applicable regulations.

Riparian habitat and other sensitive natural communities are present throughout the Fresno COG Region. Implementation of the proposed project, in combination with other regional development, could result in the loss, degradation, or fragmentation of these resources. Although the proposed project includes policies encouraging compact development within existing urban areas, some development may still occur in rural or previously undisturbed areas that support sensitive communities.

PMM BIO-2 would require avoidance, development of sufficient conservation measures, monitoring, and other strategies to minimize potential impacts to riparian habitat and other sensitive natural communities to the extent feasible. While these measures would reduce impacts to the extent feasible, the loss of these habitats at a regional scale, when combined with other projects, would result in a cumulatively significant and unavoidable impact.

Future projects facilitated by the proposed project, including cumulative development, could also result in direct and indirect impacts to wetlands and jurisdictional waters, including fill, hydrological alteration, and degradation of water quality. Regulatory compliance under Sections 404 and 401 of the CWA, Section 1602 of the California Fish and Game Code, and the Porter-Cologne Act would require delineation, permitting, and compensatory mitigation. **PMM BIO-3** would be implemented to

require avoidance of regulated aquatic resources where feasible, delineation of aquatic features, coordination with applicable regulatory agencies, and implementation of appropriate avoidance, minimization, and compensatory mitigation measures in accordance with federal and State regulations current at the time of evaluation. While these regulatory mechanisms are mandated to require no net loss of wetland function and acreage, overlapping construction periods between future projects facilitated by the proposed project and cumulative projects could result in cumulatively significant and unavoidable impacts to wetlands and jurisdictional waters at the local level.

Additionally, although future projects facilitated by the proposed project would seek to avoid areas that support wildlife movement corridors and wildlife nursery sites, some projects could occur within or adjacent to these areas, particularly at the periphery of existing urban development or along transportation corridors. Construction and operation of such projects could result in increased noise, lighting, human disturbance, and the introduction of physical barriers, which may disrupt wildlife movement, reduce habitat connectivity, and impair the use of nursery sites. Implementation of **PMM BIO-4,** which would require pre-construction surveys, coordination with appropriate resource agencies, and incorporation of design features such as buffers, wildlife crossings, and other avoidance and minimization measures, would reduce impacts to the extent feasible. Accordingly, when considered in combination with other past, present, and reasonably foreseeable future projects, cumulative impacts to wildlife movement and habitat connectivity would remain significant and unavoidable.

Implementation of the proposed project could result in conflicts with local policies and ordinances intended to protect biological resources (e.g., tree protection ordinances, riparian setback requirements, and sensitive habitat protections). The degree of such conflicts would vary on a project-by-project basis, depending on location, design, and the presence of regulated resources. Although future projects facilitated by the proposed project would generally be directed toward existing urban areas to accommodate infill development and reduce the conversion of agricultural and rural lands, and transportation improvements would typically occur within or adjacent to existing corridors, some development may occur in previously undisturbed or natural areas at the periphery of urban areas. These areas often contain biological resources subject to local protections and are particularly vulnerable to development pressure. In addition, transportation improvements intended to enhance regional accessibility may require expansion of existing infrastructure or may indirectly facilitate growth into currently undeveloped or transitioning areas, increasing the potential for conflicts with applicable policies and ordinances. While implementation of **PMM BIO-5** would require coordination with local jurisdictions, adherence to applicable regulations, and incorporation of avoidance and minimization measures, such measures would reduce impacts to the extent feasible. Accordingly, when considered in combination with other past, present, and reasonably foreseeable future projects, implementation of the proposed project could contribute to cumulative conflicts with local policies and ordinances protecting biological resources. This impact would be cumulatively significant and unavoidable.

There are no adopted regional HCPs or NCCPs in the Fresno COG Region that would apply to the project. Therefore, no cumulative impact would occur related to HCPs.

As stated throughout Section 4.4.6, impacts of the proposed project related to biological resources are considered significant and unavoidable given the programmatic nature of the proposed project,

the scale of the Fresno COG region, and the inability of the Fresno COG to enforce project-specific mitigation or make land use approvals. Because the proposed project would result in significant adverse environmental impacts with respect to biological resources, these impacts would represent an incremental contribution to the environmental impacts of other cumulative or related projects, including other regional-scale plans, ultimately leading to a **cumulatively considerable impact** to biological resources.

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4.5 CULTURAL RESOURCES

This section describes how implementation of the proposed 2026 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (proposed project) may affect the existing cultural resources and tribal cultural resources (TCRs) within the Fresno Council of Governments (COG) Region.

Section 4.18, Tribal Cultural Resources, of this Draft Program Environmental Impact Report (PEIR) addresses the topic of TCRs. Although there is partial overlap with Section 4.18, this section focuses on cultural resources of Native American and historic-era origin and historic architecture. Section 4.18 focuses specifically on cultural resources associated with Native American tribes.

The following information is provided in accordance with Section 15125 of the *State California Environmental Quality Act* (CEQA) *Guidelines*. The environmental setting discussion provides a baseline discussion of the existing conditions within the Fresno COG Region and surrounding area. This section also addresses local, State, and federal regulations as they pertain to project impacts on cultural resources.

4.5.1 Scoping Process

Potential impacts related to cultural resources were not identified during the public scoping meeting held for the proposed project on May 28, 2025.

Fresno COG received one comment letter in response to the Notice of Preparation (NOP) issued for the proposed project between May 13 and June 12, 2025, concerning the proposed project's potential impacts related to cultural resources. For copies of the NOP comment letters, refer to Appendix A of this Draft Environmental Impact Report (EIR). NOP comments related to TCRs included the following:

- **California Native American Heritage Commission (NAHC),** May 27, 2025, detailing State procedures for compliance with Assembly Bill (AB) 52, Senate Bill (SB) 18, and other State regulations related to Tribal resources and CEQA.

4.5.2 Methodology

The analysis presented in this section is based in part on information obtained from the Fresno County General Plan and General Plan PEIR and other background literature research. This analysis was also informed by a search of the NAHC's Sacred Lands File (SLF), as well as Native American consultation.

Since cultural resources impacts are highly localized, specific and detailed analyses are most appropriate at the individual improvement project and new development project level rather than the programmatic level that characterizes this PEIR. Subsequent project-specific CEQA documents may be required to further analyze the conditions related to cultural resources, the magnitude of cultural resource impacts, and the need for project-specific mitigation measures.

4.5.2.1 Key Concepts

Archaeological Resources. Archaeological resources may be considered to be either "unique archaeological resources" or "historical resources" as defined by CEQA. State CEQA Statutes Section 21083.2 defines a "unique archaeological resource" as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it:

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

Historical Resources. A site may qualify as a historical resource if it falls within at least one of four categories listed in *State CEQA Guidelines* Section 15064.5(a). The four categories are:

1. A resource listed or determined to be eligible by the State Historical Resources Commission, to be included in the California Register of Historical Resources (CRHR) (Public Resources Code [PRC] Section 5024.1, Title 14 California Code of Regulations [CCR], Section 4850 et seq.).
2. A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the PRC or identified as significant in a historical resource survey meeting the requirements of Section 5024.1 (g) of the PRC, shall 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 shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the CRHR (PRC Section 5024.1, Title 14 CCR, Section 4852).

These conditions are related to the eligibility criteria for inclusion in the CRHR (PRC Sections 5020.1[k], 5024.1, and 5024.1[g]). A cultural resource may be eligible for inclusion in the CRHR if it:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated with the lives of persons important in our past;

- Embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of an important creative individual; or possesses high artistic values; or

- Has yielded, or may be likely to yield, information important in prehistory or history.

The fact that a resource is not listed in, or determined to be eligible for listing in the CRHR; is not included in a local register of historical resources (pursuant to PRC Section 5020.1(k)); or is 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.

A lead agency must consider a resource that has been listed in, or determined to be eligible for listing in the CRHR (Category 1) as a historical resource for CEQA purposes. In general, a resource that meets any of the other three criteria listed in *State CEQA Guidelines* Section 15064.5(a) is also considered to be a historical resource unless "the preponderance of evidence demonstrates" that the resource is not historically or culturally significant."

4.5.2.2 Native American Consultation

The Fresno COG requested an SLF search and Native American Contact List from the NAHC on March 3, 2026. In its response on March 10, 2026, the NAHC indicated that the record search results were positive. The NAHC also identified methodologies and contacts for conducting required AB 52 tribal consultation and recommended that 56 Native American individuals representing tribal groups be contacted for information regarding cultural resources that could be affected by implementation of the proposed project.

On March 12, 2026, the Fresno COG provided notice of the proposed project via both certified mail and email to the Native American contacts provided by the NAHC and the Tribes that had previously requested such notice, and consulted with the Native American tribes that requested consultation in response to the notice, pursuant to provisions of AB 52. Refer to Table 4.18.A in Section 4.18, Tribal Cultural Resources, for the full list of tribal representatives who were contacted by the Fresno COG, as well as the dates that contact was made.

Pursuant to AB 52, the tribes were required to respond to the Fresno COG within 30 days of receipt of the notification if they wished to engage in consultation on the proposed project, and the Fresno COG was required to begin the consultation process within 30 days of receiving the request for consultation.

Representatives of the Traditional Choinumni Tribe and the Pakan'yani Maidu of Strawberry Valley Rancheria respectfully responded with a request to initiate the formal consultation process. The Chicken Ranch Rancheria of Me-Wuk Indians provided a response stating that they had no comments on the proposed project. No additional responses or requests for consultation under AB 52 were received during the consultation period for the proposed project. Information regarding the outcome of the tribal consultation process is provided in Section 4.5.6, below, as well as Section 4.18, Tribal Cultural Resources, of this Draft PEIR. A full record of Tribal consultation efforts is provided as Appendix B to this Draft PEIR.

It should be noted that tribal consultation requirements under AB 52 apply to projects that have an NOP or a notice of Negative Declaration (ND) or Mitigated Negative Declaration (MND) filed on or after July 1, 2015. Therefore, future transportation improvement and land use development projects facilitated by the proposed project that have a NOP or a notice of ND or MND would be required to initiate project-specific tribal consultation efforts pursuant to AB 52. In addition, future transportation improvement and land use development projects facilitated by the proposed project that involve the adoption or amendment of a general plan or specific plan would be subject to SB 18, which also requires local governments to contact, refer plans to, and consult with tribal organizations.

4.5.3 Existing Environmental Setting

Cultural resources include prehistoric-era archaeological sites, historic-era archaeological sites, Native American traditional cultural properties, sites of religious and cultural significance, and historical buildings, structures, objects, and sites. The importance of any single cultural resource is defined by the context in which it was first created, current public opinion, and modern yet evolving analysis. From an analytical perspective, temporal and geographic considerations help to define the historical context of the Fresno COG Region.

4.5.3.1 Prehistoric Era and Ethnographic Review

The San Joaquin Valley, along with the adjacent Sierra Nevada foothills and Coast Ranges, possesses a rich and complex cultural history that spans over 11,000 years prior to European contact. The earliest widely accepted evidence of prehistoric occupation includes basally thinned, fluted projectile points—typically found along the shores of now-extinct lakes—indicating the presence of Paleo-Indian hunters between approximately 11,550 and 8,550 B.C.E.

According to the County's General Plan Background Report, the Fresno COG Region comprises six traditional ethnographic territories: the Northern Valley Yokuts, Southern Valley Yokuts, Foothill Yokuts, Mono, Owens Valley Paiute, and Salinan.[1] Following European and, later, Mexican settlement in the San Joaquin Valley, these groups generally experienced a dramatic decline due to disease and displacement associated with European colonization. Refer to Section 4.18, Tribal Cultural Resources, of this PEIR for a more detailed description of each group.

4.5.3.2 Historic Era

Spanish exploration of the Central Valley began in the early 19th century, led by Gabriel Moraga.[2] In expeditions between 1805 and 1808, Moraga named several key rivers, including the Calaveras, Merced, Stanislaus, and Kings rivers, and identified a tributary that would later become known as the San Joaquin River. Moraga's journeys were undertaken to locate sites for potential missions and recover runaway neophytes. Following the transition from Spanish to Mexican rule, American trappers began utilizing the region's natural resources, and the 1848 discovery of gold in California

[1] County of Fresno. 2024. *Fresno County General Plan Background Report.* February. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/planning-and-land-use/general-plan/background-report-2024.pdf (accessed November 25, 2025).

[2] Bancroft, Hubert Howe. 1884–1890. *History of California,* 7 vols. The History Company, San Francisco, California.

accelerated the influx of settlers. This wave of migration and development, particularly in the nearby mountains and foothills, led to a dramatic decline in Yokuts populations in the latter half of the 19th century, primarily due to introduced diseases and expanding European settlements.

The discovery of additional mineral resources in the mid-19th century led to the establishment of small communities along rivers and streams in the foothills and mountains. Fresno County was formed in 1856, with its original county seat set in the foothill town of Millerton. Following a devastating flood in 1867 that affected Millerton and other nearby settlements, efforts began to establish a more secure regional trading center within the San Joaquin Valley. That same year, A.Y. Easterby founded a large agricultural enterprise in what is now central Fresno, and his partner, Moses Church, developed an innovative water delivery system that diverted water from the nearby Kings River. By 1871, Easterby's 5,000-acre farm was planted with irrigated wheat fields. The area gained further prominence when Central Pacific Railroad officials visited the site and designated it as a stop on the Central California Railroad, later known as the Southern Pacific Railroad, following the company's renaming in 1884. After locals realized Fresno Station would become the trading center for the area, development spread beyond the original Easterby plat and began to be oriented toward roadways put in along section lines in cardinal directions.

Eventually, irrigation companies, colonies, and districts were formed in the vicinity of various small towns including Fresno to promote agriculture. In 1875, the Central California Colony was established south of Fresno, which set the model for a system of development that was used throughout the San Joaquin Valley. Tracts of land were subdivided into 20- to 40-acre parcels, irrigated from a system of canals and often landscaped with boulevards of palms, eucalyptus, or other drought-resistant trees. By 1903, there were 48 separate colonies or tracts in the Fresno COG Region, which drew farmers and their families from Scandinavia and from across the United States. Fresno incorporated in 1885, with a population of over 3,000. Development was restricted to a six-block area beginning at and northeast from the Southern Pacific Railroad Depot.

The discovery of oil in the western Fresno COG Region, near the town of Coalinga, brought an economic boom during the early part of the 20th century. By 1910, the Coalinga Oil Field was the most productive oil field in California and continues to be a productive field today. Steady growth and increasing prosperity continued for the Fresno COG Region over the first 3 decades of the 20th century, during which the City of Fresno established itself as the primary city of the San Joaquin Valley. As urban transit improved (e.g., streetcar lines) and car ownership became more common, farmland in proximity to urban areas of the Fresno COG Region began to be subdivided for suburban development.

4.5.3.3 Known Cultural Resources

According to the National Park Service (NPS), as of June 2025, there are 45 properties in the Fresno COG Region listed on the National Register of Historic Places (NRHP), as shown in Table 4.5.A, below.

Table 4.5.A: Properties in the Fresno COG Region on the National Register of Historic Places

Reference Number	Property Name	Address	Date Listed
100000779	Azteca Theater	836–840 F Street	3/27/2017
82000963	Bank of Italy	1015 Fulton Mall	10/29/1982
10001117	Ben Gefvert Ranch Historic District	4770 West Whites Bridge Road	1/7/2011
16000468	Big Creek Hydroelectric System Historic District	Roughly from Big Creek to Northern Los Angeles	7/26/2016
03000117	Birdwell Rock Petroglyph Site	Address Restricted	3/12/2003
83001178	Brix, H.H., Mansion	2844 Fresno Street	9/15/1983
82002175	Coalinga Polk Street School	South 5th and East Polk Streets	5/6/1982
96000911	Dinkey Creek Bridge	Off Dinkey Creek Road, west of Camp Fresno, Sierra National Forest	9/5/1996
78000662	Einstein House	1600 M Street	1/31/1978
77000293	Forestiere Underground Gardens	5021 West Shaw Avenue	10/28/1977
82000964	Fresno Bee Building	1555 Van Ness Avenue	11/1/1982
84000773	Fresno Brewing Company Office and Warehouse	100 M Street	1/5/1984
11000932	Fresno County Hall of Records	2281 Tulare Street	12/22/2011
94000427	Fresno Memorial Auditorium	2425 Fresno Street	5/10/1994
79000474	Fresno Republican Printery Building	2130 Kern Street	1/2/1979
01001050	Fresno Sanitary Landfill	West and Jensen Avenues	8/7/2001
77000123	Gamlin Cabin	Northwest of Wilsonia	3/8/1977
86002097	Holy Trinity Armenian Apostolic Church	2226 Ventura Street	7/31/1986
04000333	Hotel Californian	851 Van Ness Avenue	4/21/2004
100002910	Hotel Fresno	1241–1263 Broadway Plaza	9/13/2018
75000426	Kearney, M. Theo, Park and Mansion	7160 Kearney Boulevard	3/13/1975
82000965	Kindler, Paul, House	1520 East Olive Avenue	10/29/1982
78000291	Knapp Cabin	West of Cedar Grove in Kings Canyon National Park	12/20/1978
82002176	Maulbridge Apartments	2344 Tulare Street	5/6/1982
75000427	Meux House	1007 R Street	1/13/1975
16000576	Muir, John, Memorial Shelter	SR-180, Grant Grove Village in Kings Canyon National Park	8/15/2016
74000510	Old Administration Building, Fresno City College	1101 University Avenue	5/1/1974
71000139	Old Fresno Water Tower	2444 Fresno Street	10/14/1971
78000668	Orange Cove Santa Fe Railway Depot	633 East Railroad Avenue	8/29/1978
78000663	Pantages, Alexander, Theater	1400 Fulton Street	2/23/1978
78000664	Physicians Building	2607 Fresno Street	11/20/1978
85000352	Reedley National Bank	1100 G Street	2/28/1985
84000774	Reedley Opera House Complex	10th and G Streets	4/5/1984
82002177	Rehorn House	1050 S Street	1/8/1982

Table 4.5.A: Properties in the Fresno COG Region on the National Register of Historic Places

Reference Number	Property Name	Address	Date Listed
82002178	Romain, Frank, House	2055 San Joaquin Street	1/11/1982
05001497	San Joaquin Light & Power Corporation Building	1401 Fulton Street	1/3/2006
91000287	Santa Fe Hotel	935 Santa Fe Avenue	3/14/1991
76000482	Santa Fe Passenger Depot	2650 Tulare Street	11/7/1976
78000293	Shorty Lovelace Historic District	East of Pinehurst on Kings Canyon National Park	1/31/1978
78000665	Southern Pacific Passenger Depot	1033 H Street	3/21/1978
85003145	Stoner House	21143 East Welson Avenue	10/17/1985
92001276	Tower Theatre	1201 North Wishon Avenue	9/24/1992
91000308	Twining Laboratories	2527 Fresno Street	3/26/1991
78000666	Warehouse Row	722, 744, and 764 P Street	3/24/1978
78000667	Y.W.C.A. Building	1660 M Street	9/21/1978

Source: National Park Service. 2025. Spreadsheet of National Register-Listed Properties (listings up to 6/24/2025). Website, https://www.nps.gov/subjects/nationalregister/database-research.htm, accessed March 25, 2026.
COG = Council of Governments
SR- = State Route

Although the Fresno COG Region does not contain any resources listed on the CRHR, according to the California Office of Historic Preservation (OHP), seven resources in the Fresno COG Region are listed as California Historical Landmarks (CHLs). CHLs are buildings, structures, sites, or places that have been determined to have statewide historical significance by meeting at least one of the following criteria:[3]

- The first, last, only, or most significant of its type in the State or within a large geographic region (Northern, Central, or Southern California).
- Associated with an individual or group having a profound influence on the history of California.
- A prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best-surviving work in a region of a pioneer architect, designer, or master builder.

The seven CHLs within the Fresno COG Region are listed in Table 4.5.B, below.

[3] California Office of Historic Preservation (OHP). California Historical Landmarks. Website: https://ohp.parks.ca.gov/?page_id=21387 (accessed November 25, 2025).

Table 4.5.B: California Historical Landmarks within the Fresno COG Region

Reference Number	Name/Description	Location
344	**Arroyo de Cantua:** Site where notorious bandit Joaquin Murieta was killed by State rangers on July 25, 1853.	Three large rocks in the foothills southwest of Cantua Creek Bridge. Plaques are located on SR-198, 9 miles north of Coalinga.
488	**Fresno City:** Site of "Fresno City," which gradually arose at the head of navigation of the Fresno Slough and existed from approximately 1855 to 1875. No traces left under existing conditions. Separate from the City of Fresno, which is about 30 miles to the northeast.	On Fresno Slough, 0.8 mile north of James Road, from Tranquillity, then 1.3 miles northwest on levee road (dirt), Tranquillity.
584	**Fort Miller:** Now inundated by Millerton Lake, Fort Miller was established in 1852 as a temporary headquarters for the Commissioners during the latter part of the Mariposa Indian War. The peace treaty was signed there April 29, 1851. The first recorded religious services in the Fresno area were performed here on October 21, 1855, by Right Reverend William Ingraham Kip, the first Protestant Episcopal Bishop of California. The village of Rootville grew into the town of Millerton and became the first seat of Fresno County in 1856.	South shore of Millerton Lake State Recreation Area, adjacent to Millerton historical courthouse, Friant.
803	**Site of First Junior College in California:** Constructed in 1895, the school was known as Fresno High School from 1895 to 1921. Established as the first junior college of California in 1910, in 1911, it became a normal school, the forerunner to Fresno State College. It was called Fresno Technical High School from 1921 to 1948 and Fresno Junior College from 1948 to 1959. The plaque was placed by the Fresno Tech Alumni Association.	Northeast corner of intersection of Stanislaus and O Streets, Fresno.
873	**Site of the Fresno Free Speech Fight of the Industrial Workers of the World:** At the corner of Mariposa and I Streets, from October 1910 to March 1911, the Industrial Workers of the World fought for the right of free speech in their efforts to organize Fresno's unskilled labor force. This was the first fight for free speech in California and the first attempt to organize the valley's unskilled workers.	In planter, 100 feet southwest of clock tower, Broadway and Mariposa Mall, Fresno.
916	**Forestiere Underground Gardens:** Site of retreat sculpted by Baldasare Forestiere (1879–1946) in the early 1900s. Excavating the hardpan by hand, he created a unique complex of underground rooms, passages, and gardens that rambled throughout a 10-acre parcel. His work is being preserved as a living monument to a creative and individualistic spirit unbounded by conventionality.	5201 West Shaw Avenue, Fresno.
934	**Temporary Detention Camps for Japanese Americans.** ***Fresno Assembly Center:*** This memorial is dedicated to over 5,000 Americans of Japanese ancestry who were confined at the Fresno Fairgrounds from May to October 1942. This was an early phase of the mass incarceration of over 120,000 Japanese Americans during World War II pursuant to Executive Order 9066. They were detained without charges, trial, or establishment of guilt. ***Pinedale Assembly Center:*** Site of a temporary detention camp (also known as an "assembly center") representing the first phase of the mass incarceration of 97,785 Californians of Japanese ancestry during World War II. Pursuant to Executive Order 9066 signed by President Franklin D. Roosevelt on February 19, 1942, 13 makeshift detention facilities were constructed at various California racetracks, fairgrounds, and labor camps. These facilities were intended to confine Japanese Americans until more permanent concentration camps, such as those at Manzanar and Tule Lake in California, could be built in isolated areas of the country. Beginning March 30, 1942, all native-born Americans and long-time legal residents of Japanese ancestry living in California were ordered to surrender themselves for detention.	***Fresno Assembly Center:*** Fresno District Fairgrounds, front of Commerce Building, Chance Avenue entrance, Fresno. ***Pinedale Assembly Center:*** Pinedale.

Source: California Office of Historic Preservation (OHP). California Historical Landmarks by County; Fresno County. Website, https://ohp.parks.ca.gov/?page_id=21418https://ohp.parks.ca.gov/?page_id=21418, accessed March 25, 2026.
COG = Council of Governments SR- = State Route

The Fresno COG Region contains 13 sites listed as California Points of Historical Interest, or sites, buildings, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value.[4] The 13 California Points of Historical Interest within the Fresno COG Region are listed in Table 4.5.C, below.

Table 4.5.C: California Points of Historical Interest Within the Fresno COG Region

Reference Number	Property Name	Date Listed
P438	Brix Home/Brix Mansion	10/1/1975
P7	Coaling Station A	12/16/1966
P440	Einstein Home, YWCA Activity Building	10/1/1975
P299	Fowler's Switch	5/2/1973
P5	Kearney Park & Mansion, M. Theo Kearney Park & Mansion	8/5/1966
P694	Kingsburg Railroad Depot	3/30/1988
P437	Meux House	10/1/1975
P4	Milwood Townsite	8/5/1966
P45	Settlement of Academy	9/22/1967
P226	Sycamore Point	10/5/1971
P145	Tollhouse	11/3/1969
P439	YWCA Residence	10/1/1975

Source: California Office of Historic Preservation. n.d. California Historical Resources by County; Fresno County.
COG = Council of Governments
YWCA = Young Women's Christian Association

Lastly, over 200 sites within the Fresno COG Region are listed on the Fresno County List of Historic Places, which is a local list maintained by the County of Fresno Historical Landmarks and Records Commission.

4.5.4 Regulatory Setting

This section includes applicable federal, State, regional, and local policies and regulations.

4.5.4.1 Federal Regulations

National Historic Preservation Act. The National Historic Preservation Act (NHPA) was signed into law on October 15, 1966. It establishes a national preservation program and a system of procedural protections, which encourage both the identification and protection of historic resources, including archeological resources, at the federal level and indirectly at the State and local levels. Specifically, the NHPA established guidelines to "preserve important historic, cultural, and natural aspects of our cultural heritage, and to maintain, wherever possible, an environment that supports diversity and a variety of individual choice." The NHPA includes regulations specifically for federal land-holding agencies, but also includes regulations (known as Section 106) that pertain to all projects that are

[4] California Office of Historic Preservation (OHP). n.d. California Points of Historical Interest.

funded, permitted, or approved by any federal agency and that have the potential to affect cultural resources. In addition, the NHPA authorizes the Secretary of the Interior to establish the NRHP. The NRHP is an inventory of districts, sites, buildings, structures and objects significant at a national, State, or local level in American history, architecture, archaeology, engineering, and culture. The NRHP is wholly maintained by the NPS, the Advisory Council on Historic Preservation, and the State Historic Preservation Officer (SHPO) and grants-in-aid programs. Although the proposed project is subject only to CEQA review, future or second-tier projects contemplated under the proposed project may involve federal funding or approvals, which could trigger compliance with federal preservation requirements, including Section 106 of the NHPA.

Archaeological Resources Protection Act. The Archaeological Resources Protection Act (ARPA) (16 USC 470, et seq.) was enacted in 1979 with the purpose of securing the protection of archaeological resources and sites on public lands and Native American lands, and to foster increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals.

The Native American Graves Protection and Repatriation Act. The Native American Graves Protection and Repatriation Act (NAGPRA) (25 USC Sections 3001–3013) describes the rights of Native American lineal descendants, Indian Tribes, and Native Hawaiian organizations with respect to the treatment, repatriation, and disposition of Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony (referred to collectively in the statute as cultural items) with which they can show a relationship of lineal descent or cultural affiliation. It requires that federal agencies and museums receiving federal funds inventory holdings of Native American human remains and funerary objects and provide written summaries of other cultural items.[5]

4.5.4.2 State Regulations

California Register of Historical Resources. The CRHR is an inventory of significant architectural, archaeological, and historical resources in the State of California. Important cultural resources can be listed in the CRHR through a number of methods, and listing requires approval from the State Historic Resources Commission. Properties can be nominated to the CRHR by local governments, private organizations, or citizens. State Historical Landmarks and NRHP-listed properties gain automatic listing in the CRHR. The evaluative criteria used by the CRHR for determining eligibility are closely based on those developed by the NPS for the NRHP. In order for a cultural resource to be significant, or in other words eligible, for listing in the CRHR, it must reflect one or more of the following criteria (PRC 5024.1c):

- **Criterion 1 (Events):** Resources that are associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.

- **Criterion 2 (Persons):** Resources that are associated with the lives of persons important to local, California, or national history.

[5] National Park Service (NPS). n.d. *The Native American Graves Protection and Repatriation Act (NAGPRA).* Website: https://www.nps.gov/subjects/nagpra/index.htm (accessed November 25, 2024).

- **Criterion 3 (Architecture):** Resources that embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of a master, or possess high artistic values.

- **Criterion 4 (Information Potential):** Resources or sites that have yielded or have the potential to yield information important to the prehistory or history of the local area, California, or the nation.

California Environmental Quality Act. CEQA requires that public agencies assess the effects on historical resources of public or private projects that the agencies finance or approve. Historical resources are defined as buildings, sites, structures, objects, areas, places, records, or manuscripts that the lead agency determines to have historical significance, including architectural, archaeological, cultural, or scientific significance. CEQA requires that if a project results in an effect that may cause a substantial adverse change in the significance of a historical resource, alternative plans or mitigation measures must be considered.

Every cultural resource has some associative significance. However, only those cultural resources that are associated in a meaningful or important way need to be addressed as potential historical resources. As stated in NPS guidance, "Mere association with historic events or trends is not enough, in of itself… the property's specific associations must be considered important as well."[6] Therefore, before the assessment of effects or development of mitigation measures, the significance of cultural resources must be determined. The steps that are normally taken in a cultural resources investigation for CEQA compliance are as follows:

1. Identify potential historical resources.

2. Evaluate the eligibility of historical resources. Official NPS guidance states that for a resource to qualify for inclusion in the NRHP, it must meet at least one of the criteria for evaluation by:

   a. Being associated with an important historic context; and

   b. Retaining historic integrity of those features necessary to convey its significance

   Resources that meet age guidelines, are significant, and possess integrity will generally be eligible for inclusion in the NRHP or CRHR.

3. Evaluate the effects of the project on all eligible historical resources.

In addition, properties that are listed in or eligible for listing in the NRHP are considered eligible for listing in the CRHR and thus are significant historical resources for the purposes of CEQA (PRC Section 5024.1[d][1]).

[6] National Park Service (NPS). 1997. *National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation*. Page 12. Website: https://www.thc.texas.gov/sites/default/files/2023-12/NR_Applying_NR_Criteria.pdf (accessed March 25, 2026).

According to CEQA, a project with an effect that may cause a substantial adverse change in the significance of a historical resource may have a significant impact on the environment (*State CEQA Guidelines* Section 15064.5[b]). CEQA also states that a substantial adverse change in the significance of a resource means the physical demolition, destruction, relocation, or alteration of a historical resource or its immediate surroundings such that the significance of the resource would be materially impaired. Actions that would materially impair the significance of a historical resource are any actions that would demolish or materially and adversely alter the physical characteristics of a historical resource that convey its historical significance and qualify or justify its eligibility for inclusion in the CRHR or in a local register or survey that meets the requirements of PRC Sections 5020.1(k) and 5024.1(g).

State Health and Safety Code Section 7050.5. The discovery of human remains is regulated according to California Health and Safety Code Section 7050.5, which states, "If human remains are encountered, no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the NAHC, which will determine and notify Most Likely Descendant (MLD). With the permission of the landowner or his or her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 24 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials."

Assembly Bill 52. AB 52, the Native American Historic Resource Protection Act, sets forth a proactive approach intended to reduce the potential for delay and conflicts between Native American and development interests. Projects subject to AB 52 are those that file an NOP for an EIR or Notice of Intent to adopt an ND or MND on or after July 1, 2015. AB 52 adds TCRs to the specific cultural resources protected under CEQA. Under AB 52, a TCR is defined as a site, feature, place, cultural landscape (must be geographically defined in terms of size and scope), sacred place, or object with cultural value to a California Native American tribe that is either included or eligible for inclusion in the CRHR, or included in a local register of historical resources. A Native American tribe or the lead agency, supported by substantial evidence, may choose at its discretion to treat a resource as a TCR. AB 52 also mandates that lead agencies consult with tribes, if requested by the tribe, and sets the principles for conducting and concluding consultation.

Senate Bill 18. California Government Code Section 65352.3 (adopted pursuant to the requirements of SB 18) requires local governments to contact, refer plans to, and consult with tribal organizations prior to making a decision to adopt or amend a general plan or specific plan. The tribal organizations eligible to consult have traditional lands in a local government's jurisdiction and are identified, upon request, by the NAHC. As noted in the Governor's Office of Land Use and Climate Innovation (formerly the Governor's Office of Planning and Research) *Tribal Consultation Guidelines, Supplement to General Plan Guidelines* (2005),[7] "the intent of SB 18 is to provide California Native

[7] Governor's Office of Land Use and Climate Innovation. 2005. *State of California Tribal Consultation Guidelines, Supplement to General Plan Guidelines.* November 14. Website: https://lci.ca.gov/docs/011414_Updated_Guidelines_922.pdf (accessed March 31, 2026).

American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places."

Public Resources Code Section 5097.5. California PRC Section 5097.5 prohibits the "knowing and willful" excavation or removal of any "vertebrate paleontological site…or any other archaeological, paleontological or historical feature, situated on public lands, except with express permission of the public agency having jurisdiction over such lands." Public lands are defined as land that is owned or under the jurisdiction of the State or any city, county, district, authority, or public corporation, or any agency thereof.

4.5.4.3 Regional Regulations

County of Fresno Historical Landmarks and Records Commission. The County Board of Supervisors adopted established the County of Fresno Historical Landmarks and Records Commission in 1966. The commission's duties are to advise the Board of Supervisors on landmark preservation and designation; maintain list of County Landmarks; advise the Board of Supervisors on properties that might be added to the NRHP, the CRHR, and the Fresno County Landmarks list; coordinate with other community agencies and organizations to carry out the goal of historic preservation; advise the Board of Supervisors on the preservation of governmental records, including the retention and storage of these records; advise the County Library in its work for the preservation of all local historic records in Fresno County; and coordinate with other agencies/organizations to foster and promote the preservation of all appropriate historic records.

> ***Fresno County List of Historic Places.*** This inventory was established to inventory all historic and prehistoric sites and structures, regardless of whether the sites are currently listed in any registry program. This list is maintained by the County of Fresno Historical Landmarks and Records Commission. Individuals can use the Historic Places application to have historic sites and/or structures approved under the Fresno County List of Historic Places, if desired.

4.5.4.4 Local Regulations

Local General Plans. The Fresno COG Region contains Fresno County and 15 incorporated cities, each with an individual general plan prepared pursuant to California Government Code Section 65300. Each general plan contains goals and policies related to cultural resources within the particular jurisdiction. Although general plan element titles may vary, this information is typically found within the general plan open space/conservation element, or equivalent.

Local Municipal Codes. Fresno County and cities within the Fresno COG Region may have adopted local historic preservation ordinances, which are used to provide local levels of control over the historical aesthetics of cultural resources within the jurisdiction, and to ensure that potential impacts to locally significant historical resources that may be the subject of redevelopment are given reasonable consideration. For example, the City of Fresno has an established historic preservation ordinance.[8]

[8] City of Fresno. n.d. Fresno, California – Code of Ordinances. Chapter 12, Article 16 – Historic Preservation Ordinance.

4.5.5 Thresholds of Significance

The following thresholds of significance are based on Appendix G of the *State CEQA Guidelines*. Based on these thresholds, implementation of the proposed project would have a significant adverse impact with respect to cultural resources if it would:

Threshold 4.5.1: Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5;

Threshold 4.5.2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5; or

Threshold 4.5.3: Disturb any human remains, including those interred outside of dedicated cemeteries.

4.5.6 Project Impacts

The following discussion describes the potential impacts related to cultural resources that could result from implementation of the proposed project.

Threshold 4.5.1: Would the project cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?

Significant and Unavoidable Impact. As described above, the Fresno COG Region contains CHLs, California Points of Historical Interest, and properties listed in the NRHP. While these properties represent known historic resources, the NRHP generally considers properties to be of historic age when they reach 50 years old.[9] Therefore, any building more than 50 years old within the Fresno COG Region has the potential to be eligible for listing in the NRHP or the CRHR upon evaluation and documentation. In addition, the Fresno COG Region contains both known (i.e., reburied upon discovery) and unknown (i.e., situated in unknown soils) subsurface archaeological resources, including those associated with Native American tribes (refer to Section 4.18, Tribal Cultural Resources).

As described in Section 3.0, Project Description, the Fresno COG selected Scenario C (Enhanced Transit and Smart Growth) as the preferred project scenario. One of the focal points of this scenario is sustainable urban growth focused in existing urban centers and established areas. Such growth could include infill redevelopment requiring the demolition of existing structures. In the event that a structure slated for demolition is determined to be greater than 50 years old or to possess other characteristics indicating potential historical significance, it is possible that future transportation improvement and land use development projects under the proposed project could result in significant impacts to historic built environment resources.

Pursuant to **Project-Specific Mitigation Measure (PMM) CUL-1**, during the environmental review process for each individual project, a record search at the Southern San Joaquin Valley Information

[9] National Park Service (NPS). n.d. FAQs. Website: https://www.nps.gov/subjects/nationalregister/faqs.htm (accessed March 13, 2026).

Center (SSJVIC) at California State University, Bakersfield, would be conducted to determine whether the project has been previously surveyed and whether historic resources have been identified. An affiliate of the OHP's California Historical Resources Information System, the SSJVIC is the official State repository of cultural resource records and reports for Fresno County. In the event the records indicate that no previous survey has been conducted, SSJVIC will make a recommendation on whether a survey is warranted based on the sensitivity of the individual transportation improvement or future land use development project location for cultural resources.

Should SSJVIC recommend surveys, **PMM CUL-2** would require the lead agency to obtain a qualified architectural historian to conduct historic architectural surveys of affected buildings, structures, or objects to determine their individual or potential collective eligibility for listing in the CRHR and/or NRHP. Based on the results of the surveys, the lead agency would be required under CEQA to develop measures to mitigate potential impacts to historical resources.

While limited potential exists for projects within urban centers to impact archaeological resources due to prior disturbance from past grading and development activities, future transportation improvement and future land use development projects involving excavation activities in undisturbed subsurface sediments may have the potential to encounter unknown, unrecorded historic resources, including those associated with Native American tribes. Therefore, excavation activities associated with construction of future transportation improvement and land use development projects facilitated by the proposed project would result in potentially significant direct and indirect impacts on known and/or unknown buried historic resources as construction activities would have the possibility to damage the resources or remove them from their local context.

As described in Section 4.5.2.2, the proposed project is subject to tribal consultation requirements set forth by AB 52. In compliance with AB 52, the Fresno COG provided notice of the proposed project to the Native American contacts provided by the NAHC and the tribes that had previously requested such notice. The Fresno COG consulted with the Native American tribes that requested consultation in response to the notice, pursuant to provisions of AB 52 (refer to Appendix B to this Draft PEIR for a full record of Tribal consultation efforts). The purpose of this effort was to provide Native American tribes with the opportunity for meaningful participation and to identify known TCRs within the Fresno COG Region. Of the 56 tribal representatives contacted by Fresno COG, only four representatives responded on behalf of the following tribes:

- **Traditional Choinumni Tribe.** On March 16, 2026, a representative of the Traditional Choinumni Tribe contacted Fresno COG, indicating that the Tribe wished to continue their partnership. No further correspondence has been received to date, and consultation is considered closed.

- **Chicken Ranch Rancheria of Me-Wuk Indians.** On March 26, 2026, a representative of the Chicken Ranch Rancheria of Me-Wuk Indians contacted Fresno COG, requesting formal consultation and additional project materials. On March 26, 2026, Fresno COG responded and provided the project materials available at that time and noted that the Draft 2026 RTP/SCS/PEIR would be made available during the public review period. No further correspondence has been received to date, and consultation is considered closed.

- **Pakan'yani Maidu of Strawberry Valley Rancheria.** On April 4, 2026, representatives of the Table Mountain Rancheria contacted Fresno COG, indicating that the project site is located within the Tribe's cultural area of interest. On April 9, 2026, Fresno COG responded and provided the project materials available at that time and noted that the Draft 2026 RTP/SCS/PEIR would be made available during the public review period. No further correspondence has been received to date, and consultation is considered closed.

As with the proposed project, lead agencies of future transportation improvement and future land use development projects requiring an ND, MND, or EIR under CEQA will be required to undergo project-specific tribal consultation efforts pursuant to AB 52. In addition, projects involving the adoption or amendment of a general plan or specific plan would require additional tribal consultation efforts pursuant to SB 18. Information provided through the AB 52 and SB 18 tribal consultation processes would inform the assessment as to whether TCRs are present within each individual project site and the significance of any potential impacts to such resources.

Pursuant to **PMM CUL-3**, future project sites with the potential to yield archaeological resources, as determined by the SSJVIC, would be monitored by a qualified archaeologist during ground-disturbing activities. In addition, under **PMM CUL-4,** in the event that buried cultural materials (including those associated with Native American tribes) are encountered during construction, all work in that area should be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the find and determine appropriate treatment. With adherence to **PMMs CUL-3** and **CUL-4**, potential impacts to buried historic resources would be minimized to the extent feasible.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, this analysis represents a general characterization of reasonably foreseeable impacts that could occur under implementation of the proposed project. With adherence to AB 52, SB 18, and **PMMs CUL-1**, **CUL-2**, **CUL-3**, and **CUL-4**, impacts to historical resources would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts associated with historic resources are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.5.2: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

Significant and Unavoidable Impact. Archaeological resources include both pre-contact remains and remains dating to the historical period. Pre-contact (or Native American) archaeological resources are physical indicators of human activities that pre-date written records and may include village sites, temporary camps, lithic (stone tool) scatters, rock art, roasting pits/hearths, milling features, rock features, and burials. Historic archaeological resources can include refuse heaps, bottle dumps, ceramic scatters, privies, foundations, and burials.

As described under Threshold 4.5.1, ground-disturbing activities associated with construction of future transportation improvement and land use development projects facilitated by the proposed project have the potential to unearth previously undocumented archaeological resources, including those associated with Native American tribes. The tribal consultation process for the proposed project was conducted in accordance with AB 52 and indicated under Threshold 4.5.1. In addition, future transportation improvement and future land use development projects requiring an ND, MND, or EIR under CEQA will be required to undergo project-specific tribal consultation efforts pursuant to AB 52 and, potentially, SB 18. These processes would inform the assessment as to whether Native American archaeological resources are present within each individual project site and the significance of any potential impacts to such resources.

Pursuant to **PMM CUL-1**, during the environmental review process for each individual project, a record search would be conducted at the SSJVIC to determine whether the individual transportation improvement or future land use development project location has been previously surveyed and whether cultural resources have been identified, including archaeological resources. The results of the search would allow the project proponent to avoid, minimize, or mitigate impacts to known archaeological sites.

Pursuant to **PMM CUL-3**, future project sites with the potential to yield archaeological resources, as determined by the SSJVIC, would be monitored by a qualified archaeologist during ground-disturbing activities. In addition, pursuant to **PMM CUL-4,** in the event that buried cultural materials (including those associated with Native American tribes) are encountered during earthmoving operations associated with a future transportation improvement or land use development project, all work in that area would be halted or diverted. A qualified archaeologist would evaluate the nature and significance of the find and determine appropriate treatment (if necessary). With implementation of **PMM CUL-4**, potential impacts to archaeological resources encountered during construction would be minimized to the extent feasible.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, this analysis represents a general characterization of reasonably foreseeable impacts that could occur under implementation of the proposed project. With adherence to AB 52, SB 18, and implementation of **PMMs CUL-1, CUL-3,** and **CUL-4,** impacts associated with archaeological resources would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG region, it cannot be definitively known whether all potential impacts would be mitigated below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts associated with archaeological resources are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.5.3: Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

Significant and Unavoidable Impact. Future transportation improvement and land use development projects facilitated by the proposed project would be sited to avoid known burial sites, including existing cemeteries, to the extent feasible. Nevertheless, there is potential for ground-disturbing activities associated with construction of future projects to unearth previously undocumented human remains. Future projects would be required to comply with all applicable regulations protecting human remains, should they be encountered, including Section 7050.5 of the California Health and Safety Code, which requires that excavation be stopped in the vicinity of discovered human remains while the Fresno County Coroner determines whether the remains are those of a Native American. If human remains are determined as those of Native American origin, the Fresno County Coroner would be required to notify the NAHC, which will determine and notify an MLD. With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery and offer recommendations for the disposition of the remains. The project proponent shall comply with the State Health and Safety Code relating to the disposition of Native American burials that fall within the jurisdiction of the NAHC (PRC Section 5097). Additionally, Section 7052 of the California Health and Safety Code states that disturbance of Native American cemeteries is a felony.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, this analysis represents a general characterization of reasonably foreseeable impacts that could occur under implementation of the proposed project. With adherence to applicable provisions of the California Health and Safety Code and the PRC, project impacts associated with disturbance of human remains. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would remain below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts associated with the disturbance of human remains are considered **significant and unavoidable** for the purposes of this analysis.

4.5.7 Level of Significance Prior to Mitigation

Prior to mitigation, implementation of the proposed project would have potentially significant impacts related to cultural resources.

4.5.8 Mitigation Measures

4.5.8.1 Fresno COG Measures

There are no applicable mitigation measures to be undertaken by the Fresno COG pertaining to cultural resources. However, as appropriate and feasible, the Fresno COG will encourage the implementation of the project-specific mitigation strategies listed below.

4.5.8.2 Project-Specific Measures

The following mitigation measures would be applied to future transportation improvement and land use development projects to reduce potentially significant impacts related to cultural resources to the extent feasible:

PMM CUL-1 Implementing agencies shall consider mitigation measures to reduce substantial adverse changes in the significance of a historical resource, as applicable and feasible:

As part of the appropriate environmental review of individual projects, a record search at the Southern San Joaquin Valley Information Cetner (SSJVIC) at California State University, Bakersfield, shall be conducted to determine whether the project area has been previously surveyed and whether resources were identified.

PMM CUL-2 Implementing agencies shall consider mitigation measures to reduce substantial adverse changes in the significance of an archaeological resource. Such measures may include the following or other comparable measures identified by implementing agencies:

- If SJJVIC recommends a survey of an individual project site, the implementing agency shall obtain a qualified architectural historian to conduct historic architectural surveys of affected buildings, structures, or objects to determine their individual or potential collective eligibility for listing in the California Register of Historical Resources (CRHR) and/or National Register of Historic Places (NRHP).

- Based on the results of the surveys, the implementing agency shall develop measures to mitigate potential impacts to historical resources, including maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation, relocation, or reconstruction of any impacted historic resource, which shall be conducted in a manner consistent with the Secretary of the Interior's Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings, as set forth in *State California Environmental Quality Act (CEQA) Guidelines* Section 15064.5(b)(3).

- When the above measures are not feasible or possible, the implementing agency shall secure a qualified architectural historian, or other such qualified person, to document any significant historical resource(s) by way of historic narrative, photographs, or architectural drawings, as mitigation for the effects of demolition of a historic resource. This work shall follow the general guidelines as described in the Historic American Building Survey (HABS), Historic American Engineering Record (HAER), or the Historical American Landscapes Survey (HALS). The appropriate level of recordation shall be established by the implementing agency based on the resource(s) that may be adversely affected by each project, including the number of copies to prepare and a list of

designated recipients identified (e.g., local historical societies, museums, library branch, local government agency or department, and the SSJVIC). The report preparer shall contact the organizations identified and inquire whether (1) they are interested in receiving a copy of the documentation and, (2) if so, what format they prefer (e.g., a bound hard copy, a copy saved electronically and stored on a thumbdrive, or both).

- The implementing agency shall coordinate with the documentation preparer(s) and determine when the documentation package is finalized and deemed complete. A set number of copies and distribution or hosting the information on a website shall occur. The development of project-specific mitigation plans based on site and resource characteristics shall reduce potential impacts to the extent feasible.

PMM CUL-3 Implementing agencies shall consider mitigation measures to reduce potential impacts related to the disturbance human remains, including those interred outside of formal cemeteries, as applicable and feasible:

- Prior to issuance of grading permits for projects that contain known archaeological resources (or could potentially contain archaeological resources according to SSJVIC records), a Secretary of the Interior's Standards qualified and certified Registered Professional Archaeologist (RPA) (project archaeologist) shall be contracted to oversee archaeological monitoring of ground-disturbing. Ground-disturbing activities may include, but are not limited to, pavement removal, potholing or auguring, grubbing, boring, grading, excavation, drilling, and trenching. The project archaeologist, in consultation with the developer, shall develop an Archaeological Monitoring Plan to address the details, timing, and responsibility of all archaeological and cultural activities that will occur on the project site. Details in the plan shall include:
    - Project grading and development scheduling.
    - Cultural resources sensitivity training requirement for all earthwork-related construction personnel
    - If applicable, the development of a rotating or simultaneous schedule in coordination with the project sponsor and the project archaeologist for designated Native American Tribal monitors, if any, during grading, excavation, and ground-disturbing activities on the site.
    - The safety requirements, duties, scope of work, and Native American Tribal monitors' authority to stop and redirect grading activities in coordination with all project archaeologists.
    - The protocols and stipulations that the developer, Tribes, and project archaeologist must follow in the event of inadvertent cultural resources

discoveries, including any newly discovered cultural resource deposits that shall be subject to a cultural resources evaluation.

- The archaeological monitor shall maintain a daily log documenting, at a minimum, the identity of the monitor, the work monitored, and any cultural materials identified or other actions taken by the monitor. The monitoring logs shall be provided to the implementing agency upon request and may be shared with interested parties at the implementing agency's discretion.

- On-site monitoring shall end when the project site grading and excavation activities are completed, or when the monitor has indicated that the site has a low potential for archaeological resources.

PMM CUL-4 Implementing agencies shall consider mitigation measures to reduce substantial adverse effects to prehistoric or historic-era subsurface archaeological features or deposits, as applicable and feasible.

In the event that evidence of any prehistoric or historic-era subsurface archaeological features or deposits (e.g., ceramic shards, trash scatters, lithic scatters) are discovered during construction, all ground-disturbing activity within 50 meters (165 feet) of the discovery shall be halted until an RPA (project archaeologist) can assess the significance of the find. If the find is a prehistoric archaeological site, the appropriate Native American group shall be notified. If the project archaeologist determines that the find does not meet the Center for Regional Heritage Research standards of significance for cultural resources, construction may proceed. If the project archaeologist determines that further information is needed to evaluate significance, a testing plan shall be prepared and implemented. If the find is determined to be significant by the project archaeologist (i.e., because the find is determined to constitute either a historical resource or a unique archaeological resource), the project archaeologist shall work with the project sponsor to avoid disturbance to the resources, and if complete avoidance is not feasible in light of project design, economics, logistics, and other factors, shall recommend additional measures such as the preparation and implementation of a data recovery plan. All cultural resources work shall follow accepted professional standards in recording any find, including submittal of standard Department of Parks and Recreation (DPR) Primary Record forms (Form DPR 523) and location information to the appropriate California Historical Resources Information System office for the project area.

4.5.9 Level of Significance After Mitigation

While implementation of **PMMs CUL-1** through **CUL-4** would assist the Fresno COG and lead agencies of future transportation improvement and land use development projects in reducing impacts related to cultural resources to the extent feasible, the analysis presented in this section is general in nature, and given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future transportation

improvement and land use development projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. As appropriate and feasible, the Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified. Nevertheless, impacts related to cultural resources are considered **significant and unavoidable** for the purposes of this analysis.

4.5.10 Cumulative Impacts

As defined in Section 15130 of the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for cultural resources. The cumulative impact area for cultural resources is the Fresno COG Region based on its shared cultural context. As described in Section 4.5.3, the Fresno COG Region contains CHLs, California Points of Historical Interest, and properties listed in the NRHP. In addition, numerous cultural resource surveys have been conducted and recorded through the SSJVIC throughout the Fresno COG Region. However, the absence of surveys does not necessarily mean the absence of cultural resources. The Fresno COG Region is anticipated to contain a number of unknown, unrecorded historic resources in undisturbed subsurface sediments that have not yet been surveyed. As with the proposed project, ground-disturbing activities associated with construction of cumulative projects in the Fresno COG Region may have the potential to unearth such resources.

Each discretionary development proposal in the Fresno COG Region received by the appropriate lead agency is required to comply with the requirements of CEQA, including an environmental review to determine if a project would have a substantial adverse change in the significance of a cultural resource. These environmental reviews may involve literature review, field surveys, SSJVIC searches, and other methods to determine the potential for cultural resource impacts. Based on requirements established by each lead agency and the extent of identified impacts, cumulative projects would implement standard conditions and/or the mitigation measures identified in the site- and project-specific cultural resource assessments prepared (as necessary) for those projects.

As with the proposed project, cumulative projects would be sited to avoid known burial sites to the extent feasible but would have the potential to unearth previously undocumented human remains during construction. Cumulative projects would also be required to comply with all applicable regulations protecting human remains, should they be encountered, including Section 7050.5 of the California Health and Safety Code, which requires that excavation be stopped and the proper identification procedures be followed.

As stated above under Section 4.5.9, impacts of the proposed project related to cultural resources are considered significant and unavoidable given the programmatic nature of the proposed project, the scale of the Fresno COG Region, and the inability of the Fresno COG to enforce project-specific mitigation or make land use approvals. Because the proposed project would result in significant adverse environmental impacts with respect to cultural resources, these impacts would represent an incremental contribution to the environmental impacts of other cumulative or related projects,

including other regional-scale plans, ultimately leading to a cumulatively considerable impact to cultural resources in the cumulative impact area.

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4.6 ENERGY

This section of the Draft Program Environmental Impact Report (PEIR) discusses the existing conditions within the Fresno Council of Governments (COG) Region related to energy and provides an analysis of energy use resulting from implementation of the proposed 2026 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (proposed project). Specifically, this section evaluates whether the proposed project would result in the wasteful, inefficient, or unnecessary consumption of energy resources or conflict with any applicable plans for renewable energy and energy efficiency.

4.6.1 Scoping Process

Potential impacts related to energy were not identified during the public scoping meeting held for the proposed project on May 28, 2025.

The Fresno COG received one comment letter in response to the Notice of Preparation (NOP) issued for the proposed project between May 13 and June 12, 2025, concerning the proposed project's potential impacts related to energy. For copies of the NOP comment letters, refer to Appendix A of this Draft PEIR. NOP comments related to greenhouse gas (GHG) emissions included the following:

- **San Joaquin Valley Air Pollution Control District (SJVAPCD)**, May 29, 2025, recommended that future development projects facilitated by the proposed project incorporate clean energy technology, such as electric vehicle charging infrastructure and solar power systems.

4.6.2 Methodology

This analysis focuses on the three sources of energy that are relevant to implementation of the proposed project: electricity, natural gas, and transportation fuel. This section analyzes the potential energy impacts of future transportation improvement projects and land use developments facilitated by the proposed project to the extent feasible. Since energy impacts are typically evaluated through quantitative comparison with regional energy demand, specific and detailed analyses are most appropriate at the individual improvement project and new development project levels rather than the programmatic level that characterizes this PEIR. Subsequent project-specific Environmental Impact Reports (EIRs) will be required to further analyze the transportation improvements or new development facilitated by the proposed project to determine the magnitude of energy impacts, and to project-specific mitigation measures.

4.6.3 Existing Environmental Setting

This section describes existing energy providers within the Fresno COG Region.

4.6.3.1 Electricity

Electricity is a manmade resource. The production of electricity requires the consumption or conversion of energy resources (including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources) into energy. Electricity is used for a variety of purposes, including lighting, heating,

cooling, and refrigeration, as well as operating appliances, computers, electronics, machinery, and public transportation systems.[1]

According to the most recent data available, in 2023, California's electricity was generated primarily by non-GHG and renewable sources (56.09 percent), natural gas (43.68 percent), large hydroelectric (12.55 percent), nuclear (8.22 percent), coal (0.12 percent), and other unspecified sources. Total electric generation in California in 2023 was 281,140 gigawatt-hours (GWh), down 2.1 percent from the 2022 total generation of 287,220 GWh.[2]

The majority of electricity in the Fresno COG Region, including all incorporated areas, is provided by Pacific Gas & Electric Company (PG&E). Electricity in the northeast part of the Fresno COG Region and the communities of Shaver Lake and Big Creek is provided by Southern California Edison Company (SCE).[3]

According to the California Energy Commission (CEC),[4] in 2024, total electricity consumption in the PG&E service area for all sectors[5] was 75,337.58 gigawatt-hours (GWh), or 75,337,580,000 kilowatt-hours (kWh). In the same year, total electricity consumption in the SCE service area for all sectors was 79,342.01 GWh, or 79,342,010,000 kWh. In total, the PG&E and SCE service areas consumed a total of 154,679.59 GWh (154,679,590,000 kWh) of electricity in 2024.

4.6.3.2 Natural Gas

Natural gas is a nonrenewable fossil fuel. Fossil fuels form when layers of decomposing plant and animal matter are exposed to intense heat and pressure under the surface of the Earth over millions of years. Natural gas is a combustible mixture of hydrocarbon compounds (primarily methane) that is used as a fuel source. Natural gas is found in naturally occurring reservoirs in deep underground rock formations and has a variety of uses (e.g., heating buildings, generating electricity, and powering appliances such as stoves, washing machines and dryers, gas fireplaces, and gas grills).

1 United States Energy Information Administration (EIA). 2024. Electricity Explained. Website: https://www.eia.gov/energyexplained/electricity/ (accessed November 26, 2025).

2 California Energy Commission (CEC). 2024. 2023 Total System Electric Generation. Website: https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2023-total-system-electric-generation (accessed November 26, 2025).

3 County of Fresno. 2024. *General Plan Background Report.* February. Page 6-50. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/planning-and-land-use/general-plan/background-report-2024.pdf (accessed November 26, 2025).

4 California Energy Commission (CEC). n.d. California Electricity Consumption. Website: https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/california-energy-consumption-dashboards-0 (accessed November 26, 2025).

5 All sectors include Residential, Industrial, Agriculture and Water Pumping, Commercial, Transportation Communications, and Utilities, and Mining.

PG&E provides all natural gas services within the Fresno COG Region.[6] In 2024, total natural gas consumption in the PG&E service area for all sectors was 4,256.05 million therms (4,266,050,000 therms).[7]

4.6.3.3 Petroleum/Transportation Energy

Petroleum is a nonrenewable fossil fuel. Petroleum is a thick, flammable, yellow-to-black mixture of gaseous, liquid, and solid hydrocarbons that occurs naturally beneath the Earth's surface. Petroleum is primarily recovered by oil drilling. It is refined into a large number of consumer products, primarily fuel oil, gasoline, and diesel.

The average fuel economy for light-duty vehicles (automobiles, pickups, vans, and sport utility vehicles [SUVs]) in the United States has steadily increased from approximately 14.9 miles per gallon (mpg) in 1980 to 22.6 mpg in 2023.[8] The average fuel economy for heavy-duty trucks in the United States has also steadily increased, from 5.7 mpg in 2013 to a projected 8.0 mpg in 2021.[9] Federal and State fuel economy standards require the continued increase of fuel efficiency in passenger and commercial fleets. Gasoline is the most used transportation fuel in California, with 97 percent of all gasoline consumed by light-duty cars, pickup trucks, and SUVs. In 2023, the most recent year available, total petroleum consumption in California was 2,996.2 trillion British thermal units (BTU).[10]

The Fresno COG Region is taking strides to explore sustainable forms of transportation fuel. One example is the SoHyCal Renewable Hydrogen Production Plant in Kerman. This facility is the largest operational green hydrogen production plant powered entirely by renewable energy in North America to date, and is expected to generate up to 1,000 kg/day of 100 percent emission-free hydrogen to serve the Hydrogen Refueling Stations (HRSs) of the San Joaquin Valley and the San Francisco Bay Area.[11] The facility is currently powered by biogas from a neighboring dairy farm, and will eventually utilize photovoltaic (PV) solar panels as an additional power source.

6 County of Fresno. 2024. n.d. *General Plan Background Report.* February. Page 6-53. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/planning-and-land-use/general-plan/background-report-2024.pdf (accessed November 26, 2025).

7 California Energy Commission (CEC). n.d. California Natural Gas Consumption. Website: https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/california-energy-consumption-dashboards-1 (accessed November 26, 2025).

8 United States Department of Transportation (USDOT). 2025. Table 4-23: Average Fuel Efficiency of U.S. Light Duty Vehicles. Website: https://www.bts.gov/content/average-fuel-efficiency-us-light-duty-vehicles (accessed November 26, 2025).

9 California Energy Commission (CEC). 2015. Medium and Heavy-Duty Truck Prices and Fuel Economy 2013–2026. Website: efiling.energy.ca.gov/getdocument.aspx?tn=206180 (accessed November 26, 2025).

10 United States Energy Information Administration (EIA). 2023. California State Profile and Energy Estimates, Data. Website: www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_mg.html&sid=CA (accessed November 26, 2025).

11 H2B2 USA, LLC. 2024. Solar PV Hydrogen Production Plant in Central California. October 31. Website: https://www.energy.ca.gov/sites/default/files/2025-01/CEC-600-2025-004.pdf (accessed March 24, 2026).

4.6.4 Regulatory Setting

Federal and State agencies regulate energy use and consumption through various means and programs. On the federal level, the United States Department of Transportation (USDOT), the United States Department of Energy, and the United States Environmental Protection Agency (EPA) are three federal agencies with substantial influence over energy policies and programs. Generally, federal agencies influence and regulate transportation energy consumption through establishment and enforcement of fuel economy standards for automobiles and trucks, through funding of energy-related research and development projects, and through funding for transportation infrastructure improvements. On the State level, the California Public Utilities Commission (CPUC) and the CEC are two agencies with authority over different aspects of energy.

The CPUC regulates privately owned electric, natural gas, telecommunication, water, railroad, rail transit, and passenger transportation companies and serves the public interest by protecting consumers and ensuring the provision of safe, reliable utility service and infrastructure at reasonable rates, with a commitment to environmental enhancement and a healthy California economy.

The CEC is the State's primary energy policy and planning agency. The CEC forecasts future energy needs, promotes energy efficiency, supports energy research, develops renewable energy resources, and plans for/directs State response to energy emergencies.

The applicable federal, State, regional, and local regulatory framework is discussed below.

4.6.4.1 Federal Regulations

Energy Policy Act of 2005. The Energy Policy Act of 2005 (42 United States Code Section 13201 et seq.) seeks to reduce reliance on nonrenewable energy resources and provide incentives to reduce current demand on these resources. For example, under this act, consumers and businesses can obtain federal tax credits for purchasing fuel-efficient appliances and products (including hybrid vehicles), building energy-efficient buildings, and improving the energy efficiency of commercial buildings. Additionally, tax credits are available for the installation of qualified fuel cells, stationary microturbine power plants, and solar power equipment.

Corporate Average Fuel Economy Standards. On March 31, 2022, the National Highway Traffic Safety Administration finalized the Corporate Average Fuel Economy (CAFE) standards for Model Years 2024–2026 Passenger Cars and Light Trucks. The amended CAFE standards would require an industry-wide fleet average of approximately 53.5 mpg for passenger cars and light trucks in model year 2026 by increasing fuel efficiency by 8 percent annually for model years 2024–2025, and 10 percent annually for model year 2026. The final standards are estimated to save over 200 billion gallons of gasoline between model years 2030 and 2050.[12]

[12] National Highway Traffic Safety Administration. 2024. *Corporate Average Fuel Economy Standards for Passenger Cars and Light Trucks for Model Years 2027 and Beyond and Fuel Efficiency Standards for Heavy-Duty Pickup Trucks and Vans for Model Years 2030 and Beyond*. June 24. Website: https://www.federalregister.gov/documents/2024/06/24/2024-12864/corporate-average-fuel-economy-standards-for-passenger-cars-and-light-trucks-for-model-years-2027 (accessed November 26, 2025).

4.6.4.2 State Regulations

Assembly Bill 1575, Warren-Alquist Act. In 1975, largely in response to the oil crisis of the 1970s, the State Legislature adopted Assembly Bill (AB) 1575 (also known as the Warren-Alquist Act), which created the CEC. The statutory mission of the CEC is to forecast future energy needs, license power plants of 50 megawatts (MW) or larger, develop energy technologies and renewable energy resources, plan for and direct State responses to energy emergencies, and, perhaps most importantly, promote energy efficiency through the adoption and enforcement of appliance and building energy efficiency standards. AB 1575 also amended Public Resources Code (PRC) Section 21100(b)(3) and *State California Environmental Quality Act (CEQA) Guidelines* Section 15126.4 to require EIRs to include, where relevant, mitigation measures proposed to minimize the wasteful, inefficient, and unnecessary consumption of energy caused by a project. Thereafter, the State Resources Agency created Appendix F to the *State CEQA Guidelines*. Appendix F assists EIR preparers in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy. Appendix F of the *State CEQA Guidelines* also states that the goal of conserving energy implies the wise and efficient use of energy and the means of achieving this goal, including (1) decreasing overall per-capita energy consumption; (2) decreasing reliance on fossil fuels such as coal, natural gas, and oil; and (3) increasing reliance on renewable energy sources.

Senate Bill 1389, Energy: Planning and Forecasting. In 2002, the State Legislature passed Senate Bill (SB) 1389, which required the CEC to develop an integrated energy plan every 2 years for electricity, natural gas, and transportation fuels. 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 their infrastructure needs, and encouragement of urban designs that reduce vehicle miles traveled (VMT) and accommodate pedestrian and bicycle access.

In compliance with the requirements of SB 1389, the CEC adopts an Integrated Energy Policy Report every 2 years and an update every other year. The most recently adopted report includes the *2024 Integrated Energy Policy Report Update*.[13] The *2024 Integrated Energy Policy Report Update* covers a broad range of topics, including decarbonizing buildings, integrating renewables, energy efficiency, energy equity, integrating renewable energy, updates on Southern California electricity reliability, climate adaptation activities for the energy sector, natural gas assessment, transportation energy demand forecast, and the California Energy Demand Forecast. The *2024 Integrated Energy Policy Report Update* provides the results of the CEC's assessments of a variety of energy issues facing California.

Renewables Portfolio Standard. The California Renewables Portfolio Standard (RPS) program was established in 2002 by SB 1078. SB 1078 initially required that 20 percent of electricity retail sales be served by renewable resources by 2017; however, this standard has become more stringent over time. In 2006, SB 107 accelerated the standard by requiring that the 20 percent mandate be met by

[13] California Energy Commission (CEC). 2024. *2024 Integrated Energy Policy Report Update.* Docket Number 24-IEPR-01.

2010. In April 2011, SB 2 required that 33 percent of electricity retail sales be served by renewable resources by 2020. In 2015, SB 350 established tiered increases to the RPS of 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. In 2018, SB 100 increased the requirement to 60 percent by 2030 and required all the State's electricity to come from carbon-free resources by 2045. SB 100 took effect on January 1, 2019.[14]

Title 24 of the California Code of Regulations. In November 2008, the California Building Standards Code established the California Green Building Standards Code (CALGreen), which sets performance standards for residential and non-residential development to reduce environmental impacts and encourage sustainable construction practices. CALGreen addresses energy efficiency, water conservation, material conservation, planning and design, and overall environmental quality. CALGreen is updated every 3 years and was most recently updated in 2025 to include new mandatory measures for residential as well as non-residential uses; the new measures took effect on January 1, 2026. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions.

Title 24, Part 6 is California's Energy Efficiency Standards for Residential and Non-Residential Buildings. These standards were first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption and are updated on an approximately 3-year cycle to allow consideration and possible incorporation of new energy efficient technologies and methods. All buildings for which an application for a building permit is submitted on or after January 1, 2026, must follow the 2025 standards. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions.

California Energy Efficiency Strategic Plan. On September 18, 2008, the CPUC adopted California's first Long-Term Energy Efficiency Strategic Plan, presenting a roadmap for energy efficiency in California. 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 the CPUC established in Decisions D.07-10-032 and D.07-12-051[15]:

- All new residential construction will be zero net energy (ZNE) by 2020.[16]
- All new commercial construction will be ZNE by 2030.
- 50 percent of commercial buildings will be retrofitted to ZNE by 2030.
- 50 percent of new major renovations of State buildings will be ZNE by 2025.

Assembly Bill 1493, Pavley, Vehicular Emissions: Greenhouse Gases. AB 1493 was enacted on July 22, 2002, requiring the California Air Resources Board (CARB) to develop and adopt regulations that

[14] California Public Utilities Commission (CPUC). 2019. Renewables Portfolio Standard Program. Website: cpuc.ca.gov/rps (accessed November 26, 2025).

[15] California Public Utilities Commission (CPUC). n.d. *Zero Net Energy*. Website: https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/energy-efficiency/zero-net-energy (accessed August 2025).

[16] Achievement of this goal was determined not yet to be feasible in time for the 2019 Building Energy Efficiency Standards (effective 2020), but State regulators continue to take steps toward this goal.

reduce GHGs emitted by passenger vehicles and light-duty trucks. Under this legislation, CARB adopted regulations to reduce GHG emissions from noncommercial passenger vehicles (cars and light-duty trucks). Although aimed at reducing GHG emissions specifically, a co-benefit of the AB 1493 standards is an improvement in fuel efficiency and, consequently, a reduction in fuel consumption.

Assembly Bill 1007, State Alternative Fuels Plan. Signed into law by Governor Arnold Schwarzenegger on September 29, 2005, AB 1007 required the CEC to prepare a plan to increase the use of alternative fuels in California. The State Alternative Fuels Plan was prepared by the CEC with CARB and in consultation with other federal, State, and local agencies to reduce petroleum consumption; increase use of alternative fuels (e.g., ethanol, natural gas, liquefied petroleum gas, electricity, and hydrogen); reduce GHG emissions; and increase in-State production of biofuels. The State Alternative Fuels Plan recommends a strategy that combines private capital investment, financial incentives, and advanced technology that would increase the use of alternative fuels; result in significant improvements in the energy efficiency of vehicles; and reduce trips and VMT through changes in travel habits and land management policies. The Alternative Fuels and Vehicle Technologies Funding Program legislation (AB 118, Statutes of 2007) proactively implements this plan.

Assembly Bill 118. AB 118 created the Clean Transportation Program (formerly known as the Alternative and Renewable Fuel and Vehicle Technology Program). The Clean Transportation Program aims to reduce GHG emissions and petroleum dependence by accelerating the development of zero-emission and near-zero-emission technologies.

Executive Order S-01-07, Low Carbon Fuel Standard. Executive Order (EO) S-01-07 formally established the goal of a low carbon fuel standard (LCFS) to reduce the carbon intensity of transportation fuels by 10 percent by 2020, facilitate the reduction of pollutants and GHG emissions, and diversify energy used for transportation, which would have the effect of improving energy efficiency. The EO directed CARB to determine if an LCFS can be adopted as an early action measure. In 2009, CARB approved the LCFS (17 CCR § 95480 et seq.), and it took effect on January 1, 2011.

California Code of Regulations Title 20 Appliance Efficiency Standards. The 2006 Appliance Efficiency Regulations (20 CCR §§ 1601–1608) were adopted by the CEC on October 11, 2006, and approved by the State's Office of Administrative Law on December 14, 2006. The Appliance Efficiency Regulations regulate the sale of appliances in California and include energy performance, energy design, water performance, and water design standards for both federally regulated appliances and non-federally regulated appliances. Twenty-three categories of appliances are included in the scope of these regulations. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the State and those designed and sold exclusively for use in recreational vehicles or other mobile equipment.

4.6.4.3 Regional Regulations

Fresno County Comprehensive Climate Action Plan Analysis. The County of Fresno Comprehensive Climate Action Plan Analysis (CCAP-A) was prepared by the Fresno COG in February 2026 to build

onto the previously prepared Priority Climate Action Plan document. The CCAP-A serves as a conceptual exploration of strategies and paths toward GHG reduction and includes an updated and refined emissions inventory for the County, GHG emission reduction measures with quantified emissions reductions for all sectors that are potential sources of GHG emissions in the County, and an analysis of co-benefits and potential impacts to low-income and disadvantaged communities. Strategies identified in the CCAP-A pertaining to energy include electrifying public and commercial fleets, expanding transit and charging infrastructure, promoting energy efficiency and rooftop solar in buildings, and supporting renewable energy generation.

County of Fresno General Plan. The County's General Plan contains several policies related to responsible energy consumption in the Fresno COG Region. The following goals and policies related to energy contained in the County's General Plan are relevant to the proposed project:

- **Goal PF-J:** To provide efficient and cost-effective utilities that serve the existing and future needs of people in the unincorporated areas of the county.
    - **Policy PF-J.1: Existing and Future Utility Demands.** The County shall encourage the provision of adequate gas and electric, communications, and telecommunications service and facilities to serve existing and future needs.
    - **Policy PF-J.3: Gas and Electric Systems.** The County shall work with local gas and electric utility companies to design and locate appropriate expansion of gas and electric systems, while minimizing impacts to agriculture and minimizing noise, electromagnetic, visual, and other impacts on existing and future residents.

Fresno Multi-Jurisdictional 2023-2031 Housing Element. The Fresno Multi-Jurisdictional 2023–2031 Housing Element serves as the Housing Element for the County and all but one of the incorporated cities within the County, as required by California State law (Section 65580 to 65589 of the California Government Code). Refer to Section 4.14, Population and Housing, for more information regarding the Fresno Multi-Jurisdictional 2023–2031 Housing Element. The following goals and policies related to energy contained in the Fresno Multi-Jurisdictional 2023–2031 Housing Element are relevant to the proposed project:

- **Goal 6:** Encourage energy efficiency in all new and existing housing.
    - **Policy 6.1:** Encourage the use of energy conserving techniques in the siting and design of new housing.
    - **Policy 6.2:** Actively implement and enforce all State energy conservation requirements for new residential construction.

County of Fresno Code of Ordinances. The County's Energy Code is contained in Section 15.14 of the County Code of Ordinances. Section 15.14.010 states, "the California Energy Code as referenced in the 2022 California Building Code is adopted by reference."

Integrated Strategies for a Vibrant and Sustainable Fresno County. This report, prepared in 2011 by the County, addresses local vulnerabilities, climate impacts, and stakeholder-recommended adaptation strategies to reduce climate impacts in Fresno County, including providing energy and conservation financing to promote clean energy.

4.6.4.4 Local Regulations

Local General Plans. The Fresno COG Region contains Fresno County and 15 incorporated cities, each with an individual general plan prepared pursuant to California Government Code Section 65300. Each general plan contains goals and policies related to biological resources within the particular jurisdiction. Although general plan element titles may vary, this information is typically found within the General Plan Conservation Element, or equivalent.

Local Municipal Codes. Fresno County and cities within the Fresno COG Region may have adopted local energy codes, which are usually based on the California Energy Code and outline regulations for energy conservation within each jurisdiction. This information is typically found in the Municipal Code.

4.6.5 Thresholds of Significance

The following thresholds of significance are based on Appendix G of the *State CEQA Guidelines*. Based on these thresholds, implementation of the proposed project would have a significant adverse impact with respect to energy if it would:

Threshold 4.6.1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or

Threshold 4.6.2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

4.6.6 Project Impacts

Threshold 4.6.1: Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Significant and Unavoidable Impact. Implementation of the proposed project would increase the demand for energy. Fuel consumption would increase with construction and operation of future transportation improvement and land use development projects facilitated by the proposed project. This section discusses energy use resulting from implementation of the proposed project and evaluates whether the proposed project would result in the wasteful, inefficient, or unnecessary consumption of energy resources.

Construction. Construction activities associated with future transportation improvement projects and land use developments could include demolition, grading, site preparation, building construction, architectural coating, paving, and other activities. Construction activities require

energy associated with the manufacture and transportation of building materials, grading activities, and building construction. Construction activities also typically require electricity to power construction-related equipment.

Transportation represents a large source of energy consumption. The transport and use of construction equipment, delivery vehicles and haul trucks, and construction worker vehicles would use petroleum fuels (e.g., diesel fuel and/or gasoline). Therefore, the analysis of energy use during construction focuses on fuel consumption. Construction trucks and vendor trucks hauling materials to and from each project site would be anticipated to use diesel fuel, whereas construction workers traveling to and from the project site would be anticipated to use gasoline-powered vehicles. Fuel consumption from transportation uses depends on the type and number of trips, VMT, vehicle fuel efficiency, and travel mode.

Potential energy consumption during construction of each future transportation improvement project and land use development implemented under the proposed project cannot be meaningfully quantified at this time. However, future projects subject to discretionary approval by the appropriate lead agency are required to comply with the requirements of CEQA. This includes an environmental review to determine if a project would result in wasteful, inefficient, or unnecessary consumption of energy resources during construction. This review may involve the use of energy consumption modeling software such as the California Emissions Estimator Model (CalEEMod), which utilizes widely accepted methodologies for estimating emissions combined with default data that can be used when site-specific information is not available, including data from the CEC. CalEEMod contains default values for estimating utility consumption (e.g., water, electricity, natural gas) that may be used in the preparation of energy analyses.

Ultimately, construction of each future transportation improvement project and land use development implemented under the proposed project would be temporary, and associated energy use would be relatively small in comparison to the Fresno COG Region's overall use of the State's available energy resources. In addition, inefficient use of fuel (gasoline and diesel) is not anticipated because construction contractors would conserve fuel to minimize their costs on each project. The proposed project is not anticipated to cause, or result in the need for, additional energy facilities or an additional or expanded delivery system. For these reasons, fuel consumption during construction would avoid inefficient, wasteful, or unnecessary energy use to the extent feasible.

Each individual project would be required to adhere to applicable regulations governing energy use during construction. Specifically, the 2025 CALGreen Code includes recycling, construction material, and energy efficiency requirements that would reduce construction-period energy usage to the extent feasible. Beyond these requirements, **Project-Specific Mitigation Measure (PMM) EN-1** would require implementing agencies to incorporate best practices and technological improvements to reduce the consumption of fossil fuels during construction, including reducing idling from construction equipment, modernizing older off-road engines and equipment, limiting use and developing fleet rules for construction equipment, and requiring zero-emission forklifts. Additionally, under **PMM EN-2,** construction bids issued by project sponsors would be required to identify a preference for alternative formulations of cement and

asphalt with reduced GHG emissions, which are less energy-intensive to produce, as well as a preference for recycling of construction waste and debris, as market conditions permit at the time construction is proposed.

Operation. Similar to the construction analysis above, potential energy consumption during operation of each future transportation improvement project and land use development under implementation of the proposed project cannot be meaningfully quantified at this time. However, future projects subject to discretionary approval by the appropriate lead agency are required to comply with the requirements of CEQA. This includes an environmental review to determine if a project would result in wasteful, inefficient, or unnecessary consumption of energy resources during operation. This review could involve the use of energy consumption modeling software such as CalEEMod, which would assist in the determination of impacts and the identification of appropriate project-specific mitigation measures.

As described in Chapter 3.0, Project Description, the Fresno COG selected Scenario C (Enhanced Transit and Smart Growth) as the preferred project scenario. A focal point of this scenario is transit system upgrades/improvements, which would encourage the use of alternative modes of transportation to the automobile. This would reduce the demand for petroleum fuel (transportation energy) resources. While transit services generally utilize electricity (train, light rail, etc.) and petroleum or diesel (bus) for operations and maintenance, this energy use is more efficient and serves a higher volume of passengers than single-occupancy vehicles. In addition, other transportation improvements included in the proposed 2026 RTP/SCS that would improve energy efficiency and reduce transportation energy demand include improved solar lighting at bus stops, electric bus replacement, electric street sweeper replacement, bicycle lane installation, sidewalk/trail improvements, and EV charging for member-agency vehicle fleets. Further, under **Fresno COG Mitigation Measure (FMM) EN-1**, the Fresno COG would encourage member agencies to increase the number of alternative fuel vehicles within agency fleets, as feasible.

Other focal points of Scenario C include sustainable urban growth focused on existing urban centers and established areas and supporting higher-density growth with mixed-use development. These growth patterns would contribute to a reduction in transportation energy demand by locating land uses within walking or biking distance to community resources, including grocery stores. Transit would also be more accessible within urban centers as stations/stops are typically located in busier areas. Therefore, Scenario C would densify land uses in areas with a variety of transportation options and encourage participation in active or public transportation, which would reduce the demand for transportation energy. To further reduce operational energy consumption, **FMM EN-2** would require the Fresno COG to encourage member agencies to alter zoning to maximize homes near employment centers to further encourage active transportation.

The proposed project includes several transportation improvement projects that would involve widening existing roadways, thereby increasing their capacity to accommodate vehicles. Additional capacity generally reduces traffic congestion, which would subsequently reduce vehicle idling and associated fuel consumption. This would potentially offset increased fuel consumption associated with additional motorists from the increased roadway capacity.

Furthermore, future land use developments would be required to adhere to all federal, State, and local requirements for energy efficiency, including the Title 24 standards. Title 24 building energy efficiency standards establish minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building insulation, roofing, and lighting, which would reduce energy usage. It is anticipated that each project would include conservation and sustainability features, as appropriate. Features could include bicycle parking racks, EV charging stations and EV-capable spaces, and passive solar design. Under **FMM EN-3**, the Fresno COG would encourage member agencies to streamline permitting and provide public information to facilitate accelerated construction of solar and wind power.

Additionally, under **FMM EN-4**, the Fresno COG would encourage member agencies to go beyond standard sustainability requirements by adopting their own "Green Building Programs" to promote green building standards beyond those established by Title 24. Each member agency's green building standards may involve provisions for energy efficiency and usage of renewable resources.

Implementing agencies would also be required to consider incorporation of operational best practices and technological improvements that can reduce the consumption of fossil fuels, including replacing gasoline-powered mowers with electric mowers, requiring electric truck refrigerator units, and reducing locomotive fuel use. Under **PMM EN-3**, future transportation improvement projects and land use developments facilitated by the proposed project would be required to incorporate energy-efficient lighting fixtures, traffic lights, and rail signals to reduce operational energy consumption.

As described in Chapter 3.0, Project Description, the design of each transportation improvement project and land use development facilitated by the proposed project is currently unknown. Therefore, this analysis represents a general characterization of reasonably foreseeable impacts that could occur under implementation of the proposed project. With adherence to regulatory energy efficiency requirements and **FMMs EN-1** through **EN-4** and **PMMs EN-1** though **EN-3,** project impacts associated with the wasteful, inefficient, or unnecessary consumption of energy resources would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to the California Department of Transportation (Caltrans), local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with the wasteful, inefficient, or unnecessary consumption of energy resources are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.6.2: Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Significant and Unavoidable Impact. As discussed in Section 4.6.4.2, the most recently adopted CEC energy report is the *2024 Integrated Energy Policy Report Update*.[17] This provides CEC's assessment of a variety of energy issues facing California, many of which require action if the State is to meet its climate, energy, air quality, and other environmental goals while maintaining energy reliability and controlling costs. The *2024 Integrated Energy Policy Report Update* covers a broad range of topics, including implementation of SB 350 (Clean Energy and Pollution Reduction Act of 2015), integrated resource planning, distributed energy resources, transportation electrification, solutions to increase resiliency in the electricity sector, energy efficiency barriers faced by disadvantaged communities, demand response, transmission and landscape-scale planning, the California Energy Demand Preliminary Forecast, the preliminary transportation energy demand forecast, renewable gas (in response to SB 1383), updates on Southern California electricity reliability, the natural gas outlook, and climate adaptation and resiliency.

As discussed in Section 4.6.3.1, in 2023, California's electricity was generated primarily by non-GHG and renewable (56.09 percent) natural gas (43.68 percent), large hydroelectric (12.55 percent), nuclear (8.22 percent), coal (0.12 percent), and other unspecified sources. The proposed project would not adversely affect the State's existing breakdown of electricity sources. Instead, the proposed project would result in increased renewable energy generation through the installation of solar panels under projects already identified in the list of financially constrained projects in the Constrained Program of Projects (reference Appendix B of the RTP/SCS document). as well as under additional streamlining from the Fresno COG pursuant to **FMM EN-3**.

As indicated earlier, energy usage during construction of each transportation improvement project and land use development facilitated by the proposed project would be temporary in nature. Construction-related energy use is anticipated to be relatively small in comparison to the Fresno COG Region's overall use of the State's available energy resources. Further, pursuant to **PMMs EN-1** and **EN-2**, energy-efficient best practices and materials would be incorporated into the construction of future projects where applicable and feasible.

While the large-scale transportation improvement projects identified in the list of financially constrained projects in the Constrained Program of Projects (reference Appendix B of the RTP/SCS document) would consume energy to some extent, these projects would ultimately represent an improvement in energy efficiency through congestion reduction and transit development. Pursuant to **FMM EN-2,** the Fresno COG would encourage member agencies to use zoning changes to create balanced, walkable communities where alternative modes of transportation are feasible and accessible. The proposed project would direct growth toward dense, mixed-use development within urban centers, which would encourage the use of energy-efficient transit and active transportation choices (walking and biking). Under **FMM EN-1**, the Fresno COG would encourage the electrification of member-agency fleet vehicles or otherwise seek alternative fuels. These actions would align with

[17] California Energy Commission (CEC). 2024. *2024 Integrated Energy Policy Report Update.* Docket Number 24-IEPR-01.

California's energy conservation planning actions, particularly the transportation electrification goal covered in the *2024 Integrated Energy Policy Report Update*.

Future projects would be required to adhere to all federal, State, and local requirements for energy efficiency, including the latest Energy Code and Title 24 standards at the time each project is proposed. The Energy Code establishes minimum energy efficiency requirements for new buildings and additions or alterations to existing buildings. Additionally, under **FMM EN-4**, the Fresno COG would encourage member agencies to go beyond standard sustainability requirements by adopting their own "Green Building Programs," which future projects within each member agency's jurisdiction would be required to adhere to where applicable. Lastly, future projects would be required to incorporate the lighting energy efficiency measures identified in **PMM EN-3** when applicable and feasible.

As described in Chapter 3.0, Project Description, the design of each transportation improvement project and land use development facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur under implementation of the proposed project. With adherence to regulatory energy efficiency requirements and **FMMs EN-1** through **EN-4** and **PMMs EN-1** though **EN-3,** project impacts associated with conflicting with or obstructing a State or local plan for renewable energy or energy efficiency would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with conflicting with or obstructing a state or local plan for renewable energy or energy efficiency are considered **significant and unavoidable** for the purposes of this analysis.

4.6.7 Level of Significance Prior to Mitigation

Prior to mitigation, implementation of the proposed project would have potentially significant impacts related to energy.

4.6.8 Mitigation Measures

4.6.8.1 Fresno COG Measures

The following mitigation measures would be applied on a regional scale by the Fresno COG to reduce potentially significant impacts related to energy to the extent feasible:

FMM EN-1 The Fresno COG shall encourage member agencies to increase the number of alternative fuel vehicles (i.e., vehicles not powered strictly by gasoline or diesel fuel) both in publicly owned vehicles, as well as those owned by franchisees of these agencies, such as trash haulers, green waste haulers, street sweepers, and curbside recyclable haulers.

FMM EN-2 The Fresno COG shall encourage member agencies to alter zoning to improve the jobs/housing balance, create communities where people live closer to work, and offer alternatives to personal automobile travel (bike, walk, and transit).

FMM EN-3 The Fresno COG shall encourage member agencies to streamline permitting and provide public information to facilitate accelerated construction of solar and wind power.

FMM EN-4 The Fresno COG shall encourage member agencies to adopt a "Green Building Program" to promote green building standards that go beyond minimum mandatory requirements, such as achieving California Green Building Standards Code (CALGreen) Tier 1 or Tier 2 measures. Green building standards include energy efficiency, usage of renewable resources, and reduced waste generation.

4.6.8.2 Project-Specific Measures

The following mitigation measures would be applied to future transportation improvement and land use development projects to reduce potentially significant impacts related to energy to the extent feasible:

PMM EN-1 Implementing agencies shall consider mitigation measures to reduce impacts to the wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation, as applicable and feasible, as follows:

- Expanding light-duty vehicle retirement programs;
- Increasing commercial vehicle fleet modernization;
- Implementing driver training modules on fuel consumption;
- Replacing gasoline-powered mowers with electric mowers;
- Reducing idling from construction equipment;
- Incentivizing alternative fuel vehicles and equipment;
- Developing infrastructure for alternative-fueled vehicles;
- Implementing truck idling rules, devices, and truck-stop electrification;
- Requiring electric truck refrigerator units;
- Reducing locomotives' fuel use;
- Modernizing older off-road engines and equipment;
- Encouraging freight mode shift;
- Limiting use of and developing fleet rules for construction equipment; and
- Requiring zero-emission forklifts.

PMM EN-2 Implementing agencies shall consider mitigation measures to reduce impacts to the wasteful, inefficient, or unnecessary consumption of energy resources, during construction bid solicitations, as applicable and feasible:

Include the use of alternative formulations of cement and asphalt to the extent they are available at a reasonable cost in the marketplace. Solicitations shall include the recycling of construction waste and debris.

PMM EN-3 Implementing agencies shall consider mitigation measures to reduce impacts to the wasteful, inefficient, or unnecessary consumption of energy resources, during the design and approval, as applicable and feasible:

- Lighting fixtures shall achieve energy reductions beyond an estimated baseline energy use for such lighting.
- Light-emitting diode (LED) technology shall be used for all new or replaced traffic lights, rail signals, and other new development lighting features compatible with LED technology.

4.6.9 Level of Significance After Mitigation

While implementation of **FMMs EN-1** through **EN-4** and **PMMs EN-1** through **EN-3** would help reduce impacts related to energy to the extent feasible, the analysis presented in this section is general in nature. Given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future transportation improvement projects and land use developments, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. As appropriate and feasible, the Fresno COG will implement or encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts. Nevertheless, impacts related to energy are considered **significant and unavoidable** for the purposes of this analysis.

4.6.10 Cumulative Impacts

As defined in Section 15130 of the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for energy. The cumulative impact area for electricity resources consists of the PG&E service area and the SCE service area, given that both companies provide electrical service to the Fresno COG Region. The cumulative area for natural gas is the PG&E service area, given that PG&E provides all natural gas services within the Fresno COG Region.

Although the proposed project would prioritize transit system upgrades/improvements, which would encourage the use of alternative modes of transportation to the automobile, some future projects under Scenario C could also include capacity-enhancing roadway improvements that add new lane miles to maintain system performance and support freight movement. Transit system upgrades/improvements supporting alternate modes of transportation would reduce transportation-related energy consumption by lowering demand for single-passenger vehicle trips. Additionally, roadway capacity projects may reduce localized congestion and vehicle idling, allowing vehicles to operate at more efficient speeds and further reducing transportation-related energy consumption. By promoting transit on a regional scale, the proposed project could have a positive cumulative effect on other projects near transit infrastructure, further reducing the frequency of single-passenger vehicle trips and associated transportation energy consumption.

Cumulative impacts may occur for projects located away from alternative transportation. Increased energy consumption may result from an increase in single-passenger vehicles, which could be cumulatively considerable when evaluated in for the proposed project. However, projects in the Fresno COG Region must comply with the requirements of CEQA. The lead agencies for these projects would quantify energy consumption during construction and operation. Based on the extent of identified impacts, cumulative projects would implement standard conditions and/or mitigation measures (as necessary) to reduce significant impacts.

Although future transportation improvement projects and land use developments facilitated by the proposed project could result in an increased demand for electricity alongside cumulative projects, this increase is not anticipated to require SCE or PG&E to expand or construct infrastructure that could cause substantial environmental impacts. PG&E and SCE demand forecasts generally account for growth resulting from cumulative development within their respective service areas. Further, as with the proposed project, cumulative projects would be required to comply with various federal and State laws and regulations aimed at reducing VMT and improving energy efficiency in buildings, equipment, and appliances. As energy requirements become more stringent over time and energy-efficient technology advances, increased energy efficiency would contribute to reductions in energy consumption in the cumulative impact area over time. Additionally, utility companies are required to increase their renewable energy sources to meet the RPS mandate of 60 percent renewable supplies by 2030. PG&E and SCE plan to continue to provide reliable service to their customers and upgrade their distribution systems as necessary to meet future demand.

As stated in Section 4.6.9, the impacts of the proposed project on energy are considered significant and unavoidable given the programmatic nature of the proposed project, the scale of the Fresno COG Region, and the inability of the Fresno COG to enforce project-specific mitigation or make land use approvals. Because the proposed project would result in significant adverse environmental impacts, its impacts would represent an incremental contribution to the environmental impacts in the cumulative impact study area, ultimately leading to a cumulatively considerable impact related to energy.

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4.7 GEOLOGY AND SOILS

This section of the Draft Program Environmental Impact Report (PEIR) discusses the existing geology and soils setting within Fresno Council of Governments (COG) Region and provides an analysis of the potential impacts anticipated with implementation of the proposed 2026 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (proposed project) related to geology and soils. Specifically, this section addresses potential impacts related to the Fresno COG Region's geology and soils, including exposure of people or structures to seismic hazards such as fault rupture, strong ground shaking, or landslides; risks associated with unstable, expansive, or corrosive soils; soil erosion or degradation; impacts to grading, foundations, or drainage; and the potential for the project to disturb or destroy unique paleontological resources or significant geologic features.

4.7.1 Scoping Process

Potential impacts related to geology and soils were not identified during the public scoping meeting held for the proposed project on May 28, 2025.

The Fresno COG received no comment letters in response to the Notice of Preparation (NOP) issued for the proposed project between May 13 and June 12, 2025, concerning the proposed project's potential impacts related to geology and soils.

4.7.2 Methodology

The area encompassed by the Fresno COG Region is too large to be accurately characterized in a geotechnical report or other related report typically used to support California Environmental Quality Act (CEQA) analysis. As a result, the analysis presented in this section is based in part on information obtained from the County of Fresno's (County) General Plan,[1] General Plan PEIR,[2] Hazard Mitigation Plan (HMP),[3] and other background literature research. The information obtained from these sources was utilized to analyze the potential for impacts under future transportation improvement and land use development projects facilitated by the proposed project.

Subsequent project-specific CEQA documents may be required to further analyze the conditions related to geology and soils at each individual project site, determine the magnitude of potential impacts, and identify appropriate project-specific mitigation measures.

4.7.2.1 Key Concepts

Surface Rupture. Surface rupture is the breakage of ground along the surface trace of a fault.

Ground Shaking. When movement occurs along a fault, accumulated energy is released in the form of ground shaking.

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1 County of Fresno. 2024. *Fresno County General Plan Policy Document. General Plan Review*. February.

2 County of Fresno. 2023. *Fresno County General Plan Review and Zoning Ordinance Update*. *Program Environmental Impact Report Public Review.* April.

3 County of Fresno. 2024. *2024 Fresno County Hazard Mitigation Plan*. May.

Liquefaction. Liquefaction is typified by a loss of shear strength in the affected soil layer, thereby causing the soil to act as a viscous (thick) liquid. Liquefaction and dynamic settlement of soils can be caused by strong vibration during earthquakes. Liquefaction commonly occurs when three conditions are present simultaneously: (1) high groundwater; (2) relatively loose, cohesion-lacking, primarily sandy soil; and (3) earthquake-generated seismic waves.

Landslides. Landslides occur when an unstable slope results in downslope movement of rock, soil, or other debris.

Subsidence. Subsidence refers to vertical displacement of land. Common causes of land subsidence are pumping water, oil, and gas from underground reservoirs; dissolution of limestone aquifers (sinkholes); collapse of underground mines; drainage of organic soils; and initial wetting of dry soils (hydrocompaction). Subsidence is also caused by heavy loads generated by large earthmoving equipment.

Lateral Spreading. Lateral spreading typically occurs as a form of horizontal displacement of relatively flat-lying alluvial material toward an open or "unconfined" face, such as an open body of water, channel, or excavation. In soils, this movement is generally due to failure along a weak plane and is often associated with liquefaction.

Expansive Soils. Expansive soils contain types of clay minerals that occupy considerably more volume when they are wet or hydrated than when they are dry or dehydrated. Volume changes associated with changes in the moisture content of near-surface expansive soils can cause uplift or heave of the ground when they become wet or, less commonly, cause settlement when they dry out.

Paleontological Resources. The fossilized remains of previously living organisms, including plants and animals typically found in geologic deposits or bedrock beneath soil layers.

4.7.3 Existing Environmental Setting

This section describes the existing environmental setting of the Fresno COG Region pertaining to geology and soils.

4.7.3.1 Geologic Conditions

Geologic features in the Fresno COG Region range from flat agricultural land in the San Joaquin Valley to steep mountains in the Sierra Nevada mountains. The region is located in the Coast Ranges, Great Valley, and Sierra Nevada Geomorphic Provinces.[4] The Coast Ranges Province is characterized by northwest-trending mountain ranges and valleys composed of Mesozoic and Cenozoic sedimentary, igneous, and metamorphic strata. The eastern Coast Ranges Province is characterized by strike ridges and valleys in the Upper Mesozoic strata. The Great Valley Province is an alluvial plain characterized by two distinct sediment layers, with the upper layer originating from the recent Holocene Epoch to Oligocene Epoch (37 to 24 million years ago) and the lower layer originating from the Pliocene Epoch (5.3 to 1.6 million years ago) to the Eocene Epoch (58 to 37 million years ago). The Sierra Nevada

[4] County of Fresno. 2023. *General Plan Review and Zoning Ordinance Update Program Environmental Impact Report, Public Review Draft.* April. Page 4.7-1.

Province is characterized by high, rugged slopes on its eastern side and gentler slopes on its western side. While most of the granitic rocks of this Province are Mesozoic Era (approximately 248 to 65 million years ago), these granitic rocks are partially capped by Cenozoic Era, Tertiary Period (between 65 to 1.6 million years ago) rocks.

The elevation of the Fresno COG Region ranges from approximately 100 feet above mean sea level (amsl) in the central San Joaquin Valley portion to over 14,000 feet amsl in the eastern portion adjacent to the Sierra Nevada mountains.[5]

Based on geologic mapping conducted in 2010, the region contains 23 distinct geologic units, as shown on Figure 4.7-1 and listed below:[6]

- **Q**—Quaternary alluvium, lake, playa, and terrace deposits;
- **Qg**—Quaternary glacial till;
- **Qv**—Quaternary volcanic flow deposits;
- **QPc**—Pliocene to Pleistocene continental sedimentary rocks;
- **Tc**—Tertiary non-marine sedimentary rocks;
- **Tv**—Tertiary volcanic flow rocks;
- **Mc**—Miocene non-marine sedimentary rocks;
- **E**—Eocene marine sedimentary rocks;
- **Ec**—Eocene non-marine sedimentary rocks;
- **Mzv**—Mesozoic volcanic rocks;
- **Ku**—Upper Cretaceous marine sedimentary rocks;
- **Kl**—Lower Cretaceous marine sedimentary rocks;
- **KJf**—Franciscan Complex;
- **J**—Jurassic marine sedimentary rocks;
- **ls**—Paleozoic or Mesozoic limestone;
- **Pm**—Permian sedimentary marine sedimentary rocks;
- **Pz**—Paleozoic marine sedimentary rocks;
- **grMz**—Mesozoic granitic rocks;
- **um**—Mesozoic ultramafic rocks;
- **gb**—Mesozoic gabbroic rocks;
- **gr-m**—Mesozoic to Precambrian granitic and metamorphic rocks;
- **m**—undivided pre-Cenozoic metamorphic rocks; and
- **mv**—undivided pre-Cenozoic metavolcanic rocks.

[5] County of Fresno. 2024. *Fresno County, California Hazard Mitigation Plan*. May. Page 134.

[6] California Department of Conservation (DOC). Mines Online. Website: https://maps.conservation.ca.gov/mol/index.html (accessed December 1, 2025).

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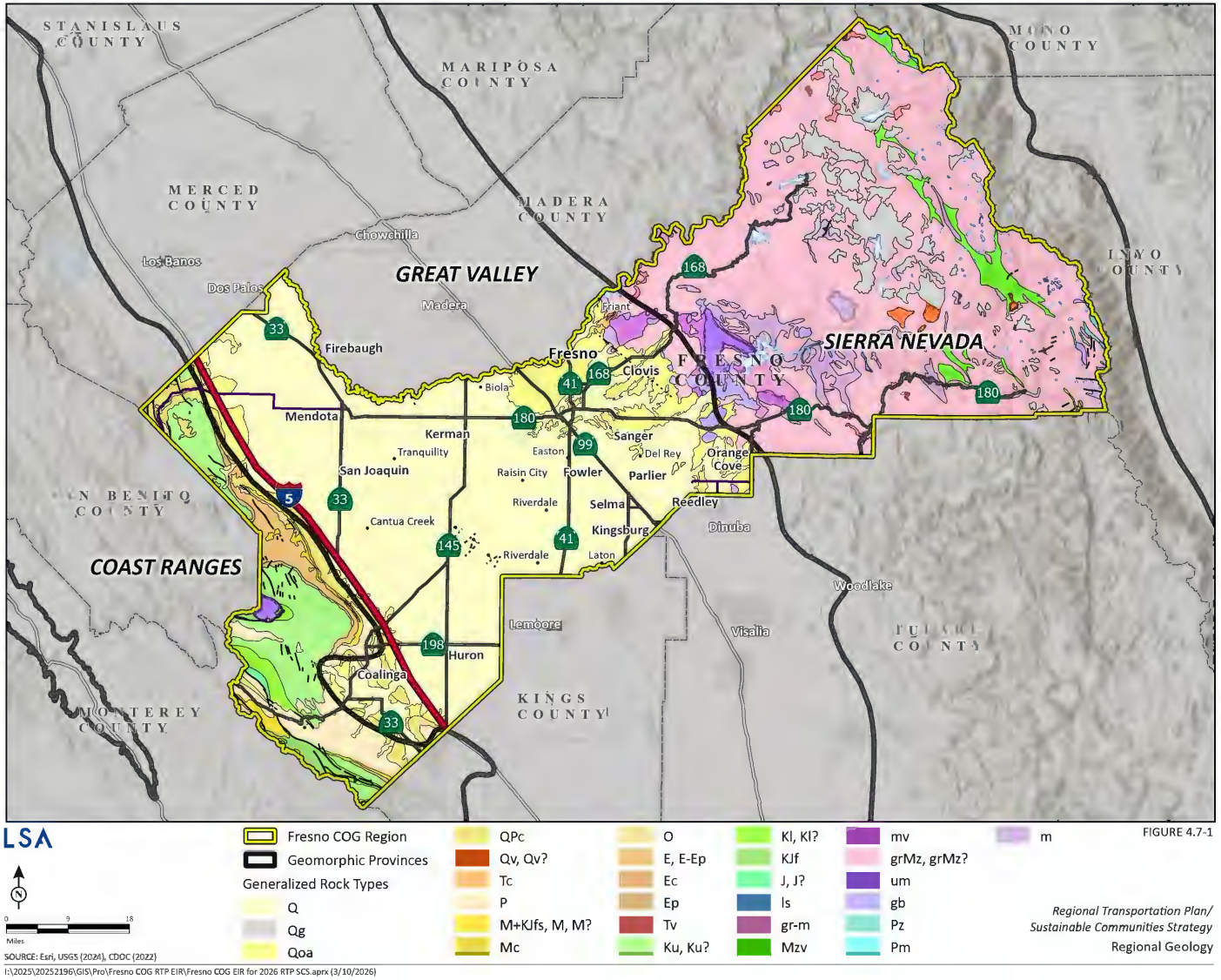


FIGURE 4.7-1

Regional Transportation Plan/ Sustainable Communities Strategy
Regional Geology

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4.7.3.2 Seismic Conditions

Seismic hazards include groundshaking, surface fault ruptures, and soil liquefaction. The majority of the Fresno COG Region is not located in an earthquake fault zone as designated by the Alquist-Priolo Earthquake Fault Zoning Act. However, there are a number of active and potentially active faults in and adjacent to the Fresno COG Region. An active fault is defined by the United States Geological Survey (USGS) as a fault that is likely to have another earthquake sometime in the future.[7] Faults are commonly considered to be active if they have moved once or more in the last 10,000 years.

As shown on Figure 4.7-2, the western portion of the Fresno COG Region contains two potentially active faults: the Nunez fault and the Ortigalita fault.[8] The Nunez fault is a historically active and relatively minor oblique-slip fault located in the southwest part of the Fresno COG Region, northwest of Coalinga. Notably, in 1983, a 6.7 magnitude earthquake approximately 7.5 miles northeast of Coalinga resulted in substantial damage to buildings and numerous injuries.[9] The Ortigalita fault is a Quaternary active fault complex zone of reverse, normal, and right-lateral strike-slip faults located in the northwesternmost corner of the Fresno COG Region in the Panoche Valley area. The area immediately surrounding each fault are mapped as State of California Earthquake Fault-Rupture Hazard Zone, as defined by the State of California in the Alquist-Priolo Earthquake Fault Zone Act.[10]

The Fresno COG Region also contains the Clovis fault, which is an inactive concealed fault located approximately 6 miles east of Clovis. Given its inactive status, this fault does not require investigation in accordance with the Alquist-Priolo Earthquake Fault Zoning Act.

Active fault zones also exist just outside the Fresno COG Region, including the San Andreas Fault Zone to the west and the Sierra Nevada Fault Zone to the east. The San Andreas Fault Zone is considered active and trends northwest through the Coastal Ranges roughly parallel to the western boundary of the Fresno COG Region, reaching within 2 miles of the County boundary. The Sierra Nevada Fault Zone, which contains faults considered active, is located just east of the Fresno COG Region, along the eastern slope of the Sierra Nevada.

4.7.3.3 Seismic and Geologic Hazards

The following section provides a brief description of each seismic or geologic hazard and the existing conditions of the Fresno COG Region related to each hazard.

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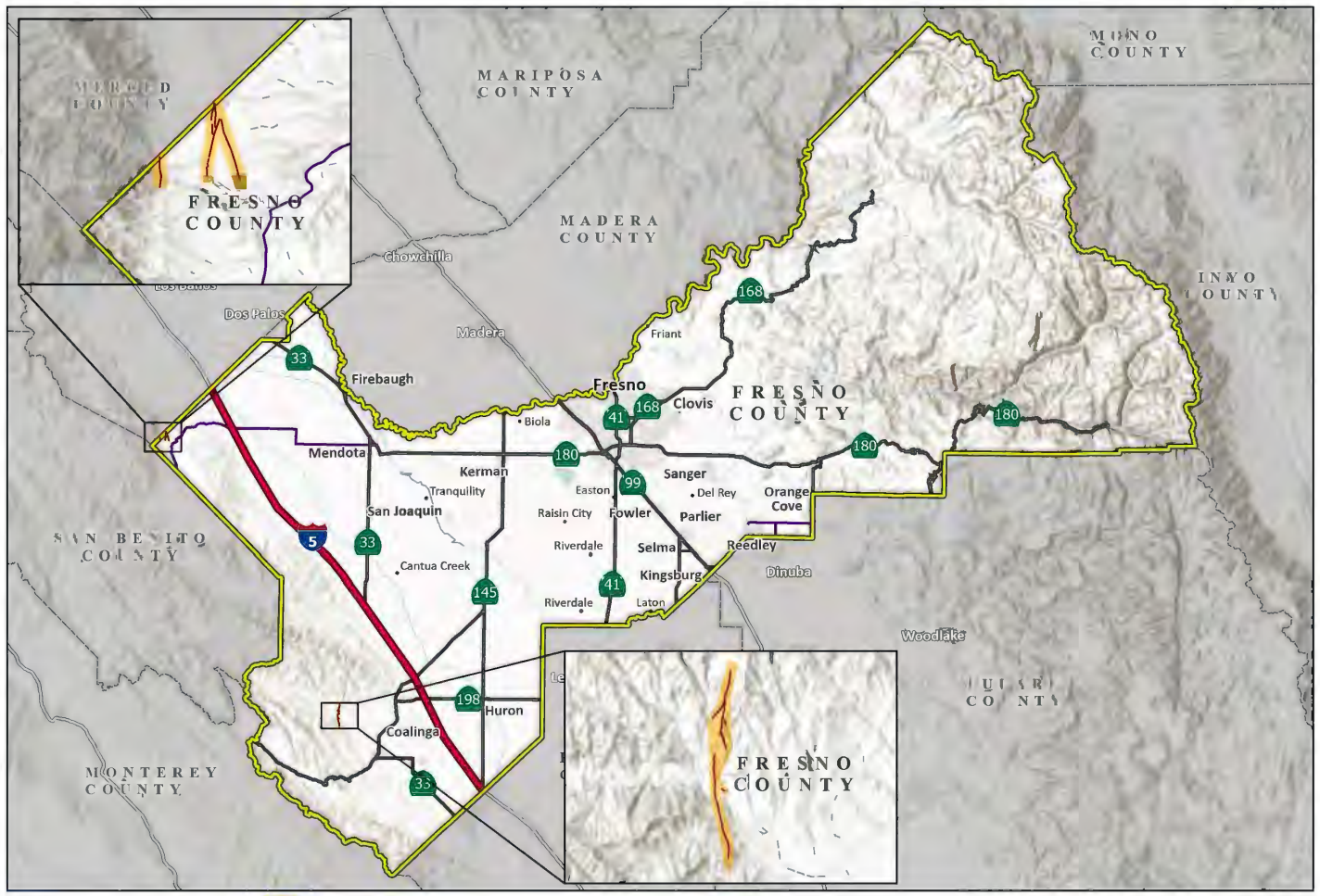
7 United States Geological Survey (USGS). n.d. Earthquake Hazards Program. Website: https://www.usgs.gov/glossary/earthquake-hazards-program (accessed December 1, 2025).

8 United States Geological Survey (USGS). 2022. U.S. Quaternary Faults. September 27. Website: https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf (accessed December 1, 2025).

9 United States Geological Survey (USGS). 1983. The Coalinga, California, Earthquake of May 2, 1983. Website: https://pubs.usgs.gov/pp/1487/report.pdf (accessed March 13, 2026).

10 California Geological Survey. 2024. Earthquake Zones of Required Investigation. November 21. Website: https://maps.conservation.ca.gov/cgs/informationwarehouse/eqzapp/ (accessed December 1, 2025).

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LSA

Fresno COG Region
Alquist Priolo Fault Zones
Alquist-Priolo Fault Traces

0 9 18
Miles

SOURCE: Esri, USGS (2024), CDOC (2025)
I:\2025\20252196\GIS\Pro\Fresno COG RTP EIR\Fresno COG EIR for 2026 RTP SCS.aprx (3/11/2026)

FIGURE 4.7-2

Regional Transportation Plan/Sustainable Communities Strategy
Regional Faulting and Alquist-Priolo Zones

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Surface Rupture. As previously discussed, the Fresno COG Region contains two Alquist-Priolo Earthquake Fault Zones, or regulatory zones surrounding surface traces of active faults within California in order to reduce losses from surface fault rupture.[11]

Ground Shaking. Ground shaking is commonly described in terms of peak ground acceleration as a fraction of the acceleration of gravity (g), or by using the Modified Mercalli (MM) Intensity Scale. The MM Intensity Scale is a descriptive method involving 12 levels of intensity. Table 4.7-A, below, illustrates MM intensity ranges from Level I (shaking that is not felt) to Level XII (total damage). MM intensities ranging from IV to X could cause moderate to significant structural damage, as detailed in Table 4.7-A, below. The extent of ground shaking associated with an earthquake is dependent upon the size of the earthquake and the geologic material of the underlying area. Based on the locations of the seismic feature discussed in Section 4.7.3.2, above, greater ground shaking potential is present in the western part of the Fresno COG Region. According to the Fresno County HMP, the western and northeastern portions of the Fresno COG Region are the most at risk of damaging ground shaking.[12] However, the HMP also notes that the valley portion of the Fresno COG Region is located on alluvial deposits, which tend to experience greater ground shaking intensities than areas located on hard rock.[13] Therefore, structures in the valley areas are expected to suffer greater damage from ground shaking than those located in the foothill and mountain areas.

Liquefaction. No specific regional assessments to identify liquefaction hazards have been performed. However, areas with shallow groundwater are generally located in the San Joaquin Valley, where soil types are mostly coarse or high in clay content and thus not conducive to liquefaction. Areas in western and eastern parts of the Fresno COG Region, which are subject to greater ground shaking, generally have groundwater at greater depths.[14]

Lateral Spreading. Because lateral spreading is often associated with liquefaction, it is anticipated that portions of the Fresno COG Region susceptible to liquefaction are also susceptible to lateral spreading.

Landslide. Landslide hazard areas in the Fresno COG Region include foothill and mountain areas of the Sierra Nevada mountains where fractured and steep slopes are present, areas of the Coastal Ranges where less consolidated or weathered soils overlie bedrock, and areas along the San Joaquin River where accelerated erosion occurs. Areas along State Route (SR-)168 in the eastern portion of the Fresno COG Region and along SR-198 in the western portion of the Fresno COG Region have been identified as areas potentially affected by landslides.[15]

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11 California Department of Conservation (DOC). Alquist-Priolo Earthquake Fault Zones. Website: https://www.conservation.ca.gov/cgs/alquist-priolo (accessed December 1, 2025).

12 County of Fresno. 2024. Fresno County, *California Hazard Mitigation Plan.* May.

13 Ibid. Page 60.

14 County of Fresno. 2024*. General Plan Background Report*. February. Page 8-5.

15 Ibid. Page 8-6.

Table 4.7.A: Modified Mercalli Intensity Scale

Scale[1]	Shaking	Description
I	Not Felt	Not felt except by very few under especially favorable conditions.
II	Weak	Felt only by a few persons at rest, especially on upper floors of buildings.
III	Weak	Felt quite noticeably by people indoors, especially on the upper floors of buildings. Many do not recognize it as an earthquake. Standing automobiles may rock slightly. Vibration similar to the passing of a truck. Duration can be estimated.
IV	Light	Felt indoors by many, outdoors by few. Some awakened. Dishes, windows, and doors disturbed; walls make cracking sounds. Chandeliers and indoor objects shake noticeably. The sensation is more like a heavy truck striking building.
V	Moderate	Felt by nearly everyone; many awakened. Some dishes, windows, etc., broken; a few instances of fallen plaster; unstable objects overturned. Disturbances of trees, poles, and other tall objects sometimes noticed. Pendulum clocks may stop.
VI	Strong	Felt by all; many frightened and run outdoors. Some heavy furniture moved; a few instances of fallen plaster or damaged chimneys. Damage slight.
VII	Very Strong	Damage negligible in buildings of good design and construction; slight to moderate in well-built, ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving motor cars.
VIII	Severe	Damage slight in specially designed structures; considerable damage in ordinary substantial buildings, with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, and walls. Heavy furniture overturned.
IX	Violent	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations.
X	Extreme	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent.

Source: United States Geological Survey (USGS). n.d. Modified Mercalli Intensity Scale. Earthquake Hazards Program. Website: https://www.usgs.gov/media/images/modified-mercalli-intensity-scale (accessed March 2, 2026).

[1] The original MMI scale goes to XII, but those values are no longer reported or described by the USGS.

Expansive Soils. Expansive soils are present along the Friant-Kern Canal Foothills in Kings Canyon National Park and along Fresno Slough from Madera County to Kings County.[16]

Subsidence. Subsidence has been known to occur in the Central Valley due to groundwater pumping for agricultural and drinking water combined with the surface weight of development. The most common areas for ground subsidence to occur within the Fresno COG Region are areas where the groundwater basin has been subject to overdraft and long-term recharge is inadequate to maintain the former groundwater levels, resulting in underground voids. The eastern portion of the region has historically seen the most subsidence, potentially reaching up to 30 feet in the northeastern portion of the Fresno COG Region. However, current legislation requiring jurisdictions to halt overdraft and ensure sustainable pumping (refer to Section 4.10, Hydrology and Water Quality, of this PEIR for more information) can reduce the potential for further subsidence.

[16] County of Fresno. 2024. *General Plan Background Report*. February. Page 8-6.

4.7.3.4 Paleontological Resources

Paleontological resources are the fossilized remains of previously living organisms, including plants and animals, and are found in geologic deposits or bedrock beneath soil layers. Paleontological sensitivity refers to the potential for a geologic unit to produce scientifically significant fossils.

Paleontological resources have been found throughout the Fresno COG Region and include scientifically significant resources. A search of the University of California Museum of Paleontology's online collections database[17] reveals over 2,200 known fossil localities in the Fresno COG Region.

Areas of the Fresno COG Region recognized as fossil-rich are the Plio-Pleistocene alluvial deposits in the center of the region and the Cretaceous marine deposits in the western part of the Fresno COG Region near Coalinga.[18]

4.7.4 Regulatory Setting

This section includes applicable federal, State, regional, and local policies and regulations.

4.7.4.1 Federal Regulations

There are no federal policies or regulations related to geology and soils that are applicable to the proposed project.

4.7.4.2 State Regulations

Alquist-Priolo Earthquake Fault Zoning Act (1972). The Alquist-Priolo Earthquake Fault Zoning Act of 1972 and updates (California Public Resources Code [PRC], Section 2621, et seq.) is the principal California State guidance to prevent the construction of habitable structures on the surface trace of active earthquake faults. If an active fault is found, a structure for human occupancy must be set back from the fault (generally a 50-foot setback). The Alquist-Priolo Earthquake Fault Zoning Act only addresses the hazard of surface fault rupture; it does not consider other earthquake hazards.

Seismic Hazard Mapping Act (1990). The Seismic Hazard Mapping Act (SHMA) was adopted by the State in 1990 to address the potential hazards posed by secondary effects of seismic activity, including strong ground shaking, soil liquefaction, and associated ground failure and seismically induced landslides. The California Geological Survey (CGS) prepares and provides local governments with seismic hazard zone maps that identify areas susceptible to amplified shaking, liquefaction, earthquake-induced landslides, and other ground failures. The seismic hazard zones are referred to as "zones of required investigation" because site-specific geological investigations are required for construction projects within these areas. Before a project can be permitted, a geologic investigation, evaluation, and written report must be prepared by a licensed geologist to demonstrate that the potential hazards can be successfully mitigated.

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17 University of California Museum of Paleontology. UCMP Locality Search. Website: https://ucmpdb.berkeley.edu/loc.html (accessed December 1, 2025).

18 County of Fresno. 2024. *General Plan Background Report*. February. Page 7-137.

California Building Code (within California Code of Regulations). Current law states that every local agency enforcing building regulations, such as cities and counties, must adopt the provisions of the California Building Code (CBC) within 180 days of its publication. The publication date of the CBC is established by the California Building Standards Commission, and the code is also known as Title 24, Part 2, of the California Code of Regulations (CCR). The 2025 CBC took effect on January 1, 2026. Local jurisdictions often adopt local, more restrictive amendments that are based on local geographic, topographic, or climatic conditions. These codes provide minimum standards to protect property and public safety by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements to mitigate the effects of seismic shaking and adverse soil conditions.

The CBC contains provisions for earthquake safety based on factors including occupancy type, the types of soil and rock on site, and the strength of ground shaking with a specified probability at a site. The seismic ratings used in Section 1613.2 of the CBC are derived from the International Building Code specifications.

Requirements for Geotechnical Investigations. Requirements for geotechnical investigations for subdivisions requiring tentative and final maps are provided in the California Health and Safety Code, Sections 17953 through 17955, and in Section 1802 of the CBC. Testing of samples from subsurface investigations is required, such as from borings or test pits. Studies must be done as needed to evaluate slope stability, soil strength, position and adequacy of load-bearing soils, the effect of moisture variation on load-bearing capacity, compressibility, liquefaction, differential settlement, and expansiveness.

California Public Resources Code Section 5097.5. Section 5097.5 of the PRC provides for the protection of cultural and paleontological resources and prohibits the removal, destruction, injury, or defacement of archaeological and paleontological features on any lands under the jurisdiction of State or local authorities. Specifically, PRC Section 5097.5 states the following:

- A person shall not 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, rock art, 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.

- 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.

A violation of this section is a misdemeanor.

4.7.4.3 Regional Regulations

There are no regional regulations that apply to the proposed project with respect to geology and soils.

4.7.4.4 Local Regulations

Local General Plans. The Fresno COG Region contains Fresno County and 15 incorporated cities, each with an individual general plan prepared pursuant to California Government Code Section 65300. Each general plan contains goals and policies related to geology and soils within the particular jurisdiction. Although general plan element titles may vary, this information is typically found within the General Plan Safety Element, or equivalent.

Local Municipal Codes. Sections 17922 and 17951–17958.7 of the California Health and Safety Code require cities and counties to adopt and enforce the current edition of the CBC. While the CBC provides minimum standards for building design in the State, local codes are permitted to be more restrictive than the CBC, but not less restrictive. Fresno County and cities in the Fresno COG Region may have adopted local codes that are at least as restrictive as CCR Title 24, Part 2, of the 2025 CBC. Future transportation and land use development projects facilitated by the proposed project would adhere to the seismic and building standards in the relevant jurisdiction's Municipal Code and the CBC.

Local Hazard Mitigation Plans. Fresno County and cities within the Fresno COG Region may have adopted Local HMPs to identify each jurisdiction's hazards, review and assess past disaster occurrences, estimate the probability of future occurrences, and set goals to mitigate potential risks to reduce or eliminate long-term risks to people and property from natural and man-made hazards. These plans are prepared pursuant to the requirements of the Disaster Mitigation Act of 2000 to achieve eligibility and potentially secure mitigation funding through the Federal Emergency Management Agency (FEMA) Flood Mitigation Assistance, Pre-Disaster Mitigation, and Hazard Mitigation Grant Programs.

4.7.5 Thresholds of Significance

The following thresholds of significance are based on Appendix G of the *State CEQA Guidelines*. Based on these thresholds, implementation of the proposed project would have a significant adverse impact with respect to geology and soils if it would:

Threshold 4.7.1(i): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42;

Threshold 4.7.1(ii): Directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking;

Threshold 4.7.1(iii): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction;

Threshold 4.7.1(iv): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides;

Threshold 4.7.2: Result in substantial soil erosion or the loss of topsoil;

Threshold 4.7.3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;

Threshold 4.7.4: Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property;

Threshold 4.7.5: Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water; or

Threshold 4.7.6: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

4.7.6 Project Impacts

The following discussion describes the potential impacts related to geology and soils that could result from implementation of the proposed project.

Threshold 4.7.1(i): Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?

Significant and Unavoidable Impact. The County HMP[19] states that most of the Fresno COG Region is situated within an area of relatively low seismic activity, which would indicate low levels of fault rupture. However, as described above in Section 4.7.3.3, the Fresno COG Region contains two Alquist-Priolo Earthquake Fault Zones. These areas represent regulatory zones surrounding surface traces of active faults. The Alquist-Priolo Earthquake Fault Zoning Act prohibits the location of structures for human occupancy across active faults. Further, any land use development project proposed within an Alquist-Priolo Earthquake Fault Zone would be required to prepare a surface fault rupture hazard investigation by the applicable jurisdiction.

In order to minimize potential loss, injury, or death associated with surface fault rupture for future transportation improvement projects and land use developments located within or across active fault zones, implementing agencies would be required to ensure that each project complies with design requirements published by the CGS, as well as local, regional, State, and federal design criteria for construction of projects in seismic areas. Further, all new development projects, regardless of location within an Alquist-Priolo Earthquake Fault Zone, are required to comply with the provisions of the current CBC at the time the development is proposed. The CBC contains provisions for earthquake

[19] County of Fresno. 2024. Fresno County, *California Hazard Mitigation Plan*. May.

safety based on factors including occupancy type, the types of soil and rock on site, and the strength of ground shaking with a specified probability at a site.

Further, the California Department of Transportation (Caltrans) Geotechnical Manual requires the preparation of a Surface Fault Rupture Displacement Hazard Analysis (SFRDHA) in any case where a transportation facility is proposed within an Alquist-Priolo Earthquake Fault Zone or within 1,000 feet of an unzoned fault that is Holocene (up to 11,000 years) or younger in age.[20] The SFRDHA would include an in-depth literature review, site reconnaissance, and mapping of fault geomorphic expressions to accurately locate the fault with respect to the proposed development. In cases where there is a confirmed fault rupture hazard, the SFRDHA will provide magnitude and orientation of anticipated surface displacement (ground rupture, sinking, or uplift) relative to the proposed structure.

Pursuant to **Project-Specific Mitigation Measure (PMM) GEO-1,** future transportation improvement projects and land use development projects are required to be evaluated in design-level geotechnical evaluations at the time they are proposed. Each geotechnical evaluation would include a discussion of site-specific seismic hazards and design recommendations to safeguard proposed structures against the effects of potential surface fault rupture. These geotechnical evaluations would be utilized in subsequent project-specific CEQA documents to determine the magnitude of surface fault rupture impacts and to identify appropriate potential mitigation for each individual project.

As described in Chapter 3.0, Project Description, the design of each transportation improvement project and land use development facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. With adherence to the CBC, the Caltrans Geotechnical Manual, and **PMM GEO-1**, project impacts associated with fault rupture would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with fault rupture are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.7.1(ii): Would the project directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

Significant and Unavoidable Impact. As described under Threshold 4.7.1(i), above, most of the Fresno COG Region is situated in an area of relatively low seismic activity. According to the Fresno County HMP, faults and fault systems are located along the eastern and western boundaries of the Fresno

[20] California Department of Transportation (Caltrans). 2022. Geotechnical Manual: Fault Rupture. October. Website: https://dot.ca.gov/-/media/dot-media/programs/engineering/documents/geotechnical-services/202210-gm-faultrupture-a11y.pdf (accessed March 4, 2026).

COG Region. Therefore, these portions of the Fresno COG Region are the most at risk of damaging seismic ground shaking.[21] Other regional faults also have the potential to produce high-magnitude earthquakes throughout the Fresno COG Region.[22]

The extent of ground shaking associated with an earthquake is dependent upon the size of the earthquake and the geologic material of the underlying area. For example, the HMP notes that the valley portion of the Fresno COG Region is located on alluvial deposits, which tend to experience greater ground shaking intensities than areas located on hard rock.[23] Therefore, structures in the valley areas could suffer greater damage from ground shaking than those in the foothill and mountain areas. Based on this, the proposed project would have the potential to directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death as a result of strong seismic ground-shaking.

Design and construction of future transportation improvement projects and land use developments must conform with applicable provisions of the current CBC at the time they are proposed. State law requires the design and construction of new structures to comply with current CBC requirements, which require that all developments be constructed to address general geologic, seismic (including ground shaking), and soil constraints for new buildings, including design features to withstand anticipated ground shaking.

Additionally, Caltrans has established Seismic Design Criteria[24] to establish minimum design requirements for bridges and related highway structures to withstand seismic activity, such as seismic ground shaking. Where applicable, transportation improvement projects facilitated by the proposed project would be required to adhere to the requirements set forth in the Caltrans Seismic Design Criteria, which would provide safeguards against structural failure due to ground shaking.

Additionally, pursuant to **PMM GEO-1**, future transportation improvement projects and land use development projects are required to prepare geotechnical evaluations during their design phase. These evaluations would include a discussion of site-specific seismic hazards and design recommendations to safeguard proposed structures against the effects of surface fault rupture. These geotechnical evaluations would be utilized in subsequent project-specific CEQA documents to determine the magnitude of seismic ground shaking impacts and identify appropriate potential project-specific mitigation measures.

As described in Chapter 3.0, Project Description, the design of each transportation improvement project and land use development facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur under implementation of the proposed project. With adherence to the CBC, the Caltrans Seismic Design Criteria, and **PMM GEO-1**, project impacts associated with seismic ground

[21] County of Fresno. 2024. Fresno County, *California Hazard Mitigation Plan.* May.
[22] Ibid. Page 60.
[23] Ibid. Page 60.
[24] California Department of Transportation (Caltrans). 2025. Seismic Design Criteria, Version 2.1. January. Website: https://dot.ca.gov/-/media/dot-media/programs/engineering/documents/seismicdesigncriteria-sdc/202501seismicdesigncriteria21a11y.pdf (accessed March 5, 2025).

shaking would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with seismic ground shaking are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.7.1(iii): Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

Significant and Unavoidable Impact. As described in Section 4.7.2.1, liquefaction is a transformation of soil from a solid to a liquefied state and generally can occur when the following conditions are present: (1) high groundwater; (2) relatively loose, cohesion-lacking, primarily sandy soil; and (3) earthquake-generated seismic waves.

Groundwater depths vary throughout the Fresno COG Region. In addition, groundwater levels fluctuate with the seasons, and local zones of perched groundwater can be present within the near-surface deposits due to local seepage or during rainy seasons. As described in Section 4.7.3.3, portions of the Fresno COG Region are susceptible to liquefaction. Future transportation improvement or land use development projects located within an area identified by the CGS as susceptible to liquefaction, or located on soils conducive to liquefaction, would have the potential to directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death as a result of liquefaction or other seismic-related ground failure.

Caltrans has established Seismic Design Criteria[25] to govern the seismic resistance of bridges and related highway structures. Where applicable, transportation improvement projects facilitated by the proposed project would be required to adhere to the liquefaction considerations contained in the Caltrans Seismic Design Criteria and incorporate preventative measures accordingly.

Design and construction of future transportation improvement projects and land use developments must conform with applicable provisions of the current CBC at the time they are proposed, including design features to withstand seismic ground failure. Additionally, pursuant to **PMM GEO-1,** future transportation improvement projects and land use development projects are required to prepare geotechnical evaluations during design. These evaluations would include a discussion of site-specific liquefaction susceptibility and design recommendations to safeguard proposed structures against the effects of liquefaction or other seismic-related ground failure that may occur. These geotechnical evaluations would be utilized in subsequent project-specific CEQA documents to determine the

[25] California Department of Transportation (Caltrans). 2025. Seismic Design Criteria, Version 2.1. January. Website: https://dot.ca.gov/-/media/dot-media/programs/engineering/documents/seismicdesigncriteria-sdc/202501seismicdesigncriteria21a11y.pdf (accessed March 5, 2025).

magnitude of seismic ground failure impacts and to identify appropriate project-specific mitigation measures.

As described in Chapter 3.0, Project Description, the design of each transportation improvement project and land use development facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur under implementation of the proposed project. With adherence to the CBC, the Caltrans Seismic Design Criteria, and **PMM GEO-1**, project impacts associated with seismic-related ground failure, including liquefaction, would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with seismic-related ground failure, including liquefaction, are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.7.1(iv): Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

Significant and Unavoidable Impact. Landslides, including mud flows, debris flows, and soil slips, occur as soil moves downslope under the influence of gravity. Landslides may be triggered by intense rainfall or seismic shaking. As described in Section 4.7.3.3, portions of the Fresno COG Region are susceptible to landslide hazards, including foothill and mountain areas of the Sierra Nevada mountains where fractured and steep slopes are present, areas of the Coastal Ranges where less consolidated or weathered soils overlie bedrock, and areas along the San Joaquin River where accelerated erosion occurs. Areas along SR-168 in the eastern portion of the Fresno COG Region and along SR-198 in the western portion of the Fresno COG Region have been identified as areas potentially affected by landslides.[26] Whenever feasible, future transportation improvement project and land use developments would be sited to avoid unstable slopes and landslide areas.

Design and construction of future transportation improvement projects and land use developments must conform with applicable provisions of the current CBC at the time they are proposed, including design features to withstand landslides. Additionally, pursuant to **PMM GEO-1,** future transportation improvement projects and land use development projects are required to prepare geotechnical evaluations during design prior to their construction. These evaluations would include a discussion of site-specific landslide susceptibility and design recommendations to safeguard proposed structures against the effects of landslides. These geotechnical evaluations would be utilized in subsequent project-specific CEQA documents to determine the magnitude of landslide impacts and identify appropriate project-specific mitigation measures. For example, many transportation facilities throughout Fresno County adjacent to steep slopes, particularly in the foothill and mountain areas,

[26] California Department of Transportation (Caltrans). 2025. Seismic Design Criteria, Version 2.1. January. Page 8-6. Website: https://dot.ca.gov/-/media/dot-media/programs/engineering/documents/seismicdesigncriteria-sdc/202501seismicdesigncriteria21a11y.pdf (accessed March 5, 2025).

already feature landslide prevention features such as retaining walls or rockfall barriers. Further, as required under **PMM GEO-2**, implementing agencies would require that future projects provide adequate slope drainage and appropriate landscaping to enhance slope stability where feasible and appropriate.

As described in Chapter 3.0, Project Description, the design of each transportation improvement project and land use development facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. With adherence to the CBC and **PMMs GEO-1** and **GEO-2**, project impacts associated with landslide would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with landslide are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.7.2: Would the project result in substantial soil erosion or the loss of topsoil?

Significant and Unavoidable Impact. Construction activities associated with future transportation improvement projects and land use developments facilitated by the proposed project would disturb surface soils and make them susceptible to erosion from wind and water. However, potential erosion impacts from construction would be reduced through the implementation of a Stormwater Pollution Prevention Plan (SWPPP) as required by the *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities,* Order No. 2022-0057-DWQ, NPDES No. CAS000002 (Construction General Permit) and an Erosion and Sediment Control Plan pursuant to **PMM HYD-1**. Under the SWPPP and the Erosion and Sediment Control Plan, projects would be required to incorporate all applicable best management practices (BMPs) intended to reduce soil erosion.

As detailed in Section 4.10, Hydrology and Water Quality, future transportation improvement projects and land use development projects facilitated by the proposed project are anticipated to result in the conversion of pervious surfaces to impervious surfaces through paving or structural development. An increase in impervious surface area increases the rate and volume of runoff during a storm, which can more effectively transport sediments to receiving waters. However, any impervious surface areas created would not be prone to on-site erosion or siltation because there would be no exposed soil.

Areas of pervious surfaces under future projects would be stabilized with vegetation to promote infiltration, thereby minimizing on-site erosion and siltation. In addition, stormwater runoff from the addition of impervious surfaces from development of each project would be conveyed to low-impact development (LID) BMPs, as feasible, that have been designed to maintain water quality and meet the requirements of the *NPDES Permit and Waste Discharge Requirements General Permit for Discharges from Municipal Separate Storm Sewer Systems, Order No. R5-2016-0040, NPDES No. CAS0085324* (Regionwide MS4 Permit). Pursuant to **PMM HYD-2**, projects would be required to implement BMPs that minimize stormwater runoff, thereby minimizing on-site erosion and the loss of topsoil.

As described in Chapter 3.0, Project Description, the design of each transportation improvement project and land use development facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. With adherence to the Construction General Permit and the Regionwide MS4 Permit, as well as identification and implementation of erosion control measures pursuant to **PMMs HYD-1** and **HYD-2**, project impacts associated with substantial soil erosion or the loss of topsoil during construction and operations would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with substantial soil erosion or the loss of topsoil are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.7.3: Would the project 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?

Significant and Unavoidable Impact. Refer to Threshold 4.7.1(iv) for a detailed discussion of landslide impacts. As described therein, design and construction of future transportation improvement projects and land use developments would conform with applicable provisions of the current CBC at the time they are proposed, including design features to withstand landslides. Additionally, pursuant to **PMM GEO-1,** project-specific geotechnical evaluations would be conducted to determine landslide susceptibility and design recommendations to safeguard proposed structures. Further, as required under **PMM GEO-2**, implementing agencies would require that adequate slope drainage and appropriate landscaping be provided to enhance slope stability where feasible and appropriate.

Lateral Spreading. Lateral spreading is a type of liquefaction-induced ground failure associated with the lateral displacement of surface blocks of sediment resulting from liquefaction in a subsurface layer. The surface soil is transported downslope by earthquake and gravitational forces. Lateral spreading often occurs on very gentle slopes or flat terrain. As described under Threshold 4.7.1(iii), **PMM GEO-1** and the Caltrans Seismic Design Criteria both require site-specific analyses of liquefaction impacts and would require the incorporation of measures to reduce project susceptibility to liquefaction, which would also reduce project susceptibility to lateral spreading.

Subsidence. Subsidence refers to broad-scale changes in the elevation of land. Common causes of land subsidence are pumping water, oil, and gas from underground reservoirs; dissolution of limestone aquifers (sinkholes); collapse of underground mines; drainage of organic soils; and initial wetting of dry soils (hydrocompaction). As previously stated, **PMM GEO-1** requires the preparation of a geotechnical evaluation and laboratory testing program for each future transportation improvement project and land use development facilitated by the proposed project. Evaluations and testing would address potential for subsidence to occur and specify soil excavation and management and foundation and infrastructure design recommendations to ensure subsidence does not occur as a result of the project. Therefore, geotechnical evaluations would include design

features and earthwork practices to ensure adequate support for future development of the project site.

Summary. As described in Chapter 3.0, Project Description, the design of each transportation improvement project and land use development facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur under implementation of the proposed project. With adherence to the CBC, the Caltrans Seismic Design Criteria, and **PMMs GEO-1** and **GEO-2**, impacts associated with unstable geologic units or soils would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with unstable geologic units or soils are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.7.4: Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Significant and Unavoidable Impact. Expansive soils are soils that change in volume when the soil's moisture content changes. The volume change occurs when the moisture content in the soil causes swelling or shrinking because of wet/dry-weather cycles, installation of irrigation systems, change in landscape plantings, or changes in grading. Swelling and shrinking soils can result in movement of structures, hardscape, utilities, and sidewalks. The current (2025) CBC defines potentially expansive soils as soils with expansion indices (EIs) greater than 20. It is possible that future transportation improvement projects and land use developments could be proposed on soils exhibiting an EI of greater than 20 and therefore would be susceptible to damage related to expansive soils.

As previously stated, **PMM GEO-1** requires the preparation of a geotechnical evaluation and laboratory testing program during the design of each future transportation improvement project and land use development facilitated by the proposed project. The results of each design-level geotechnical evaluation and laboratory testing program would address the EI rating of soils underlying each project. Based on the EI determination, each geotechnical evaluation would specify earthwork removal, fill placement, subgrade reparation, and structural reinforcement recommendations to be implemented to reduce potential impacts from expansive soils.

As described in Chapter 3.0, Project Description, the design of each transportation improvement project and land use development facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. With adherence to the CBC and **PMM GEO-1,** impacts associated with expansive soils would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of

significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with expansive soils are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.7.5: Would the project 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?

Significant and Unavoidable Impact. Septic systems are localized wastewater treatment systems typically used in unincorporated and rural areas that are not connected to centralized (i.e., municipal) sewer systems.[27] These systems are located underground and are designed to digest organic matter and separate floatable matter (e.g., oils and grease) and solids from the wastewater, then slowly discharge fluids into surrounding soils.

As described in Section 4.19, Utilities and Service Systems, wastewater collection, treatment, and disposal services in the Fresno COG Region are provided by municipal wastewater treatment plants, sanitation districts, and community service districts. Incorporated cities operate centralized wastewater collection systems and treatment facilities that serve urbanized areas. As described in Section 3.0, Project Description, the Fresno COG selected Scenario C (Enhanced Transit and Smart Growth) as the preferred project scenario. One of the focal points of this scenario is sustainable urban growth focused on existing centers and established areas. Under this approach, new land use development would be prioritized within urban centers already served by centralized wastewater collection systems and treatment facilities (e.g., the Fresno-Clovis Metropolitan Area). Therefore, it is not expected that future land use developments facilitated by the proposed project would require the provision of new septic systems. However, the proposed project does not preclude future development in unincorporated and rural areas in which septic systems would be necessary.

Soil conditions vary throughout the Fresno COG Region. Therefore, it is possible that some soils in the region may be limited in their ability to support on-site wastewater disposal systems such as septic systems. As previously stated, **PMM GEO-1** requires the preparation of a geotechnical evaluation and laboratory testing program during design for each future transportation improvement project and land use development facilitated by the proposed project. These would address the soil type underlying each project site. Based on the characteristics of underlying soils, each geotechnical evaluation would specify earthwork recommendations to be implemented to ensure that on-site soils can adequately support the use of septic tanks or alternative wastewater disposal systems.

As described in Chapter 3.0, Project Description, the design of each transportation improvement project and land use development facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. With adherence to **PMM GEO-1,** impacts associated with soils incapable of supporting septic tanks would be reduced to the extent

[27] United States Environmental Protection Agency (EPA). 2025. How Septic Systems Work. July 21. Website: https://www.epa.gov/septic/how-septic-systems-work (accessed March 5, 2026).

feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with soils incapable of supporting septic tanks are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.7.6: Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Significant and Unavoidable Impact. As discussed in Section 4.7.2.1, paleontological resources are the fossilized remains of previously living organisms, including plants and animals, and are found in geologic deposits or bedrock beneath soil layers. Paleontological resources have been found throughout the Fresno COG Region and include scientifically significant resources. A search of the University of California Museum of Paleontology's online collections database[28] reveals over 2,200 known fossil localities in the region. In addition, it is possible that unknown, unrecorded paleontological resources exist in undisturbed subsurface sediments. Therefore, excavation activities associated with construction of future transportation improvement projects and land use developments facilitated by the proposed project would result in potentially significant direct and indirect impacts on known and/or unknown paleontological resources, as construction activities would have the possibility to damage or destroy fossils in the underlying rock units.

PMM GEO-3 requires subsequent project-specific CEQA review of transportation improvement projects and land use development projects. A record search would be conducted at the appropriate Information Center to establish the status and extent of previously recorded paleontological resources within the area surrounding each project site (as well as within the same or similar deposits as those found within each project site). In addition to the record search, **PMM GEO-3** would also require that a qualified paleontologist survey each project site to note the sediments at the surface and whether any paleontological resources are present within each project site. Based on the results of the record search and surveys, each subsequent project-specific CEQA document would discuss the potential for impacts to paleontological resources and, if needed, include project-specific mitigation measures and other recommendations to minimize these impacts.

As described in Chapter 3.0, Project Description, the design of each transportation improvement project and land use development facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. With adherence to **PMM GEO-3,** potential impacts associated with paleontological resources would be identified and minimized to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability

[28] University of California Museum of Paleontology. UCMP Locality Search. Website: https://ucmpdb.berkeley.edu/loc.html (accessed December 1, 2025).

and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with paleontological resources are considered **significant and unavoidable** for the purposes of this analysis.

4.7.7 Level of Significance Prior to Mitigation

Prior to mitigation, implementation of the proposed project would have potentially significant impacts related to geology and soils.

4.7.8 Mitigation Measures

4.7.8.1 Fresno COG Measures

There are no applicable mitigation measures to be undertaken by the Fresno COG pertaining to geology and soils. However, as appropriate and feasible, the Fresno COG will encourage the implementation of the project-specific mitigation strategies listed below.

4.7.8.2 Project-Specific Measures

The following mitigation measures would be applied to future transportation improvement and land use development projects to reduce potential impacts related to geology and soils to the extent feasible:

PMM GEO-1 Implementing agencies shall consider mitigation measures to reduce substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as applicable and feasible:

- During project design and prior to construction of individual RTP/SCS projects, a qualified geologist shall be retained by the implementing agency to prepare a geotechnical investigation to establish site-specific geotechnical conditions, identify seismic and other geologic hazards, and develop appropriate project-specific recommendations to address those hazards.
- The implementing agency shall incorporate the recommendations of the geotechnical investigation into project design and construction, as applicable.

PMM GEO-2 Implementing agencies shall consider mitigation measures to reduce substantial adverse effects, including the risk of loss, injury, or death involving landslides, as applicable and feasible:

Prior to construction of individual RTP/SCS projects, the implementing agency shall confirm that adequate slope drainage and appropriate landscaping are incorporated into project design to minimize the potential for slope instability and erosion.

PMM GEO-3 Implementing agencies shall consider mitigation measures to reduce impacts related to the destruction of unique paleontological resources or unique geologic features, as applicable and feasible:

- During environmental review, an implementing agency or designee shall conduct a project-specific records search at the appropriate Information Center to determine whether the project site has been previously evaluated for paleontological resources and whether any such resources have been identified.

- If determined to be necessary based on the records search, implementing agencies shall retain a qualified paleontologist to conduct a field survey of the project site to assess potential impacts to paleontological resources. As part of this assessment, the qualified paleontologist shall identify and recommend appropriate avoidance, minimization, and/or mitigation measures.

4.7.9 Level of Significance After Mitigation

Implementation of **PMMs GEO-1** through **GEO-3** would assist the Fresno COG and lead agencies of future transportation improvement projects and land use developments in reducing impacts related to geology and soils to the extent feasible. However, the analysis presented in this section is general in nature, and given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future transportation improvement projects and land use developments, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. As appropriate and feasible, the Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified. Nevertheless, impacts related to geology and soils are considered **significant and unavoidable** for the purposes of this analysis.

4.7.10 Cumulative Impacts

As defined in Section 15130 of the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for geology and soils. Typically, cumulative impacts to geology and soils are specific to a particular site and there is little, if any, cumulative relationship between the development of a proposed project and development within a larger cumulative area. Moreover, although seismic conditions are regional in nature, seismic impacts on a given project site are site-specific. For example, implementation of the proposed project would not alter geologic events or soil features/characteristics (such as ground shaking, seismic intensity, or soil expansion or compression). Therefore, the proposed project would not affect the level of intensity at which a seismic event on an adjacent site is experienced.

Conducting geotechnical investigations and complying with study recommendations (as required by **PMM GEO-1**) would minimize geologic hazards such as landslides, ground subsidence, and expansive soils within the Fresno COG Region. Implementation of SWPPPs and Erosion and Sedimentation

Control Plans (**PMM HYD-1**) would minimize topsoil erosion by ensuring BMPs are implemented during construction of future transportation improvement projects and land use developments. In addition, the conversion of pervious to impervious surfaces under future projects (i.e., paving) would generally reduce the potential for soil erosion during operation. Further, **PMM HYD-2** would require projects to implement operational BMPs that minimize stormwater runoff, thereby minimizing on-site erosion and the loss of topsoil.

Future transportation improvement projects and land use developments, as with all foreseeable projects within the Fresno COG Region, would be required to comply with the applicable State and local requirements, including the CBC and adopted local building codes in effect at the time of proposed development.

Potential impacts of the proposed project to unknown paleontological resources and unique geologic features, when combined with the impacts of past, present, and reasonably foreseeable projects in the Fresno COG Region, could contribute to a cumulatively significant impact due to the overall loss of paleontological resources unique to the Fresno COG Region. However, each discretionary development facilitated by the proposed project would be required to undergo environmental review pursuant to CEQA. For projects with any potential for significant impacts to paleontological resources or unique geologic features, an investigation would be required to determine the nature and extent of the resources and identify appropriate mitigation measures. When resources are assessed and/or protected as they are discovered, impacts to these resources would be reduced or avoided. Adherence to **PMM GEO-3**, which requires paleontological resource record searches and surveys, would reduce the potential for the proposed project, together with cumulative projects, to result in significant cumulative impacts to unique paleontological resources or unique geologic features.

As stated above in Section 4.7.9, impacts of the proposed project related to geology and soils are considered significant and unavoidable given the programmatic nature of the proposed project, the scale of the Fresno COG Region, and the inability of the Fresno COG to enforce project-specific mitigation or make land use approvals. Because the proposed project would result in significant adverse environmental impacts with respect to geology and soils, these impacts would represent an incremental contribution to the environmental impacts of other cumulative or related projects, including other regional-scale plans, ultimately leading to a cumulatively considerable impact to geology and soils in the cumulative impact area.

4.8 GREENHOUSE GAS EMISSIONS

This section of the Draft Program Environmental Impact Report (PEIR) summarizes existing greenhouse gas (GHG) emissions and discusses global climate change, its causes, and the contribution of human activities within the Fresno Council of Governments (COG) Region. This PEIR also provides an analysis of GHG emissions impacts related to the construction and operational phases associated with implementation of the proposed 2026 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (proposed project) and evaluates the effectiveness of measures incorporated as part of the proposed project.

4.8.1 Scoping Process

Potential impacts related to GHG emissions were not identified during the public scoping meeting held for the proposed project on May 28, 2025.

The Fresno COG received one comment letter in response to the Notice of Preparation (NOP) issued for the proposed project between May 13 and June 12, 2025, concerning the proposed project's potential impacts related to GHG emissions. For copies of the NOP comment letters, refer to Appendix A of this Draft PEIR. NOP comments related to GHG emissions included the following:

- **The San Joaquin Valley Air Pollution Control District (SJVAPCD)**, May 29, 2025, recommended that future development projects facilitated by the proposed project incorporate strategies to reduce vehicle miles traveled (VMT), incorporate zero- and net-zero-emissions technologies, and encourage solar power systems.

4.8.2 Methodology

GHG emissions impacts are typically evaluated quantitatively by estimating emissions and comparing emissions with established thresholds of significance. These specific and detailed analyses are most appropriate at the individual improvement project and new development project levels rather than the programmatic level that characterizes this PEIR. There is no physical development proposed at this time, and specific development details for improvements facilitated by the RTP/SCS are not available at this time. Therefore, a quantitative impact analysis of individual future projects is not appropriate, and this section presents a qualitative analysis of potential impacts. Subsequent project-specific CEQA documents may be required to further analyze the transportation improvement or land use development projects facilitated by the proposed project to determine the magnitude of potential impacts and identify appropriate potential mitigation for each individual transportation improvement or land use development project.

Although potential GHG emissions during construction and operation of each future transportation improvement and land use development project cannot be meaningfully quantified at this time, the Fresno COG has quantified the overall reduction in per-capita passenger vehicle-generated GHG emissions that could result from implementation of the preferred SCS strategy, as well the other four SCS strategies, pursuant to Senate Bill (SB) 375. The comparison of GHG emissions reductions under each SCS strategy, as well as the No Project scenario, is provided in the following section to determine whether the proposed project would be consistent with SB 375 and other applicable plans, policies, and regulations adopted for the purpose of reducing the emissions of GHGs. Additional detail

regarding SCS modeling is provided in Appendix C to the RTP/SCS document, which is incorporated by reference.

4.8.3 Existing Environmental Setting

As described in Section 4.3, Air Quality, of this Draft PEIR, the Fresno COG Region is located within the San Joaquin Valley Air Basin (Basin), which consists of eight counties: Kings, Madera, San Joaquin, Merced, Stanislaus, Tulare, and Fresno counties, and a portion of Kern County. The local agency with jurisdiction over GHG emissions in the Basin is the SJVAPCD.

This section describes existing GHG emissions in the Fresno COG Region and the Basin, beginning with a discussion of typical GHG types and sources, the impacts of global climate changes, and current emission levels.

4.8.3.1 Background

Global climate change refers to the observed changes in climate patterns across the world in recent decades, including an increase in the average temperature of the Earth's atmosphere and oceans, as well as an increase in frequency and intensity of extreme weather events. The prevailing scientific consensus on climate change is that most of the warming observed over the last 50 years is attributable to human activities. The increased amounts of carbon dioxide (CO_2) and other GHGs are the primary causes of the human-induced component of warming. GHGs are released by the burning of fossil fuels, land clearing, agriculture, and other activities, and lead to an increase in the greenhouse effect.[1]

GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced global climate change are the following:

- CO_2
- Methane (CH_4)
- Nitrous oxide (N_2O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur hexafluoride (SF_6)

For the purposes of this analysis, the term "GHGs" will refer collectively only to the six gases listed above. Over the last 200 years, humans have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere and enhancing the natural greenhouse effect, which is believed to be causing global warming. Although

[1] The temperature on Earth is regulated by a system commonly known as the "greenhouse effect." Just as the glass in a greenhouse lets heat from sunlight in and reduces the heat escaping, GHGs like CO_2, methane, and N_2O in the atmosphere keep the Earth at a relatively even temperature. Without the greenhouse effect, the Earth would be a frozen globe; thus, although an excess of GHG results in global warming, the naturally occurring greenhouse effect is necessary to keep the planet at a comfortable temperature.

manmade GHGs include naturally occurring GHGs such as CO_2, methane, and N_2O, some gases, such as HFCs, PFCs, and SF_6, are completely new to the atmosphere.

Certain GHGs, such as water vapor, are short-lived in the atmosphere. Others remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is excluded from the list of GHGs above because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

These gases vary considerably in terms of global warming potential (GWP), which is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and the length of time the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to CO_2, the most abundant GHG; the definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO_2 over a specified time period. GHG emissions are typically measured in terms of pounds or tons of "CO_2 equivalents" (CO_2e). Table 4.8.A shows the GWP for each type of GHG. For example, on a 100-year time horizon, SF_6 is 23,900 times more potent at contributing to global warming than CO_2.

Table 4.8.A: Global Warming Potential of GHGs

Gas	Atmospheric Lifetime (Years)	Global Warming Potential (100-year Time Horizon)
Carbon Dioxide (CO_2)	50–200	1
Methane (CH_4)	12	21
Nitrous Oxide (N_2O)	114	310
HFC-32	270	11,700
HFC-134a	14	140
HFC-152a	1.4	140
PFC: Tetrafluoromethane (CF_4)	50,000	6,500
PFC: Hexafluoromethane (C_2F_6)	10,000	9,200
Sulfur Hexafluoride (SF_6)	3,200	23,900

Source: California Air Resources Board. 2017. *California's 2017 Climate Change Scoping Plan.* November.
GHG = greenhouse gas
HFC = hydrofluorocarbon
PFC = perfluorocarbon

The following paragraphs summarize the characteristics of the six principal GHGs.

Carbon Dioxide. In the atmosphere, carbon generally exists in its oxidized form, as CO_2. Natural sources of CO_2 include the respiration (breathing) of humans, animals, and plants; volcanic outgassing; decomposition of organic matter; and evaporation from the oceans. Human-caused sources of CO_2 include the combustion of fossil fuels and wood, waste incineration, mineral production, and deforestation.

In 2023, total annual CO_2 accounted for approximately 80 percent of California's overall GHG emissions.[2] Transportation is the single largest source of CO_2 in California, which is primarily composed of on-road travel. Electricity production and industrial and residential sources also make important contributions to CO_2 emissions in California.

Methane. Methane is produced when organic matter decomposes in environments lacking sufficient oxygen. Natural sources include wetlands, termites, and oceans. Decomposition occurring in landfills accounts for the majority of human-generated methane emissions in California and in the United States as a whole. Agricultural processes such as intestinal fermentation, manure management, and rice cultivation are also significant sources of methane in California. Total annual emissions of methane accounted for approximately 10.2 percent of GHG emissions in California in 2023.[3]

Nitrous Oxide. N_2O is produced naturally by a wide variety of biological sources, particularly microbial action in soils and water. Tropical soils and oceans account for the majority of natural-source emissions. N_2O is a product of the reaction that occurs between nitrogen and oxygen during fuel combustion. Both mobile and stationary combustion emit N_2O, and the quantity emitted varies according to the type of fuel, technology, and pollution control device used, as well as maintenance and operating practices. Agricultural soil management and fossil fuel combustion are the primary sources of human-generated N_2O emissions in California. N_2O emissions accounted for approximately 3.7 percent of GHG emissions in California in 2023.[4]

Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride. HFCs are primarily used as substitutes for ozone (O_3) depleting substances regulated under the Montréal Protocol, which is an international treaty that was approved on January 1, 1989, and was designated to protect the ozone layer by phasing out the production of several groups of halogenated hydrocarbons believed to be responsible for ozone depletion.[5] PFCs and SF6 are emitted from various industrial processes, including aluminum smelting, semiconductor manufacturing, electric power transmission and distribution, and magnesium casting. There is no aluminum or magnesium production in California; however, the rapid growth in the semiconductor industry has led to greater emissions of PFCs. PFCs and SF_6 accounted for about 5.9 percent of GHG emissions in California in 2023.[6]

Black Carbon. Black carbon is the most strongly light-absorbing component of particulate matter formed by burning fossil fuels such as coal, diesel, and biomass. Black carbon is emitted directly into the atmosphere in the form of particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) and is the most effective form of particulate matter, by mass, at absorbing solar energy. Black carbon contributes to climate change both directly, such as absorbing sunlight, and indirectly, such as by affecting cloud

2 California Air Resources Board (CARB). 2025. *Assembly Bill 32 Greenhouse Gas Emissions Inventory for 2000-2023 – by Gas.*

3 Ibid.

4 Ibid.

5 United Nations Treaty Collection. n.d. *a Montreal Protocol on Substances that Deplete the Ozone Layer*. Website: https://treaties.un.org/pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-2-a&chapter=27&clang=_en (accessed November 24, 2025).

6 California Air Resources Board (CARB). 2024. Op. cit.

formation. However, because black carbon is short-lived in the atmosphere, it can be difficult to quantify its effect on global warming.

Most U.S. emissions of black carbon come from mobile sources (52 percent), particularly from diesel-fueled vehicles. The other major source of black carbon is open biomass burning, including wildfires, although residential heating and industry also contribute. The California Air Resources Board (CARB) estimates that the annual black carbon emissions in California will be reduced approximately 50 percent below 2013 levels by 2030.[7]

4.8.3.2 Emissions Inventories

An emissions inventory that identifies and quantifies the primary human-generated sources and sinks of GHGs is a well-recognized and useful tool for addressing climate change. This section summarizes the latest information on global, United States, state, and regional GHG emissions inventories.

Global Emissions. Worldwide emissions of GHGs in 2023 totaled 53.8 billion metric tons of CO_2e. Global estimates are based on country inventories developed as part of the programs of the United Nations Framework Convention on Climate Change (UNFCCC).[8]

United States Emissions. In 2023, the year for which the most recent data is available, the United States emitted about 5,894.0 million metric tons (MMT) of CO_2e. Overall, net emissions decreased by 2.9 percent from 2022 to 2023 and decreased by 16.9 percent from 2005 levels. The decrease in total GHG emissions was driven by a decrease in CO_2 emissions from fossil fuel combustion.

State of California Emissions. The State emitted approximately 360.4 MMT CO_2e emissions in 2023, 11.2 MMT CO_2e lower than 2022 levels.[9] CARB estimates that transportation was the source of approximately 38 percent of the State's GHG emissions in 2023. The next largest sources included industrial sources at approximately 22 percent and electricity generation at 16 percent. The remaining sources of GHG emissions were residential activities at 10 percent, agriculture at 8 percent, and commercial activities at 7 percent.[10]

Fresno COG Region Emissions. The region's Priority Climate Action Plan was the first component of the Regional Climate Action Plan that the Fresno COG will be developing in phases. As the first phase, the Priority Climate Action Plan was approved by the Fresno COG Policy Board on February 29, 2024, and includes a regional GHG inventory, a public outreach process, identification and quantification of priority GHG emissions reduction measures, a benefit analysis for low-income and disadvantaged

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7 California Air Resources Board (CARB). 2017. *Short-Lived Climate Pollutant Reduction Strategy.* March. Website: https://ww2.arb.ca.gov/sites/default/files/2020-07/final_SLCP_strategy.pdf (accessed September 2025).

8 United Nations Framework Convention on Climate Change (UNFCCC). 2024. *GHG Data from UNFCCC.* Website: unfccc.int/process-and-meetings/transparency-and-reporting/greenhouse-gas-data/ghg-data-unfccc/ghg-data-from-unfccc (accessed December 2025).

9 California Air Resources Board (CARB). 2025. *California Greenhouse Gas Emissions for 2000 to 2023, Trends of Emissions and Other Indicators Report*. November 4. Website: https://ww2.arb.ca.gov/sites/default/files/2025-11/nc-2000_2023_ghg_inventory_trends.pdf (accessed December 2025).

10 Ibid.

communities, and identification of implementation authorities. The Comprehensive Climate Action Plan Analysis (CCAP-A) was prepared by the Fresno COG in February 2026 to build on the previously prepared Priority Climate Action Plan document. The CCAP-A includes a refined emissions inventory for Fresno County in the baseline year 2019, as presented in Table 4.8.B, below. This inventory accounts for carbon sequestration in the Working and Natural Lands sector, which includes forests, other plants, and wetlands.

Table 4.8.B: Fresno COG Region GHG Emissions Inventory (2019)

Sector	Baseline Emissions (MT CO_2e)	Percent of Total
Agriculture	2,815,105	22.5
Commercial	753,075	6.0
Fugitive	14,644	0.1
Industrial	1,303,689	10.4
Municipal	253	0.0
Residential	1,104,464	8.8
Transportation	6,781,635	54.1
Waste	468,641	3.7
Total Emissions Prior to Sequestration	**13,241,506**	
Working and Natural Lands (Sequestration)	*-708,300*	*-5.7%*
Total Emissions After Sequestration	**12,533,206**	

Source: Fresno Council of Governments (COG). 2026. *Comprehensive Climate Action Plan Analysis.* February.
GHG = greenhouse gas
MT CO_2e = metric tons of carbon dioxide equivalent

The CCAP-A identifies that reducing GHGs will not only address climate change but also deliver co-benefits such as improved air quality, lower household energy costs, and new economic opportunities in clean energy and sustainable agriculture.[11]

4.8.4 Regulatory Setting

Federal, State, and local regulations and programs related to GHG emissions that are applicable to the proposed project are described below.

4.8.4.1 Federal Regulations

Federal Clean Air Act. The United States has historically had a voluntary approach to reducing GHG emissions. However, on April 2, 2007, the United States Supreme Court ruled in *Massachusetts v. E.P.A.* (2007), 549 U.S. 497, that the United States Environmental Protection Agency (EPA) has the authority to regulate CO_2 emissions of motor vehicles under the federal Clean Air Act (FCAA). It should be noted that the EPA can grant Clean Air Act Preemption waivers to states that request to enforce

[11] Fresno Council of Governments (COG). 2026. *Comprehensive Climate Action Plan Analysis.* February. Website: https://www.fresnocog.org/wp-content/uploads/2026/03/Final-Report-Fresno-County-CCAP-A-1-1.pdf (accessed March 30, 2026).

stricter vehicle emissions standards than those at the federal level. California was granted a waiver in 2009, which was revoked in 2019, restored in 2021, and revoked again in 2025.

Although there currently are no adopted federal regulations for the control or reduction of GHG emissions, the EPA commenced several actions in 2009 to implement a regulatory approach to global climate change. This includes the 2009 EPA final rule for mandatory reporting of GHGs from large GHG emission sources in the United States, as well as Title V federal permit requirements. Additionally, the EPA Administrator signed an endangerment finding action in 2009 under the FCAA, finding that six GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) constitute a threat to public health and welfare, and that the combined emissions from motor vehicles cause and contribute to global climate change, leading to national GHG emission standards. In February 2026, the endangerment finding was rescinded.

The Inflation Reduction Act (IRA) of 2022 reaffirmed the EPA's authority to regulate GHG emissions under the CAA. In January 2025, Executive Order (EO) 14153, Unleashing American Energy, agencies were directed to stop issuing funds under the IRA. A bill has been introduced to repeal the IRA, but it has not been passed through the legislative process as of February 2026.

Although federal regulations address GHG emissions nationally, California has adopted independent statutory targets and regulatory programs that establish the framework for evaluating GHG impacts under the California Environmental Quality Act (CEQA).

Federal Phase 1 and 2 Heavy-Duty Vehicle GHG Standards. In 2011, the EPA and the National Highway Traffic Safety Administration (NHTSA) jointly adopted the first federal GHG emission standards and fuel economy standards for heavy-duty engines and vehicles, referred to as the federal Heavy-Duty GHG Phase 1 regulation (Phase 1). In 2011, the EPA adopted its rule for heavy-duty trucks (HDTs) and engines, which has compliance requirements for new compression and spark ignition engines, as well as Class 2b through Class 8 trucks. Compliance requirements begin with model year 2014, with stringency levels increasing through model year 2018. The rule organizes truck compliance into three groupings, which include: (1) heavy-duty pickups and vans; (2) vocational vehicles; and (3) combination tractors. The EPA rule does not regulate trailers.

The federal Phase 2 standards built upon the improvements in engine and vehicle efficiency required by the Phase 1 emission standards and represent a significant opportunity to achieve further GHG reductions for 2018 and later-model-year HDT vehicles, including trailers. In February 2019, the Office of Administrative Law approved the Phase 2 Heavy-Duty Vehicle GHG Standards, which became effective April 1, 2019. The Phase 2 GHG standards are needed to offset projected VMT growth and keep HDT CO_2 emissions declining. The federal Phase 2 standards establish for the first time federal emissions requirements for trailers hauled by heavy-duty tractors. The federal Phase 2 standards are more technology-forcing than the federal Phase 1 standards, requiring manufacturers to improve existing technologies or develop new technologies to meet the standards. The federal Phase 2 standards for new tractors, vocational vehicles, and heavy-duty pickup trucks and vans will be phased in from 2021 to 2027; additionally, for trailers, the standards are phased in from 2018 (2020 in California) through 2027.

4.8.4.2 State Regulations

CARB is the lead agency for implementing climate change regulations in the State. Since its formation, CARB has worked with the public, the business sector, and local governments to find solutions to California's air pollution problems. Key efforts by the State applicable to the proposed project are described below.

Assembly Bill 1493 (2002). In response to the transportation sector's significant contribution to California CO_2 emissions, Assembly Bill (AB) 1493 was enacted on July 22, 2002. AB 1493 requires CARB to set GHG emission standards for passenger vehicles and light-duty trucks (and other vehicles whose primary use is noncommercial personal transportation in the State) manufactured in 2009 and all subsequent model years. These standards (starting in model years 2009 to 2016) were approved by CARB in 2004, but the necessary waiver of Clean Air Act Preemption was not granted by the EPA until June 30, 2009. CARB responded by amending its original regulation, now referred to as Low Emission Vehicle III, to take effect for model years starting in 2017 to 2025. The Trump Administration revoked California's waiver in 2019, but the Biden Administration restored California's waiver in 2021. The waiver was revoked again in 2025.

Executive Order S-3-05 (2005). Governor Arnold Schwarzenegger signed EO S-3-05 on June 1, 2005, which proclaimed that California is vulnerable to the impacts of climate change. To combat those concerns, the EO established California's GHG emissions reduction targets, which established the following goals:

- GHG emissions should be reduced to 2000 levels by 2010.
- GHG emissions should be reduced to 1990 levels by 2020.
- GHG emissions should be reduced to 80 percent below 1990 levels by 2050.

Assembly Bill 32 (2006), California Global Warming Solutions Act. California's major initiative for reducing GHG emissions is AB 32, passed by the State Legislature on August 31, 2006. This initiative aims at reducing GHG emissions to 1990 levels by 2020. CARB has established the level of GHG emissions in 1990 at 427 MMT CO_2e. The emissions target of 427 MMT CO_2e requires a reduction of 169 MMT CO_2e from the State's projected business-as-usual 2020 emissions of 596 MMT CO_2e. AB 32 required CARB to prepare a Scoping Plan that outlines the State's main strategies for meeting the 2020 deadline and to reduce GHGs that contribute to global climate change. CARB approved the first Scoping Plan on December 11, 2008, which contains the main strategies California will implement to achieve the reduction goals and includes CARB-recommended GHG reductions for each emission sector of the State's GHG inventory.[12]

The most recent 2022 Scoping Plan[13] was approved in December 2022 and assesses progress toward achieving the SB 32 2030 target and laying out a path to achieve carbon neutrality no later than 2045. The 2022 Scoping Plan focuses on outcomes needed to achieve carbon neutrality by assessing paths

[12] California Air Resources Board (CARB). 2008. *Climate Change Scoping Plan*. December. Website: https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/document/adopted_scoping_plan.pdf (accessed August 2025).

[13] California Air Resources Board (CARB). 2022. *2022 Scoping Plan*. November 16. Website: https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf (accessed June 2025).

for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities.

Senate Bill 375. SB 375 (2009) complements vehicle technology and fuel standards by promoting more efficient land use patterns and transportation planning to reduce VMT. Under SB 375, CARB establishes regional GHG reduction targets for California's 18 Metropolitan Planning Organizations (MPOs). MPOs must demonstrate how their RTPs, through inclusion of SCSs, will achieve CARB-established targets. The CARB may update these targets every 4 years and must update them at least every 8 years.

Executive Order B-30-15 (2015). Governor Jerry Brown signed EO B-30-15 on April 29, 2015, which added the following target:

- GHG emissions should be reduced to 40 percent below 1990 levels by 2030.

All State agencies with jurisdiction over sources of GHG emissions were directed to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 targets. CARB was directed to update the AB 32 Scoping Plan to reflect the 2030 target and therefore is moving forward with the update process. The midterm target is critical to help frame the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure needed to continue reducing emissions.

Senate Bill 350 (2015) Clean Energy and Pollution Reduction Act. SB 350, signed by Governor Jerry Brown on October 7, 2015, updates and enhances AB 32 by introducing the following set of objectives in clean energy, clean air, and pollution reduction for 2030:

- Raise California's Renewables Portfolio Standard from 33 percent to 50 percent.
- Increase energy efficiency in buildings by 50 percent by the year 2030.

The 50 percent renewable energy standard will be implemented by the California Public Utilities Commission for private utilities and by the California Energy Commission for municipal utilities. Each utility must submit a procurement plan showing it will purchase clean energy to displace other nonrenewable resources. The 50 percent increase in energy efficiency in buildings must be achieved through the use of existing energy-efficiency retrofit funding and regulatory tools already available to State energy agencies under existing law. The addition made by this legislation requires State energy agencies to plan for and implement those programs in a manner that achieves the energy efficiency target.

Senate Bill 32, California Global Warming Solutions Act of 2016, and Assembly Bill 197. In 2016, the Legislature passed and Governor Brown signed SB 32 and AB 197. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emission reductions target of at least 40 percent below 1990 levels by 2030 contained in Governor Brown's April 2015 EO B-30-15. SB 32 builds on AB 32 to keep California on the path toward achieving its 2050 objective of reducing emissions to 80 percent below 1990 levels, consistent with an Intergovernmental Panel on Climate Change (the United Nations body for assessing science related to climate change) analysis of the

emissions trajectory that would stabilize atmospheric GHG concentrations at 450 parts per million CO_2e and reduce the likelihood of catastrophic impacts from climate change.

The companion bill to SB 32, AB 197, provides additional direction to CARB related to the adoption of strategies to reduce GHG emissions. This additional direction was posted in December 2016 and provides for easier public access to air emissions data that are collected by CARB.

Senate Bill 100. On September 10, 2018, Governor Brown signed SB 100, which raises California's Renewables Portfolio Standard requirements to 60 percent by 2030, with interim targets, and to 100 percent by 2045. SB 100 also establishes a State policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all State agencies by December 31, 2045. Under SB 100, the State cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

Executive Order B-55-18. EO B-55-18, signed September 10, 2018, sets a goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." EO B-55-18 directs CARB to work with relevant State agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The goal to achieve carbon neutrality by 2045 is in addition to other statewide goals, including that not only should emissions be reduced to 80 percent below 1990 levels by 2050, but that, by no later than 2045, the remaining emissions be offset by equivalent net removals of CO_2e from the atmosphere, including through sequestration in forests, soils, and other natural landscapes.

Executive Order N-79-20. EO N-79-20, which Governor Gavin Newsom signed on September 23, 2020, sets the following goals for the State: 100 percent of in-State sales of new passenger cars and trucks shall be zero-emission by 2035; 100 percent of medium- and heavy-duty vehicles in the State shall be zero-emission by 2045 for all operations where feasible and by 2035 for drayage trucks; and 100 percent of off-road vehicles and equipment in the State shall be zero-emission by 2035, where feasible.

Assembly Bill 1279. AB 1279 was signed in September 2022 and codifies the State goals of achieving net carbon neutrality by 2045 and maintaining net negative GHG emissions thereafter. AB 1279 also requires California to reduce statewide GHG emissions by 85 percent compared to 1990 levels by 2045 and directs CARB to work with relevant State agencies to achieve these goals.

Title 24 of the California Code of Regulations. In November 2008, the California Building Standards Code established the California Green Building Standards Code (CALGreen), which sets performance standards for residential and non-residential development to reduce environmental impacts and encourage sustainable construction practices. CALGreen addresses energy efficiency, water conservation, material conservation, planning and design, and overall environmental quality. CALGreen is updated every 3 years and was most recently updated in 2025 to include new mandatory measures for residential as well as non-residential uses; the new measures took effect on January 1, 2026. Energy-efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions.

Title 24, Part 6 is California's Energy Efficiency Standards for Residential and Non-Residential Buildings. These standards were first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption and are updated on an approximately 3-year cycle to allow consideration and possible incorporation of new energy efficient technologies and methods. All buildings for which an application for a building permit is submitted on or after January 1, 2026, must follow the 2025 standards. Energy-efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions.

CARB Phase 1 and 2 Heavy-Duty Vehicle GHG Standards. In 2013, CARB adopted the California Phase 1 GHG regulations, which were substantially identical to the federal Phase 1 regulations and included a regulation for GHG emissions from HDTs and engines sold in California. The California Phase 1 standards establish GHG emission limits on truck and engine manufacturers and harmonize with the federal Phase 1 standards for new trucks and engines nationally. Existing heavy-duty vehicle regulations in California include engine criteria emission standards, tractor-trailer GHG requirements to implement SmartWay strategies (i.e., the Heavy-Duty Tractor-Trailer GHG Regulation), and in-use fleet retrofit requirements such as the Truck and Bus Regulation. CARB staff has worked jointly with the EPA and the NHTSA on the next phase of federal GHG emission standards for medium-duty trucks (MDTs) and HDT vehicles, called federal Phase 2.

Low Carbon Fuel Standard Program. EO S-01-07 established a low-carbon fuel standard (LCFS) with a statewide goal to be established to reduce the carbon intensity of California's transportation fuels that applies to all refiners, blenders, producers, or importers ("providers") of transportation fuels in California, including fuels used by off-road construction equipment. CARB approved amendments in 2018 to readjust carbon intensity benchmarks to meet California's 2030 GHG reductions targets under SB 32. These amendments include opportunities to promote zero-emission vehicle (ZEV) adoption, carbon capture and sequestration, and advanced technologies for decarbonization of the transportation sector.

Executive Order B-48-18. In January 2018, Governor Brown signed EO B-48-18, requiring all State entities to work with the private sector to have at least 5 million ZEVs on the road by 2030, as well as installing 200 hydrogen fueling stations and 250,000 electric vehicle (EV) charging stations by 2025. It specifies that 10,000 of the EV charging stations should be direct-current fast chargers. EO B-48-18 also requires all State entities to continue to partner with local and regional governments to streamline the installation of ZEV infrastructure. The Governor's Office of Business and Economic Development is required to publish a Plug-in Charging Station Design Guidebook and update the 2015 *Hydrogen Station Permitting Guidebook* to aid in these efforts. All State entities are required to participate in updating the 2016 ZEV Action Plan to help expand private investment in ZEV infrastructure, with a focus on serving low-income and disadvantaged communities. Additionally, all State entities are to support and recommend policies and actions to expand ZEV infrastructure at residential land uses, through the LCFS Program, and recommend how to ensure affordability and accessibility for all drivers.

4.8.4.3 Regional Regulations

San Joaquin Valley Air Pollution Control District. The SJVAPCD has regulatory authority over certain stationary and industrial GHG emission sources and provides voluntary technical guidance on

addressing GHGs for other emission sources in a CEQA context. District initiatives related to GHGs are described below.

Climate Change Action Plan. The San Joaquin Valley Air Pollution Control District Climate Change Action Plan (CCAP) was adopted on August 21, 2008. The CCAP includes suggested best performance standards for proposed development projects. However, the SJVAPCD's CCAP was adopted in 2009 and was prepared based on the State's 2020 GHG targets, and is now considered outdated.

San Joaquin Valley Carbon Exchange and Rule 2301. The SJVAPCD initiated work on the San Joaquin Valley Carbon Exchange in November 2008. The carbon exchange was implemented with the adoption of Amendments to Rule 2301 Emission Reduction Credit Banking on January 19, 2012. The purpose of the carbon exchange is to quantify, verify, and track voluntary GHG emissions reductions generated within the San Joaquin Valley.

The SJVAPCD incorporated a method to register voluntary GHG emission reductions with amendments to Rule 2301. The purposes of the amendments to the rule include the following:

- Provide an administrative mechanism for sources to bank voluntary GHG emission reductions for later use.
- Provide an administrative mechanism for sources to transfer banked GHG emission reductions to others for any use.
- Define eligibility standards, quantitative procedures, and administrative practices to ensure that banked GHG emission reductions are real, permanent, quantifiable, surplus, and enforceable.

The SJVAPCD also participates in a program developed by the California Air Pollution Control Officers Association (CAPCOA) to encourage banking and use of GHG reduction credits referred to as the CAPCOA Greenhouse Gas Reduction Exchange (GHGRx). The GHGRx provides information on GHG credit projects within participating air districts. SJVAPCD is one of the first to have offsets available for trading on the GHGRx.

Fresno County Comprehensive Climate Action Plan Analysis. The County of Fresno CCAP-A was prepared by the Fresno COG in February 2026 to build onto the previously prepared Priority Climate Action Plan document. The CCAP-A serves as a conceptual exploration of strategies and paths toward GHG reduction and includes an updated and refined emissions inventory for Fresno County, GHG emission reduction measures with quantified emissions reductions for all sectors that are potential sources of GHG emissions in the county, and an analysis of co-benefits and potential impacts to low-income and disadvantaged communities.

4.8.4.4 Local Regulations

Local General Plans. The Fresno COG Region contains Fresno County and 15 incorporated cities, each with an individual general plan prepared pursuant to California Government Code Section 65300. Each

general plan contains goals and policies related to greenhouse gas emissions within the particular jurisdiction. Although general plan element titles may vary, this information is typically found within the general plan safety/conservation element, or equivalent.

4.8.5 Thresholds of Significance

The following thresholds of significance are based on Appendix G of the *State CEQA Guidelines*. Based on these thresholds, implementation of the proposed project would have a significant adverse impact with respect to GHG emissions if it would:

Threshold 4.8.1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or

Threshold 4.8.2: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Project-Specific GHG Emissions Thresholds. Section 15064.4 of the State CEQA Guidelines states: "A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project." In performing that analysis, the lead agency has discretion to determine whether to use a model or methodology to quantify GHG emissions, or to rely on a qualitative analysis or performance-based standards. In making a determination as to the significance of potential impacts, the lead agency then considers the extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting, whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project, and 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. Note that as of the date this PEIR is published, the Fresno COG, Fresno COG member agencies, and SJVAPCD have not adopted numeric GHG significance thresholds.

Therefore, in the absence of any specific guidelines or thresholds, future transportation improvement and land use development projects may be evaluated for consistency with the *Bay Area Air District Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans* (Justification Report).[14]

In April 2022, the Bay Area Air Quality Management District (BAAQMD) adopted the Justification Report document, which identifies GHG significance thresholds. These thresholds establish whether a project would be consistent with California's efforts to meet long-term climate goals of achieving carbon neutrality by 2045. If a project is designed and built to incorporate design elements related to natural gas, energy, VMT, and EVs, then it would contribute its portion of what is necessary to achieve California's long-term climate goals—its "fair share"—and an agency reviewing the project under CEQA can conclude that the project would not make a cumulatively considerable contribution to global climate change.

[14] Bay Area Air District. 2022. *Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts From Land Use Projects and Plans*. April.

The Justification Report provides substantial evidence supporting the use of its thresholds for projects throughout California because the thresholds are applicable to meeting the State's goal. In the absence of any Fresno COG, Fresno COG member agency, or SJVAPCD specific guidelines or thresholds, this analysis evaluates the proposed project for consistency with the identified project design elements as the applicable thresholds of significance to establish whether the proposed project is achieving its "fair share" of emission reductions to support long-term State goals for GHG emissions and carbon neutrality. According to the Justification Report, a project would have a less than significant impact related to GHG emissions if it would include the following project design elements:

1. **Buildings**

    a. The project will not include natural gas appliances or natural gas plumbing in both residential and nonresidential development).

    b. The project will not result in any wasteful, inefficient, or unnecessary electrical usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the *State CEQA Guidelines.*

2. **Transportation**

    a. Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA:

        i. Residential projects: 15 percent below the existing VMT per capita

        ii. Office projects: 15 percent below the existing VMT per employee

        iii. Retail projects: no net increase in existing VMT

    b. Achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2.

These project design elements may be used in future project-specific analyses, as the thresholds of significance to evaluate the project's potential GHG emissions impact. Future projects must also be evaluated for consistency with the CARB 2022 Scoping Plan.

SB 375 Regional Emissions Reductions Targets. CARB establishes GHG targets for each of the 18 MPOs in the State, reviews the SCSs, and makes a determination regarding whether the SCSs would achieve GHG reduction targets if implemented. The Fresno COG's previous 2022 RTP/SCS demonstrated a reduction in GHG emissions from passenger vehicles per capita of 13.82 percent by 2035 as compared to a 2005 baseline, therefore meeting the targets set by CARB. All reviewing federal and State authorities, including CARB, approved the Fresno COG's 2022 RTP/SCS.

In spring 2018, CARB adopted new GHG targets for all the 18 MPOs in the State based on the 2017 Scoping Plan and other new data. As of October 1, 2018, CARB established a 13 percent GHG reduction target for 2035 for the Fresno COG Region.[15] It should be noted that, pursuant to SB 375, CARB is required to update the regional targets no later than 2026. CARB staff began the target update process in 2024 with a public workshop and plans to conclude it in 2026 with Board approval of the new targets. However, as of the date this PEIR was prepared, updated regional targets have yet to be adopted. Therefore, the 2018 regional targets remain applicable for the 2026 RTP/SCS.

4.8.6 Project Impacts

The following discussion describes the potential impacts related to GHG emissions that could result from implementation of the proposed project.

Threshold 4.8.1: Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Significant and Unavoidable Impact.

Construction. Construction activities associated with future transportation improvement and land use development projects under the proposed project would generate GHG emissions. These would be associated with off-road construction equipment and travel on roadways from construction-related truck hauling, vendor deliveries, and worker commuting. Construction vehicles typically use fossil-based fuels. The combustion of fossil-based fuels creates GHGs such as CO_2, methane, and N_2O. Furthermore, methane is emitted during the fueling of heavy equipment. Exhaust emissions during construction would vary daily as activity levels change.

Potential GHG emissions during construction of each future transportation improvement and land use development project under the proposed project cannot be meaningfully quantified at this time. However, future projects subject to discretionary approval by the appropriate lead agency are required to comply with the requirements of CEQA, including an environmental review to determine if a project would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. Pursuant to **Project-Specific Mitigation Measure (PMM) GHG-1,** future projects facilitated by the proposed project would be required to prepare a project-specific assessment of potential construction GHG impacts and mitigation measures.

SJVAPCD has not developed or adopted numeric GHG significance thresholds. Similarly, the County and all cities in the Fresno COG Region have not developed or adopted numeric GHG significance thresholds. In the absence of any jurisdiction-specific guidelines or thresholds, future projects may be evaluated for consistency with the GHG significance thresholds established by the Bay Area Air District adopted the Justification Report[16] document. While the Bay Area Air District thresholds

[15] California Air Resources Board (CARB). SB 375 Regional Targets. Website: https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-program/sb-375-regional-targets (accessed March 20, 2026).

[16] California Air Resources Board (CARB). SB 375 Regional Targets. Website: https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-program/sb-375-regional-targets (accessed March 20, 2026).

mostly pertain to operation-period project design elements, the threshold related to wasteful, inefficient, or unnecessary electrical usage would be applicable to construction impacts.

In addition, future projects would adhere to **PMM EN-1**, which requires project sponsors to incorporate best practices and technological improvements to reduce the consumption of fossil fuels during construction, including reducing idling of construction equipment, modernizing older off-road engines and equipment, limiting use and developing fleet rules for construction equipment, and requiring zero-emission forklifts. This reduction of fossil fuel usage during construction would correspond to GHG emissions reductions. Additionally, under **PMM EN-2**, construction bids issued by project sponsors would identify a preference for alternative formulations of cement and asphalt with reduced GHG emissions, thereby reducing emissions associated with construction materials.

Due to the relatively short-term nature of construction, construction-related GHG emissions are assumed to contribute a relatively small portion of overall lifetime project GHG emissions. In addition, the SCS component of the proposed project is applied to an integrated land use and transportation planning approach to achieve the Fresno COG's targets for GHG emission reductions, consistent with SB 375. Therefore, while construction of each project would temporarily result in GHG emissions, each project would contribute toward the overall reduction of GHG emissions in the Fresno COG Region. Nevertheless, because the emissions cannot be quantified and disclosed at this time, the impact is considered to be **significant and unavoidable**.

Operation. Operational GHG emissions are associated with mobile sources (e.g., vehicle trips), area sources (e.g., maintenance activities and landscaping), indirect emissions from sources associated with energy consumption, waste sources (land filling and waste disposal), and water sources (water supply and conveyance, treatment, and distribution). Mobile-source GHG emissions would include project-generated vehicle trips supported by each project. Area-source emissions would be associated with activities such as landscaping and maintenance of each project site. Energy-source emissions would be generated at off-site utility providers because of increased electricity demand generated by each proposed project. Waste-source emissions generated by a future project would include energy generated by land filling and other methods of disposal related to transporting and managing project-generated waste. In addition, water-source emissions associated with future projects would be generated by water supply and conveyance, water treatment, water distribution, and wastewater treatment.

Potential GHG emissions during operation of each future transportation improvement and land use development project under the proposed project cannot be meaningfully quantified at this time. However, future projects subject to discretionary approval by the appropriate lead agency are required to comply with the requirements of CEQA, including an environmental review, as applicable, to determine if a project would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. Pursuant to **PMM GHG-1**, future projects under the proposed project would prepare a project-specific assessment of potential operational GHG impacts and feasible mitigation measures, if required, to reduce GHG emissions. In the absence of any jurisdiction-specific guidelines or thresholds, future projects may be evaluated for

consistency with the GHG significance thresholds established by the Bay Area Air District in its Justification Report[17] document.

Any future development that could occur from implementation of the proposed project would also need to be analyzed for consistency with State goals for the purpose of reducing GHG emissions, as contained in the 2022 Scoping Plan. However, the Bay Area Air District's Justification Report thresholds are designed to meet the State's established GHG reduction goals, including the 2022 Scoping Plan goals. If a project is designed and built to incorporate listed design elements related to VMT, natural gas, energy, and EVs, then it would contribute its portion of what is necessary to achieve California's long-term climate goals, and an agency reviewing each project under CEQA can conclude that the project would be consistent with the State's 2022 Scoping Plan. Analyzed against the thresholds of significance, the proposed project would be contributing its "fair share" of emissions reductions to support long-term State goals of GHG emission reductions and carbon neutrality and would therefore be considered consistent with regional and State goals and applicable plans for GHG emissions reductions.

As described in Chapter 3.0, Project Description, the proposed project seeks to guide the Fresno COG Region toward a more sustainable future by coordinating land use, housing, and transportation planning to create communities that are more compact, walkable, and transit oriented. Scenario C (Enhanced Transit and Smart Growth), the preferred alternative, combines efficient mobility with smart, sustainable urban growth focused on existing centers and established areas. Key priorities and strategies associated with Scenario C include transit system upgrades/improvements, moderate investment in road maintenance and operation, higher-density growth with mixed-use development, additional growth in urban centers and established areas, and considering preservation of resource land. These strategies reduce VMT and associated mobile source GHG emissions by improving access to alternative modes of transportation (e.g., walking, biking, transit, etc.). In addition, as described in **Fresno COG Mitigation Measure (FMM) EN-1** (refer to Section 4.6, Energy), the Fresno COG would encourage member agencies to increase the number of alternative fuel vehicles within agency fleets as feasible, which would further reduce mobile source GHG emissions. These strategies are consistent with the transportation design elements listed in the Bay Area Air District's Justification Report.

Implementation of Scenario C would also contribute to reductions in area-source GHG emissions through promoting more compact, dense development that allows for more efficient maintenance. Additionally, **FMM EN-2** would require the Fresno COG to encourage member agencies to alter zoning to maximize homes near employment centers in order to further encourage active transportation, reducing VMT and associated GHG emissions.

In addition, expanded use of renewable fuels and ZEVs, and replacing combustion sources with electrically powered alternatives would also result in future reductions in GHG emissions. The Fresno COG would encourage the long-term use of renewable energy by member agencies pursuant to **FMM EN-3**. Under this measure, the Fresno COG would encourage member agencies

[17] California Air Resources Board (CARB). SB 375 Regional Targets. Website: https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-program/sb-375-regional-targets (accessed March 20, 2026).

to streamline permitting and provide public information to facilitate accelerated construction of solar and wind power, which are energy sources that do not emit GHGs.

Future land use developments would adhere to all federal, State, and local requirements for energy efficiency. This would include current Title 24 and CALGreen standards, which establish minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building insulation and roofing, and lighting. Complying with energy efficiency requirements would reduce fossil fuel usage and associated GHG emissions. Under **FMM EN-4**, the Fresno COG would encourage member agencies to go beyond standard sustainability requirements by adopting their own "Green Building Programs" to promote green building standards beyond those established by Title 24. Each member agency's green building standards may involve provisions for energy efficiency and usage of renewable resources, which would contribute to reduced GHG emissions in the Fresno COG Region. These strategies are consistent with the building design elements listed in the Bay Area Air District's Justification Report.

SB 375 requires that the Fresno COG demonstrate in its SCS that State GHG emission reduction targets will be met for 2035. In order to quantify the GHG reductions from each potential SCS strategy, including Scenario C, the Fresno COG used modeling tools capable of forecasting future land use, travel patterns, and economic conditions through 2035. Additional detail regarding SCS modeling is provided in Appendix C to the RTP/SCS document, which is incorporated by reference. This analysis concluded that implementation of Scenario C would result in a 13.56 percent reduction in CO_2 emissions from 2005 levels in 2035. Therefore, as with the 2022 RTP/SCS, the Fresno COG will be able to meet the target set by CARB of a 13 percent reduction of GHG emissions by 2035, as shown below in Table 4.8.C. Note that CARB has not yet established GHG emission reduction targets for the 2026 RTP/SCS horizon year of 2049. Nevertheless, the Fresno COG modeling included this metric and determined that implementation of Scenario C would result in a 16.87 percent reduction in CO_2 emissions from 2005 levels in 2035.

Table 4.8.C: Demonstration of GHG Emission Reduction Targets

Year	Fresno COG Target Set by CARB	Scenario C
2035	13%	13.56%
2049	TBD	16.87%

Source: Fresno Council of Governments (COG). 2026.
CARB = California Air Resources Board
Fresno COG = Fresno Council of Governments
GHG = greenhouse gas

Table 4.8.C quantifies GHG emissions reductions for cars and light trucks, consistent with the requirements of SB 375. Other performance metrics related to GHG emissions are addressed in the balance of the 2026 RTP chapters, where appropriate.

In addition to achieving regional emissions reductions targets consistent with SB 375, pursuant to **FMM GHG-1**, the Fresno COG would work collaboratively with local air districts and jurisdictions to adopt qualified GHG reduction plans (e.g., climate action plans [CAPs]), develop GHG-reducing planning policies, and support local implementation of climate initiatives. These actions would facilitate additional GHG emissions reductions at the local level.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, the analysis presented represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. With implementation of **FMMs GHG-1, EN-1, EN-2, EN-3**, and **EN-4** and **PMMs GHG-1, EN-1,** and **EN-2**, project impacts related to the generation of GHG emissions that may have a significant impact on the environment would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether the potential impact related to the generation of substantial GHG emissions would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to the California Department of Transportation (Caltrans), local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts related to the generation of GHG emissions that may have a significant impact on the environment are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.8.2: Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Significant and Unavoidable Impact. This section includes analysis of the proposed project's consistency with State and local plans, policies, and regulations that have been adopted for the purpose of reducing GHGs. The SJVAPCD has adopted a CCAP, which includes suggested best performance standards for proposed development projects. However, the SJVAPCD's CCAP was adopted in 2009 and was prepared based on the State's 2020 GHG targets, which are now superseded by State policies and the 2030 GHG targets established in SB 32, as well as State goals for carbon neutrality, as included in EOs and codified in AB 1279. Therefore, the proposed project is analyzed for consistency with the 2022 Scoping Plan, which addresses consistency with the goals set forth in SB 32 and AB 1279.

In the absence of any Fresno COG, Fresno COG member agency, or SJVAPCD specific guidelines or thresholds, this analysis also evaluates the proposed project for consistency with the GHG significance thresholds established by the Bay Area Air District in its Justification Report[18] document.

Lastly, because this PEIR has been prepared to analyze implementation of the Fresno COG's 2026 RTP/SCS, the project's consistency with SB 375 is also discussed.

[18] California Air Resources Board (CARB). SB 375 Regional Targets. Website: https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-program/sb-375-regional-targets (accessed March 20, 2026).

2022 Scoping Plan. The following discussion evaluates the proposed project according to the goals of the 2022 Scoping Plan, EO B-30-15, SB 32, and AB 197. EO B-30-15 added the immediate target of reducing GHG emissions to 40 percent below 1990 levels by 2030. CARB released a second update to the Scoping Plan, the 2017 Scoping Plan,[19] to reflect the 2030 target set by EO B-30-15 and codified by SB 32. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reductions target of at least 40 percent below 1990 levels by 2030 contained in EO B-30-15. SB 32 builds on AB 32 and keeps California on the path toward achieving its 2050 objective of reducing emissions to 80 percent below 1990 levels.[20] The companion bill to SB 32, AB 197, provides additional direction to CARB related to the adoption of strategies to reduce GHG emissions.[21] Additional direction in AB 197 intended to provide easier public access to air emissions data that are collected by CARB was posted in December 2016. In addition, the 2022 Scoping Plan[22] assesses progress toward the statutory 2030 target while laying out a path to achieving carbon neutrality no later than 2045. The 2022 Scoping Plan focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities.

The 2022 Scoping Plan focuses on building clean energy production and distribution infrastructure for a carbon-neutral future, including transitioning existing energy production and transmission infrastructure to produce zero-carbon electricity and hydrogen, and utilizing biogas resulting from wildfire management or landfill and dairy operations, among other substitutes. The 2022 Scoping Plan states that in almost all sectors, electrification will play an important role. The 2022 Scoping Plan evaluates clean energy and technology options and the transition away from fossil fuels, including adding four times the solar and wind capacity by 2045 and about 1,700 times the amount of current hydrogen supply. As discussed in the 2022 Scoping Plan, EO N-79-20 requires that all new passenger vehicles sold in California be ZEVs by 2035 and that all other fleets transition to zero-emission as fully as possible by 2045, which will reduce the percentage of fossil fuel combustion vehicles. Appendix D of the 2022 Scoping Plan includes local action recommendations that align with the State's climate strategies. Land use developments 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. 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 following sections provide an analysis of the proposed project's consistency with the overarching, long-term GHG reduction goals from the Scoping Plan related to Energy Efficiency and Building Decarbonization as well as Transportation Electrification and VMT Reduction.

Energy Efficiency and Building Decarbonization. The energy efficiency measures included in the Scoping Plan are intended to maximize energy-efficient building and appliance standards; pursue

19 California Air Resources Board (CARB). 2017. *California's 2017 Climate Change Scoping Plan.* November.
20 California Legislative Information. 2016. Senate Bill No. 32. Filed with Secretary of State September 8.
21 California Legislative Information. 2016. Assembly Bill No. 197. Filed with Secretary of State September 8.
22 California Air Resources Board (CARB). 2022. *2022 Scoping Plan for Achieving Carbon Neutrality.* December. Website: https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf (accessed March 30, 2026).

additional efficiency efforts, including new technologies and new policy and implementation mechanisms; and pursue comparable investment in energy efficiency from all retail providers of electricity in California. In addition, these measures are designed to expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings. Future land use developments facilitated by the proposed project would comply with CALGreen regarding energy conservation and green building standards, which will ensure highly energy-efficient development. Additionally, as described in Section 4.6, Energy, in 2023, the majority of California's electricity was generated primarily by non-GHG and renewable sources (56.09 percent). Total electric generation in California in 2023 was 281,140 gigawatt-hours (GWh), down 2.1 percent from the 2022 total generation of 287,220 GWh.[23] Further, pursuant to **FMM EN-3**, the Fresno COG would encourage member agencies to streamline permitting and provide public information to facilitate accelerated construction of solar and wind power.

The elimination of natural gas in new development projects would help projects implement their "fair share" of GHG emission reductions necessary to achieve carbon neutrality by 2045.[24] It is not yet known whether future land use developments facilitated by the proposed project would include natural gas. To be conservative, this analysis assumes that natural gas may be required. The elimination of natural gas from the building sector is a key action identified by CARB to reduce statewide emissions. 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. Pursuant to **PMM GHG-1**, the proposed project would require future land use developments to eliminate the use of natural appliances or natural gas plumbing where feasible. In the case where natural gas use is required, as technology continues to advance toward cleaner energy, future land use developments would be able to reduce the use of natural gas and align with building decarbonization goals. Furthermore, future land use developments would be constructed with the latest Title 24 building design and will meet all required energy efficiency measures. In addition, under **FMM EN-4**, the Fresno COG would encourage member agencies to go beyond standard sustainability requirements by adopting their own "Green Building Programs" to promote green building standards beyond those established by Title 24. Each member agency's green building standards may involve provisions for energy efficiency and usage of renewable resources, which would contribute to reduced GHG emissions in the Fresno COG Region. Therefore, it is anticipated that future land use developments facilitated by the proposed project would comply with applicable energy measures. Additionally, and as noted above, future land use developments would comply with CALGreen, which also includes a variety of different measures for water conservation and efficiency, including the reduction of wastewater and water use. Therefore, the proposed project would also promote the reduction of GHG emissions through water efficiency measures.

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23 California Energy Commission (CEC). 2024. 2023 Total System Electric Generation. Website: https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2023-total-system-electric-generation (accessed November 26, 2025).

24 Bay Area Air Quality Management District. 2022. *Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts From Land Use Projects and Plans.* April.

Transportation Electrification and VMT. The goal of transportation and motor vehicle measures is to develop regional GHG emissions reduction targets for passenger vehicles. As previously described, the preferred SCS scenario would promote high-density, mixed-use development in existing urban centers, which would continue to promote the walkability of the Fresno COG Region while allowing for planned growth. Additionally, **FMM EN-2** would require the Fresno COG to encourage member agencies to alter zoning to maximize homes near employment centers in order to further encourage active transportation. As such, implementation of the proposed project would promote alternative forms of transportation (e.g., walking and cycling) and would reduce VMT. Another focal point of the preferred SCS scenario is transit system upgrades/improvements, which would encourage the use of alternative modes of transportation to the automobile. This would reduce the demand for petroleum fuel (transportation energy) resources. While transit services generally utilize electricity (train, light rail, etc.) and petroleum or diesel (bus) for operations and maintenance, this energy use is more efficient and serves a higher volume of passengers than single-occupancy vehicles. In addition, other transportation improvements included in the proposed 2026 RTP/SCS that would improve energy efficiency and reduce transportation energy demand include improved solar lighting at bus stops, electric bus replacement, electric street sweeper replacement, bicycle lane installation, sidewalk/trail improvements, and EV charging for member-agency vehicle fleets. Further, pursuant to **FMM EN-1**, the Fresno COG would encourage member agencies to increase the number of alternative fuel vehicles within agency fleets as feasible. Furthermore, with **PMM GHG-1**, future land use developments facilitated by the proposed project would meet the mandatory EV charging requirements of CALGreen (Part 11, Title 24, California Code of Regulations), which would promote the widespread use of EVs as well as provide the electrical infrastructure necessary during the development phase of a project that allows for future expansion of electrical EV facilities. As such, the proposed project would be aligned with the State's long-term EV adoption targets. Additionally, as described in Section 4.17, Transportation, the proposed project would result in a decreased per capita VMT over the planning period, which indicates that the land use and transportation strategies to be implemented under the proposed project are effective in reducing automobile by encouraging shorter trip lengths, shifting trips to alternative modes, or reducing overall travel demand.

Bay Area Air District Justification Report. In the absence of any City or SJVAPCD specific guidelines or thresholds, this analysis evaluates the proposed project for consistency with the Bay Area Air District's Justification Report,[25] which identifies project design elements as the applicable thresholds of significance. If a project is designed and built to incorporate design elements related to natural gas, energy, VMT, and EVs, then it would contribute its portion of what is necessary to achieve California's long-term climate goals—its "fair share"—and an agency reviewing the project under CEQA can conclude that the project would not make a cumulatively considerable contribution to global climate change.

Natural Gas Usage. According to the Justification Report, a less than significant GHG impact would occur if the project does not include natural gas appliances or natural gas plumbing. As noted previously, it is not yet known whether future land use developments facilitated by the proposed

[25] Bay Area Air District. 2022. *Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts From Land Use Projects and Plans*. April.

project would include natural gas. To be conservative, this analysis assumes that natural gas may be required. Pursuant to **PMM GHG-1**, the proposed project would require future land use developments to eliminate the use of natural appliances or natural gas plumbing where feasible. In the case where natural gas use is required, as technology continues to advance towards cleaner energy, future land use developments would be able to reduce the use of natural gas and align with building decarbonization goals. Furthermore, future land use developments would be constructed with the latest Title 24 building design and will meet all required energy efficiency measures.

Energy Usage. Under this design criterion, a project must not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the *State CEQA Guidelines*. This topic is discussed under Threshold 4.6.1 in Section 4.6, Energy. Potential energy consumption during construction and operation of each future transportation improvement and land use development project under implementation of the proposed project cannot be meaningfully quantified at this time. However, future projects subject to discretionary approval by the appropriate lead agency are required to comply with the requirements of CEQA. This includes an environmental review to determine if a project would result in wasteful, inefficient, or unnecessary consumption of energy resources during operation. This review could involve the use of energy consumption modeling software such as CalEEMod, which would assist in the determination of impacts and the identification of appropriate project-specific mitigation measures.

Future land use developments would be constructed with the latest Title 24 building design and will meet all required energy efficiency measures. In addition, under **FMM EN-4**, the Fresno COG would encourage member agencies to go beyond standard sustainability requirements by adopting their own "Green Building Programs" to promote green building standards beyond those established by Title 24. Each member agency's green building standards may involve provisions for energy efficiency and usage of renewable resources, which would contribute to reduced GHG emissions in the Fresno COG Region. Therefore, it is anticipated that future land use developments facilitated by the proposed project would comply with applicable energy measures. Additionally, and as noted above, future land use developments would comply with CALGreen, which also includes a variety of different measures for water conservation and efficiency, including the reduction of wastewater and water use. Therefore, the proposed project would also promote the reduction of GHG emissions through water efficiency measures.

Vehicle Miles Traveled. As previously described, the preferred SCS scenario would promote high-density, mixed-use development in existing urban centers, which would continue to promote the walkability of the Fresno COG Region while allowing for planned growth. Additionally, **FMM EN-2** would require the Fresno COG to encourage member agencies to alter zoning to maximize homes near employment centers in order to further encourage active transportation. As such, implementation of the proposed project would promote alternative forms of transportation (e.g., walking and cycling) and would reduce VMT. Another focal point of the preferred SCS scenario is transit system upgrades/improvements, which would encourage the use of alternative modes of transportation to the automobile to further reduce VMT. As previously stated, the proposed

project would result in a decreased per capita VMT over the planning period as a result of the proposed land use and transportation strategies.

Electric Vehicle Requirements. The final project design element that a proposed project should include to ensure that it is achieving its "fair share" of GHG emission reductions is compliance with EV requirements in the most recently adopted version of the CALGreen Tier 2 measures. As previously stated, transportation improvements related to EVs are included in the proposed 2026 RTP/SCS, including electric bus replacement, electric street sweeper replacement, and EV charging for member-agency vehicle fleets. Further, pursuant to **FMM EN-1**, the Fresno COG would encourage member agencies to increase the number of alternative fuel vehicles within agency fleets as feasible. Furthermore, with **PMM GHG-1**, future land use developments facilitated by the proposed project would meet the mandatory EV charging requirements of CALGreen (Part 11, Title 24, California Code of Regulations), which would promote the widespread use of EVs as well as provide the electrical infrastructure necessary during the development phase of a project that allows for future expansion of electrical EV facilities.

SB 375. SB 375 requires that the Fresno COG demonstrate in its SCS that State GHG emission reduction targets for cars and light trucks will be met for 2035. As described above under Threshold 4.8.1, modeling conducted by the Fresno COG determined that implementation of Scenario C is anticipated to result in a 13.56 percent reduction in CO_2 emissions from 2005 levels in 2035. This reduction is consistent with the target set by CARB of a 13 percent reduction of GHG emissions by 2035. Therefore, as with the 2022 RTP/SCS, the proposed 2026 RTP/SCS would achieve the currently adopted SB 375 reduction goals, which extend through year 2035. Given that the horizon year for the proposed project is 2049, future discretionary projects operational after year 2035 will be evaluated for consistency with the next round of SB 375 goals when undergoing project-specific environmental review.

Conclusion. As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. With implementation of **FMMs EN-1, EN-2, EN-3**, and **EN-4** and **PMM GHG-1,** project impacts related to conflicts with an applicable plan, policy or regulation adopted for the purpose of reducing emissions of GHGs would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether the potential impact related to consistency with the applicable GHG reduction plans would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts related to conflicts with an applicable plan, policy, or regulation adopted for the purpose of reducing emissions of GHGs are considered **significant and unavoidable** for the purposes of this analysis.

4.8.7 Level of Significance Prior to Mitigation

Prior to mitigation, implementation of the proposed project would have potentially significant impacts related to GHG emissions.

4.8.8 Mitigation Measures

4.8.8.1 Fresno COG Measures

The following mitigation measures would be applied on a regional scale by the Fresno COG to reduce potentially significant impacts related to GHG emissions to the extent feasible:

FMM GHG-1 The Fresno Council of Governments (COG), in partnership with local air districts, shall continue to work with local jurisdictions to adopt qualified greenhouse gas (GHG) reduction plans (e.g., Climate Action Plans), develop GHG-reducing planning policies, and support local implementation of climate initiatives.

FMM EN-1 *See Section 4.6, Energy.*

FMM EN-2 *See Section 4.6, Energy.*

FMM EN-3 *See Section 4.6, Energy.*

FMM EN-4 *See Section 4.6, Energy.*

4.8.8.2 Project-Specific Measures

The following mitigation measures shall be applied to future transportation improvement and land use development projects to reduce potentially significant impacts related to GHG emissions to the extent feasible:

PMM GHG-1 Implementing agencies shall consider mitigation measures to reduce impacts related to the generation of greenhouse gas (GHG) emissions, as applicable and feasible:

- Prior to approval of individual Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) projects, the project sponsor shall prepare and submit a technical assessment evaluating potential project-related GHG impacts. The evaluation shall be prepared in conformance with the San Joaquin Valley Air Pollution Control District (SJVAPCD) methodology.

- If the Fresno Council of Governments (COG), Fresno COG member agencies, or SJVAPCD establish numeric thresholds of significance for evaluating the GHG emissions impact of a proposed project (i.e., California Environmental Quality Act [CEQA] qualified Greenhouse Gas Reduction Plan/Climate Action Plan or SJVAPCD project-specific GHG thresholds), the evaluation of project-related GHG emissions shall demonstrate consistency with those thresholds of significance.

- In the absence of project-specific GHG thresholds, projects shall demonstrate compliance with the newest version of the Scoping Plan's GHG requirements, consistent with State GHG emissions reduction and equity prioritization goals, by implementing the following design elements where feasible:

    - Projects shall not include natural gas appliances or natural gas plumbing.

- Projects shall achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the newest version of the Scoping Plan.
- Projects shall not result in any wasteful, inefficient, or unnecessary electrical usage, as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.
- Projects shall comply with electric vehicle (EV) requirements in the most recently adopted version of California Green Building Standards Code (CALGreen) Tier 2.

- Should a proposed project exceed established thresholds of significance, GHG emission reduction measures shall be implemented to reduce emissions below applicable thresholds or to a level commensurate with implementing the recommended project-design features outlined above. Such mitigation measures could include, but are not limited to, energy efficiency measures, water conservation and efficiency measures, solid waste measures, and transportation and motor vehicles measures. The identified measures shall be included as part of the conditions of approval.

PMM EN-1 *See Section 4.6, Energy.*

PMM EN-2 *See Section 4.6, Energy.*

4.8.9 Level of Significance After Mitigation

Implementation of **FMMs GHG-1, EN-1, EN-2, EN-3**, and **EN-4** and **PMMs GHG-1, EN-1,** and **EN-2** would assist the Fresno COG and lead agencies of future transportation improvement and land use development projects in reducing impacts related to GHG emissions to the extent feasible. However, the analysis presented in this section is general in nature, and given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future transportation improvement and land use development projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. As appropriate and feasible, the Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified. Nevertheless, impacts related to GHG emissions are considered significant and unavoidable for the purposes of this analysis.

4.8.10 Cumulative Impacts

As defined in Section 15130 of the State CEQA Guidelines, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for GHG emissions. Past, present, and future development projects contribute to the regional GHG emissions, and GHG impacts are by

nature cumulative impacts. Localized impacts of climate change are the result of the cumulative impact of global emissions. The combined benefits of reductions achieved by all levels of government help to slow or reverse the growth in GHG emissions. In the absence of comprehensive international agreements on appropriate levels of reductions achieved by each country, another measure of cumulative contribution is required. This serves to define the State's share of the reductions regardless of the activities or lack of activities of other areas of the United States or the world. Therefore, a cumulative threshold based on consistency with State targets and actions to reduce GHGs is an appropriate standard of comparison for significance determinations.

As noted previously, CARB adopted the 2022 Scoping Plan, which assesses progress toward the statutory 2030 target while laying out a path to achieving carbon neutrality no later than 2045. The 2022 Scoping Plan focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities. In order to achieve these goals, CARB is in the process of establishing and implementing regulations to reduce statewide GHG emissions. While some other jurisdictions and air districts in the State have adopted numeric thresholds to assist in determining a project's contribution to cumulative GHG emissions, as previously stated, the Fresno COG, Fresno COG member agencies, and the SJVAPCD have not developed or adopted numeric GHG significance thresholds. Therefore, the lead agency for each future project facilitated by the proposed project or cumulative project would be responsible for determining the appropriate methodology for evaluating project-specific GHG emissions impacts, which could potentially include the use of Bay Area Air District thresholds consistent with this PEIR. As previously described, under these thresholds, a project designed and built to incorporate design elements related to natural gas, energy, VMT, and EVs would contribute its portion of what is necessary to achieve California's long-term climate goals—its "fair share"—and an agency reviewing the project under CEQA can conclude that the project would not make a cumulatively considerable contribution to global climate change.

As previously stated, the Fresno COG has demonstrated in its proposed SCS that CARB's established GHG emission reduction targets for cars and light trucks will be met for 2035. Although this determination could be made using regional modeling tools capable of forecasting future land use, travel patterns, and economic conditions through 2035, potential GHG emissions during construction and operation of each future transportation improvement and land use development project cannot be meaningfully quantified at this time. However, since GHG is a global issue, it is unlikely that each individual transportation improvement and land use development project facilitated by the proposed project would generate enough GHG emissions to influence GHG emissions on its own. Consequently, it is speculative to determine how an individual project's GHG emissions would impact climate change in California. Implementation of **PMM GHG-1** would serve to ensure that the impacts of the continued implementation of the proposed project are assessed to determine if they would have a significant impact on GHGs. **PMM GHG-1** would ensure that future development projects that would occur from implementation of the proposed project would comply with State goals related to the reduction of GHG emissions.

As with future transportation improvement and land use development projects facilitated by the proposed project, cumulative land use development projects proposed during the life of the proposed

2026 RTP/SCS would also be required to comply with existing State regulations adopted to achieve the overall GHG emissions reduction goals, including the CARB 2022 Scoping Plan, EO B-30-15, SB 32, and AB 1279.

As stated under Section 4.8.9, impacts of the proposed project on GHG emissions are considered significant and unavoidable given the programmatic nature of the proposed project, the scale of the Fresno COG Region, and the inability of the Fresno COG to enforce project-specific mitigation or make land use approvals. Because the proposed project would result in significant adverse environmental impacts, its impacts would represent an incremental contribution to the environmental impacts in the cumulative impact study area, ultimately leading to a cumulatively considerable and significant and unavoidable impact related to GHG emissions.

4.9 HAZARDS AND HAZARDOUS MATERIALS

This section of the Draft Program Environmental Impact Report (PEIR) discusses known and potential hazards and hazardous materials conditions within the Fresno Council of Governments (COG) Region and in the surrounding area and provides an analysis of the potential public health impacts anticipated with implementation of the proposed 2026 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (proposed project). This section also discusses local, State, and federal regulations and policies pertaining to hazards and hazardous materials and provides recommended measures pursuant to the California Environmental Quality Act (CEQA). For the purposes of this analysis, hazardous materials include, but are not limited to, hazardous substances, hazardous waste, and petroleum products that, if released, are harmful to human health and the environment.

4.9.1 Scoping Process

Potential impacts related to hazards and hazardous materials were not identified during the public scoping meeting held for the proposed project on May 28, 2025. The Fresno COG received no comment letters in response to the Notice of Preparation (NOP) issued for the proposed project between May 13 and June 12, 2025, concerning the proposed project's potential impacts related to hazards and hazardous materials.

4.9.2 Methodology

The area encompassed by the Fresno COG Region is too large to be accurately characterized in a Phase I Environmental Site Assessment (Phase I ESA) or other hazardous materials assessment typically used to support CEQA analysis. As such, data from the County's General Plan,[1] the County's General Plan PEIR, and the County of Fresno Hazard Mitigation Plan (HMP)[2] are incorporated into this section to provide a general overview of existing conditions and potential impacts related to hazards and hazardous materials.

Subsequent project-specific CEQA documents may be required to further analyze the conditions related to hazards and hazardous materials at each individual project site, further analyze the transportation improvements or new development facilitated by the proposed project to determine the magnitude of potential impacts, and identify appropriate project-specific mitigation measures.

4.9.2.1 Key Concepts

The evaluation of hazards and hazardous materials is guided by the potential for a project to create or exacerbate risks to human health, safety, and the environment through the routine transport, use, storage, or disposal of hazardous materials, as well as through reasonably foreseeable upset and accident conditions involving the release of such materials.

1 County of Fresno. 2024. *Fresno County General Plan Policy Document. General Plan Review*. February.
2 County of Fresno. 2024. *2024 Fresno County Hazard Mitigation Plan*. May.

Hazardous Waste. Hazardous waste is a waste with properties that make it dangerous or capable of having a harmful effect on human health or the environment. Hazardous waste is generated from many sources, ranging from industrial manufacturing process wastes to batteries and may come in many forms, including liquids, solids gases, and sludges.[3]

Sources of Hazardous Materials/Waste. Common sources of hazardous materials include industries, businesses, institutions, and households. Hazardous materials associated with these land uses have the potential to be released into the environment during use, processing, storage, and transport or when improperly disposed. According to the Federal Emergency Management Agency (FEMA), the impact to life and property from the release of hazardous materials depends on the following factors:[4]

- **Application Mode:** The human act(s) or unintended event(s) necessary to cause the hazard to occur.
- **Duration:** The length of time the hazard is present on the target.
- **Dynamic/Static Characteristic:** The tendency of the hazard or its effects to either expand, contract, or remain confined in time, magnitude, and space.
- **Mitigating Conditions:** Characteristics of the target and its physical environment that can reduce the effects of a hazard.
- **Exacerbating Conditions:** Characteristics that can enhance or magnify the effects of a hazard.

Potential Presence of Hazardous Materials in Soil and Groundwater. Hazardous materials, including pesticides and herbicides, heavy metals, volatile organic compounds, and oil and gas, may be present in soil and groundwater in areas where land uses have resulted in leaking fuel or chemical storage tanks or where other releases of hazardous materials have occurred. Land uses that typically involve the handling of hazardous materials include commercial or industrial operations, as well as agricultural areas where soils may contain pesticides and herbicides.

Hazardous Waste Transportation. Hazardous waste transporters are individuals or entities that move hazardous waste from one site to another by highway, rail, water, or air. Hazardous waste transporters play an integral role in the hazardous waste management system by delivering hazardous waste from its point of generation to ultimate destination. This includes transporting hazardous waste from a generator's site to a facility that can recycle, treat, store or dispose of the waste. It can also include transporting treated hazardous waste to a site for further treatment or disposal.[5]

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3 United States Environmental Protection Agency (EPA). 2026. *Learn the Basics of Hazardous Waste.* Website: https://www.epa.gov/hw/learn-basics-hazardous-waste (accessed March 26, 2026).

4 Federal Emergency Management Agency (FEMA). 2025. *Hazard Mitigation Assistance Program and Policy Guide.* January 20. Website: https://www.fema.gov/sites/default/files/documents/fema_hma-guide-v2.1_2025.pdf (accessed March 3, 2026).

5 United States Environmental Protection Agency (EPA). 2025. *Hazardous Waste Transportation.* Website: https://www.epa.gov/hw/hazardous-waste-transportation (accessed March 26, 2026).

Superfunds. Superfunds are collectively thousands of contaminated sites that exist nationally due to hazardous waste being dumped, left out in the open, or otherwise improperly managed. These sites include manufacturing facilities, processing plants, landfills and mining sites.[6]

National Priorities List (NPL). The NPL is a list of sites of national priority among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories. The NPL is intended primarily to guide the United States Environmental Protection Agency (EPA) in determining which sites warrant further investigation.[7]

The Hazardous Waste and Substances Sites (Cortese) List. The Cortese List is a planning document used by the State, local agencies, and developers to comply with the CEQA requirements in providing information about the location of hazardous materials release sites.

- The Department of Toxic Substances Control (DTSC) Brownfields and Environmental Restoration Program (Cleanup Program) EnviroStor database provides DTSC's component of the Hazardous Waste and Substances Sites List (commonly referred to as the Cortese List) by identifying sites included in the Annual Workplan (now referred to as State Response and/or Federal Superfund sites) and Backlog sites listed pursuant to California Health and Safety Code Section 25356. In addition, DTSC's contribution to the Cortese List includes sites that have been certified as requiring Operation and Maintenance.[8]

Aviation Hazards. Aviation hazards can be considered either hazards to flights themselves or flight-related hazards to those on the ground. Examples include flight path obstacles, visual impairment, or mechanical/electronic failure. Since 1968, counties with at least one public use airport are required to establish an airport land use commission (ALUC).

Airport Land Use Commission. An ALUC is required by California law in every county with an airport in its jurisdiction. Each ALUC must develop a plan for promoting and ensuring compatibility between each airport in the county and surrounding land uses. An ALUC has two primary functions:

- Prepare and adopt an airport land use compatibility plan (ALUCP) with a 20-year planning horizon for each airport within its jurisdiction; and

- Review local agency land use actions and airport plans for consistency with the land use compatibility policies and criteria in the ALUCP.

Airport Land Use Compatibility Plan. An ALUCP is intended to protect and promote the safety and welfare of residents, businesses, and airport users near public-use airports and military airports while supporting the continued operation of these facilities.

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6 United States Environmental Protection Agency (EPA). 2025. *What is Superfund?* Website: https://www.epa.gov/superfund/what-superfund (accessed March 26, 2026).

7 United States Environmental Protection Agency (EPA). 2025. *Superfund: National Priorities List (NPL).* Website: https://www.epa.gov/superfund/superfund-national-priorities-list-npl (accessed March 26, 2026).

8 Department of Toxic Substances Control (DTSC). 2026. *DTSC's Hazardous Waste and Substances Site List – Site Cleanup (Cortese List).* Website: https://dtsc.ca.gov/dtscs-cortese-list/ (accessed March 26, 2026).

The ALUCP also establishes seven safety zone types for each airport in accordance with the *2011 California Airport Land Use Planning Handbook.*[9] The ALUCP assigns each safety zone type with specific compatibility standards to restrict the development of land uses that could pose particular hazards to the public or to vulnerable populations in case of an aircraft accident. The seven safety zone types are described below:

- **Zone 1: Runway Protection Zone (RPZ).** Runway protection zones are trapezoidal-shaped areas located at ground level beyond each end of a runway. The accident risk level in this zone is considered very high, representing approximately 20 to 21 percent of the accidents at general aviation airports.

- **Zone 2: Inner Approach/Departure Zone (IADZ).** This zone encompasses area over which aircraft fly at low altitudes, typically only 200 to 400 feet above runway elevation. The accident risk level in this zone is considered high, representing approximately 10 percent of general aviation aircraft accidents.

- **Zone 3: Inner Turning Zone (ITZ).** This zone encompasses locations where aircraft are typically turning from the base to final approach and are descending from traffic pattern altitude. This zone also includes the area where departing aircraft normally complete the transition from takeoff power and flap settings to a climb mode and have begun to turn to their en-route heading. The accident risk level in this zone is considered moderate to high, representing approximately 7 percent of general aviation aircraft accidents.

- **Zone 4: Outer Approach/Departure Zone (OADZ).** The OADZ is situated along the extended runway centerline beyond the IADZ. Approaching aircraft are usually at less than traffic pattern altitude in the OADZ. The accident risk level in this zone is considered moderate, representing approximately 5 percent of general aviation aircraft accidents.

- **Zone 5: Sideline Zone (SZ).** The SZ encompasses the close-in area near runways. The primary risk in this zone is with aircraft losing directional control on takeoff. The accident risk level in this zone is considered low to moderate, representing approximately 5 percent of general aviation aircraft accidents.

- **Zone 6: Traffic Pattern Zone (TPZ).** The TPZ zone includes all other portions of regular aircraft traffic patterns based on the 14 Code of Federal Regulations (CFR) Part 77 Conical Surface for the following airports.

- **Zone 7: Precision Approach Zone (PAZ).** The PAZ includes the 14 CFR Part 77 Outer Approach Transitional Surface and Precision Approach Surface. The Outer Approach Transitional Surface and Precision Approach Surface are used at airports with runways with an existing or planned Precision Instrument Approach.

[9] Caltrans. Division of Aeronautics. 2011. California Airport Land Use Planning Handbook. October. Website: https://dot.ca.gov/-/media/dot-media/programs/aeronautics/documents/californiaairportlanduse planninghandbook-a11y.pdf (accessed April 6, 2026).

4.9.3 Existing Environmental Setting

This section provides an overview of potential hazardous waste sites, activities, and aviation facilities that may threaten human or environmental health and safety.

4.9.3.1 Sources of Hazardous Materials

Common sources of hazardous materials in the Fresno COG Region include industries, businesses, institutions, and households.

The California Accidental Release Prevention Program (CalARP) was used to identify facilities in the Fresno COG Region with the greatest potential to result in the release of hazardous materials that could adversely impact communities in the Fresno COG Region. The program was implemented on January 1, 1997, and replaced the California Risk Management and Prevention Program (RMPP). Under the CalARP program, businesses that handle more than a threshold quantity of a regulated substance listed in the regulations are required to develop a Risk Management Plan (RMP). An RMP is a detailed engineering analysis of the potential accident factors present in a business and the mitigation measures that can be implemented to reduce this accident potential. A review of the CalARP data suggests that a large number of the Fresno COG Region's CalARP facilities are contained within the Fresno-Clovis Metropolitan Area.

In addition to the CalARP facilities, a review of several other databases indicates the presence of the following hazardous materials sites:

- 20 active Leaking Underground Storage Tank (LUST) sites with an open status;[10]
- 30 Superfund sites, including five National Priorities List sites;[11,12]
- 46 cleanup sites with an active status;[13]
- Three solid waste disposal sites that process hazardous waste;[14]

[10] State Water Resources Control Board (SWRCB). GeoTracker. Website: https://geotracker.waterboards.ca.gov (accessed December 2, 2025).

[11] United States Environmental Protection Agency (EPA). n.d. Superfund Site Search Results. Website: https://cumulis.epa.gov/supercpad/cursites/srchrslt.cfm?start=1 (accessed December 2, 2025).

[12] The National Priorities List is a subset of the Superfund program that lists the most serious uncontrolled or abandoned hazardous waste sites.

[13] California Department of Toxic Substances Control (DTSC). n.d. EnviroStor. Website: https://www.envirostor.dtsc.ca.gov/public/ (accessed December 2, 2025).

[14] California Environmental Protection Agency (CalEPA). n.d. Sites Identified with Waste Constituents Above Hazardous Waste Levels Outside the Waste Management Unit. Website: https://calepa.ca.gov/wp-content/uploads/2016/10/SiteCleanup-CorteseList-CurrentList.pdf (accessed March 3, 2026).

- 1,678 small-quantity hazardous waste generators and 150 large-quantity hazardous waste generators;[15] and

- Agricultural operations adjacent to urbanized areas, which present risks associated with agricultural chemicals (pesticides and fertilizers).

Table 4.9.A, below, provides an overview of the number of hazardous materials facilities within incorporated and unincorporated areas in the Fresno COG Region, according to the HMP.[16]

Table 4.9.A: Hazardous Materials Facilities in the Fresno COG Region by Jurisdiction

Jurisdiction	Number of Hazardous Materials Facilities
Clovis	2
Coalinga	1
Firebaugh	1
Fowler	2
Fresno	28
Huron	3
Kingsburg	5
Mendota	2
Orange Cove	2
Reedley	8
Sanger	6
Selma	2
Unincorporated	107
Total	**169**

Source: County of Fresno. 2024. *Fresno County, California Hazard Mitigation Plan.* May.
COG = Council of Governments

Another useful source of information regarding hazardous materials in the Fresno COG Region is the EPA Toxics Release Inventory (TRI) Program,[17] which tracks the industrial management of toxic chemicals that may cause harm to human health and the environment through industry reporting. Under this program, industry sectors must report to the EPA annually how much of each chemical is released to the environment and/or managed through recycling, energy recovery, and treatment. The Fresno COG Region contains 33 TRI sites. There are 2 facilities in Clovis, 18 in Fresno, 1 in Kerman, 1 in Kingsburg, 1 in San Joaquin, 1 in Selma, and 9 in unincorporated Fresno County.

[15] County of Fresno. 2024. *Fresno County, California Hazard Mitigation Plan.* May. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/resources/hazard-mitigation-plan/draft-2024-fresno-county-hazard-mitigation-plan.pdf (accessed December 2, 2025).

[16] County of Fresno. 2024. *Fresno County, California Hazard Mitigation Plan.* May. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/resources/hazard-mitigation-plan/draft-2024-fresno-county-hazard-mitigation-plan.pdf (accessed December 2, 2025).

[17] United States Environmental Protection Agency (EPA). n.d. Toxics Release Inventory (TRI) Program. Website: https://www.epa.gov/toxics-release-inventory-tri-program (accessed March 3, 2026).

4.9.3.2 Transportation of Hazardous Materials

Hazardous materials can be released during transportation. Given that major transportation corridors allow for the movement of goods throughout and beyond the region, these corridors are the most likely to be used for the transportation of hazardous materials. The Fresno COG Region's major north-south roadways include State Route (SR-)99 and Interstate (I-)5. SR-99 runs through the central part of the Fresno COG Region and provides a north-south corridor through several counties. Most of the Fresno COG Region's industrial and residential activity is positioned along SR-99. In the western portion of the Fresno COG Region, I-5 traverses the Fresno COG Region at the base of the Coast Ranges foothills and provides a north-south route for people and goods movement. SR-33, SR-41, SR-43, SR-63, SR-145, SR-168, SR-180, SR-198, and SR-269 provide local service to urban and rural areas in the Fresno COG Region through connections to local roadways.

Vehicles transporting materials classified as hazardous by the United States Department of Transportation (USDOT)[18] are required to adhere to routing requirements that are enforced by the California Highway Patrol for the purpose of risk reduction. These routes must be as direct as possible, utilize State or Interstate highways whenever possible, and must adhere to roadways with sufficient width and load-bearing capacity. All hazardous material types, including hazardous waste, may be transported on I-5. Materials that are poisonous by inhalation, or that are explosives or high-level radioactive, may be transported on certain State Routes, including SR-33, SR-41, SR-63, SR-99, SR-180, and SR-198, but are subject to restrictions.[19]

I-5, SR-99, and SR-41 are some of the Fresno COG Region's most prominent transportation corridors because they provide direct links between the region's transportation system, the surrounding regions, and beyond. As such, long-distance trucking activity is common in the Fresno COG Region. According to the Fresno County *General Plan Background Report,* truck transportation, followed by rail, air, and pipeline, provides the majority of goods movement in the Fresno COG Region, including the transportation of hazardous materials. The State Routes that carry the vast majority of truck traffic, both in absolute and percentage share, are SR-99, I-5 and SR-198.[20]

In addition to vehicular travel, major rail lines in the Fresno COG Region include Union Pacific Railroad (UPRR), BNSF Railway (BNSF), Port Railroads, Inc., and San Joaquin Valley Railroad. The BNSF and UPRR rail lines run north-south through the Fresno COG Region and connect the region to Sacramento and the San Francisco Bay Area to the north and Bakersfield to the south. Both lines service the City of Fresno, which, as previously discussed, serves as the location for many of the region's CalARP facilities.

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18 United States Department of Transportation (USDOT). n.d. *Nine Classes of Hazardous Materials.* Website: https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/docs/Nine_Classes_of_Hazardous_Materials.pdf (accessed March 3, 2026).

19 Ibid. Page 436.

20 County of Fresno. 2024. *General Plan Background Report.* February. Page 5-54. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/planning-and-land-use/general-plan/background-report-2024.pdf (accessed December 3, 2025).

Approximately 40 trains travel through the City of Fresno each day, some of which may carry hazardous materials in close proximity to sensitive receptors.[21]

4.9.3.3 Aviation Hazards

The Fresno County ALUC consists of seven commissioners, including two city representatives, two County representatives, two aviation representatives, and one general public representative.

As stated in Section 3.0, Project Description, the Fresno COG Region contains 9 publicly owned airports, 24 privately owned airports (3 of which allow public use), and 1 military airfield that does not allow public use. The Fresno COG Region's public airports are Coalinga Municipal Airport, Firebaugh Municipal Airport, Fresno Chandler Executive Airport, Fresno Yosemite International Airport, Harris Ranch Airport, Reedley Municipal Airport, Selma Airport, Sierra Sky Park Airport, and William Robert Johnston Municipal Airport, as shown on Figure 4.9-1.

In 2023, the ALUC prepared a comprehensive ALUCP, which superseded individual plans that had previously been prepared for the airports listed above. In addition, the ALUCP included Naval Air Station (NAS) Lemoore, which is utilized by the United States military and is mostly located within neighboring Kings County. The ALUCP establishes an airport influence area (AIA) boundary for each of the 10 aviation facilities, as listed above. The AIA is "the area in which current and projected future airport-related noise, safety, airspace protection, or overflight factors/layers may significantly affect land use or necessitate restrictions on uses by an airport land use commission."[22]

4.9.3.4 Incident History

The County's HMP provides an overview of historical hazardous materials releases that have occurred in the Fresno COG Region based on data from the National Response Center.[23] According to the data, 553 incidents were reported between 2009 and 2022, for an average of approximately 40 incidents per year.[24] One of the most common incident types is fuel spills, which are considered relatively minor and can be addressed through standard cleanup efforts. Table 4.9.B, below, provides a summary of incidents by type in the most recent years for which data were available at the time the HMP was prepared (2017 to 2022).

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21 County of Fresno. 2024. *Fresno County, California Hazard Mitigation Plan.* May. Page 439. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/resources/hazard-mitigation-plan/draft-2024-fresno-county-hazard-mitigation-plan.pdf (accessed December 2, 2025).

22 County of Fresno. 2024. *Fresno County, California Hazard Mitigation Plan.* May. Page 439. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/resources/hazard-mitigation-plan/draft-2024-fresno-county-hazard-mitigation-plan.pdf (accessed December 2, 2025).

23 Ibid.

24 553 incidents ÷ 14 years = 39.5 incidents per year.

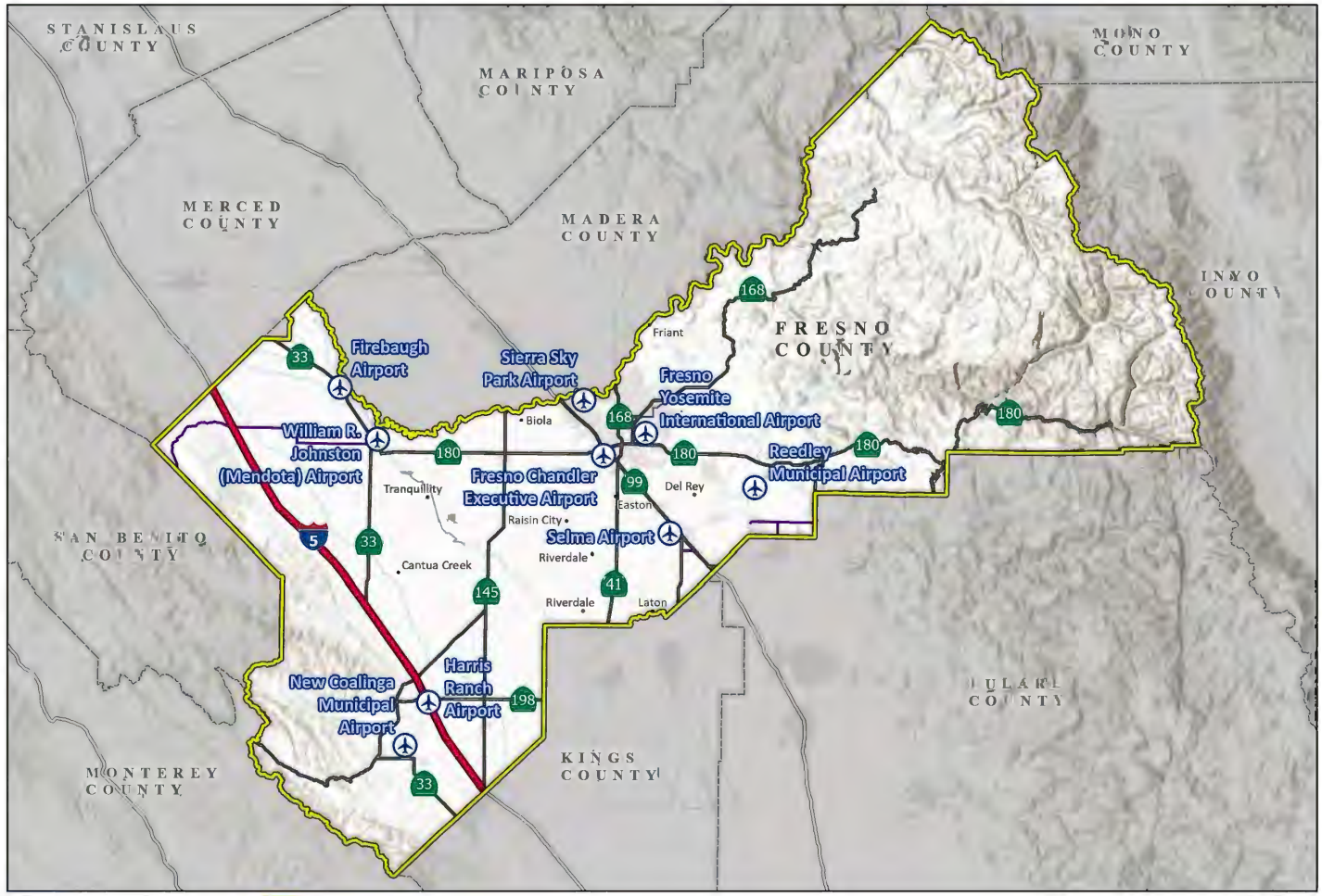


FIGURE 4.9-1

Regional Transportation Plan/Sustainable Communities Strategy
Fresno COG Region Airport Location Map

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Table 4.9.B: Hazardous Materials Incidents by Type, 2017 to 2022, in the Fresno COG Region

Incident Type	Number of Hazardous Materials Incidents
Aircraft	1
Unknown	1
Railroad	5
Pipeline	11
Mobile	15
Storage Tank	15
Fixed	68
Railroad Non-Release	89

Source: County of Fresno. 2024. *Fresno County, California Hazard Mitigation Plan.* May. Table 161.
COG = Council of Governments

4.9.4 Regulatory Setting

This section includes applicable federal, State, regional, and local policies and regulations.

4.9.4.1 Federal Regulations

Comprehensive Environmental Response, Compensation, and Liability Act. The discovery of environmental health damage from disposal sites prompted the United States Congress to pass the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund) in 1980. The purpose of the CERCLA is to identify and clean up chemically contaminated sites that pose a significant environmental health threat. The Hazard Ranking System is used to determine whether a site should be placed on the National Priorities List for cleanup activities.

Superfund Amendments and Reauthorization Act. The Superfund Amendments and Reauthorization Act (SARA) of 1986 pertains primarily to emergency management of accidental releases. It requires formation of State and local emergency planning committees, which are responsible for collecting, material handling, and transportation data for use as a basis for planning. Chemical inventory data are made available to the community at large under the "right-to-know" provision of the law. In addition, SARA also requires annual reporting of continuous emissions and accidental releases of specified compounds. These annual submissions are compiled into a nationwide TRI.

Resource Conservation and Recovery Act. The Resource Conservation and Recovery Act (RCRA), Subtitle C, addresses hazardous waste generation, handling, transportation, storage, treatment, and disposal. It includes requirements for a system that uses hazardous waste manifests to track the movement of waste from its site of generation to its ultimate disposition. The 1984 amendments to the RCRA created a national priority for waste minimization. Subtitle D establishes national minimum requirements for solid waste disposal sites and practices. It requires states to develop plans for the management of wastes within their jurisdictions. Subtitle I requires monitoring and containment systems for underground storage tanks that hold hazardous materials. Owners of tanks must demonstrate financial assurance for the cleanup of a potential leaking tank.

USDOT Regulations, Title 49 CFR (Hazardous Materials Transportation Act). The Hazardous Materials Transportation Act of 1975 is the statutory basis for the extensive body of regulations aimed at ensuring the safe transport of hazardous materials on water, on rail, on highways, in the sky, or in pipelines. It includes provisions for materials classification, packaging, marking, labeling, placarding, and shipping documentation.

Occupational Safety and Health Administration (OSHA), Title 29 CFR. OSHA is the federal agency responsible for ensuring worker safety. These regulations provide standards for safe workplaces and work practices, including those relating to hazardous materials handling.

United States Environmental Protection Agency, Title 40 CFR 700–799 (Toxic Substances Control Act). The Toxic Substances Control Act of 1976 regulates manufacturing, inventory, and disposition of industrial chemicals, including hazardous materials. It addresses the production, importation, use, and disposal of specific chemicals, including polychlorinated biphenyls (PCBs), asbestos-containing materials (ACMs), and lead-based paint (LBP).

The Clean Water Act. National Pollutant Discharge Elimination System (NPDES) (Section 402[p]) (33 United States Code [USC] Section 1342[p]) regulates discharges and spills of pollutants, including hazardous materials, to surface waters and groundwater.

The Safe Drinking Water Act. The Safe Drinking Water Act of 1974 (42 USC Section 300[f] et seq.) regulates discharges of pollutants, including hazardous materials, to underground aquifers and establishes standards for drinking water quality.

Wildland-Urban Interface Code. Section 202 of the International Code Council establishes a Wildland-Urban Interface (WUI) and requires projects within WUI areas to develop project-specific Fire Protection Plans that describe ways to minimize and mitigate the fire problems created by the project or development, with the purpose of reducing impacts on the community's fire protection delivery system.

Federal Air Regulations, 14 CFR, Part 77. The Federal Aviation Administration (FAA) is responsible for the review of construction activities that occur in the vicinity of airports. Its role in reviewing these activities is to ensure that new structures do not result in a hazard to aviation. The regulations in the Federal Air Regulations (14 CFR Part 77) are designed to ensure that no obstructions in navigable air space are allowed to exist that would endanger the public. Federal Air Regulations Part 77 identifies the minimum height at which a structure would be considered an obstacle at any given point around an airport. The extent of the off-airport coverage that needs to be evaluated for tall-structure impacts can extend miles from an airport facility. In addition, Federal Air Regulations Part 77 establishes standards for determining whether objects constructed near airports will be considered obstructions in navigable airspace, sets forth notice requirements of certain types of proposed construction or alterations, and provides for aeronautical studies to determine the potential impacts of a structure on the flight of aircraft through navigable airspace.

4.9.4.2 State Regulations

California Code of Regulations. Most State and federal regulations and requirements that apply to generators of hazardous waste are spelled out in the California Code of Regulations (CCR), Title 22, Division 4.5. Title 22 contains the detailed compliance requirements for hazardous waste generators, transporters, treatment, storage, and disposal facilities. Because California is a fully authorized[25] State according to RCRA, most RCRA regulations (those contained in 40 CFR 260, et seq.) have been duplicated and integrated into Title 22. However, because the DTSC regulates hazardous waste more stringently than the EPA, the integration of California and federal hazardous waste regulations that make up Title 22 do not contain as many exemptions or exclusions as does 40 CFR 260. As with the California Health and Safety Code, Title 22 also regulates a wider range of waste types and waste management activities than do the RCRA regulations in 40 CFR 260. To aid the regulated community, California has compiled the hazardous materials, waste, and toxics-related regulations contained in CCR Titles 3, 8, 13, 17, 19, 22, 23, 24, and 27 into one consolidated CCR Title 26, "Toxics." However, the California hazardous waste regulations are still commonly referred to as Title 22. For the purposes of clarity, because of the extensive reach of Title 22 and Title 26, many common household products sold in grocery stores and home improvement warehouses qualify as hazardous materials. These items include household cleaners, detergents, paint, motor oil, lubricants, glues, pesticides, etc. The term "hazardous materials" is also defined to include many on site materials as well, such as lubricants, fuel, etc. Thus, when this section of the PEIR discusses the transport and storage of "hazardous materials," it is referring to the potential transport of bulk products to the project locations and to the temporary storage of such materials at the project sites prior to their re-packaging and transport to subsequent destinations.

Assembly Bill 2948. In response to the growing statewide concern of hazardous waste management, Assembly Bill (AB) 2948 enacted legislation authorizing local governments to develop comprehensive hazardous waste management plans. The intent of each plan is to ensure that adequate treatment and disposal capacity is available to manage the hazardous waste generated within its jurisdiction.

California State Hazard Mitigation Plan. The purpose of the State Hazard Mitigation Plan (SHMP) is to significantly reduce deaths, injuries, and other losses attributed to natural and human-caused hazards in California. The SHMP provides guidance for hazard mitigation activities emphasizing partnerships among local, State, and federal agencies as well as the private sector.

Cortese List: Section 65962.5(a). Government Code Section 65962.5 requires the California Environmental Protection Agency (CalEPA) to develop at least annually an updated Cortese List. The Cortese List is a planning document used by the State, local agencies, and developers to comply with CEQA requirements in providing information about the locations of hazardous materials release sites. Release sites or hazardous materials release sites may include the following:

- All hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code;

[25] A "fully authorized state" under the RCRA means that the State has been granted the authority to implement the hazardous waste program as per the federal regulations.

- All land designated as hazardous waste property or border-zone property pursuant to Article 11 (commencing with Section 25220) of Chapter 6.5 of Division 20 of the Health and Safety Code;
- All information received by the DTSC, pursuant to Section 25242 of the Health and Safety Code, on hazardous waste disposals on public land;
- All sites listed pursuant to Section 25356 of the Health and Safety Code; and
- All sites included in the Abandoned Site Assessment Program.

The DTSC is responsible for a portion of the information contained in the Cortese List. Other State and local government agencies are required to provide additional hazardous material release information for the Cortese List.

California Occupational Safety and Health Administration Regulations. The California Occupational Safety and Health Administration (Cal/OSHA) is responsible for developing and enforcing workplace safety standards and ensuring worker safety in the handling and use of hazardous materials. Among other requirements, Cal/OSHA requires many entities to prepare injury and illness prevention plans and chemical hygiene plans, and provides specific regulations to limit the exposure of construction workers to lead.

California Office of Environmental Health Hazard Assessment. The California Office of Environmental Health Hazard Assessment (OEHHA) is administered by CalEPA to protect and enhance public health and the environment by scientific evaluation of risks posed by hazardous substances. The OEHHA developed California Human Health Screening Levels (CHHSLs)[26] on behalf of CalEPA, pursuant to Health and Safety Code Section 57008, to establish thresholds of chemical concentrations of concern for risks to human health, specifically, an excess of lifetime cancer risk of one in 1 million (10^{-6}) and a hazard quotient of 1.0 for non-cancer health effects. It should be noted that CHHSLs have no regulatory effect and are not intended for use by regulatory agencies that have authority to require remediation of contaminated soil. The numbers are solely advisory and published as reference values for use by citizen groups, community organizations, property owners, developers, and local government officials to estimate the degree of effort that may be necessary to remediate a contaminated site.

The Porter-Cologne Water Quality Control Act (California Water Quality Code, Section 13000 et seq.). The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) regulates water quality through the State Water Resources Control Board (SWRCB) and Regional Water Quality Control Boards (RWQCBs), including oversight of water monitoring and contamination cleanup and abatement.

Safe Drinking Water and Toxic Enforcement Act (Proposition 65, California Health and Safety Code, § 25249.5 et seq.). The Safe Drinking Water and Toxic Enforcement Act is similar to the federal Safe

[26] California Office of Environmental Health Hazard Assessment (OEHHA). 2010. California Human Health Screening Levels. September 23. Website: https://oehha.ca.gov/risk-assessment/california-human-health-screening-levels-chhsls (accessed July 8, 2024).

Drinking Water Act and Clean Water Act in that it regulates the discharge of contaminants, including hazardous materials, to groundwater.

California Emergency Services Act. Government Code Sections 8550–8692 provide for the assignment of functions to be performed by various agencies during an emergency so that the most effective use may be made of all manpower, resources, and facilities for dealing with any emergency that may occur. The coordination of all emergency services is recognized by the State to mitigate the effects of natural, manmade, or war-caused emergencies that result in conditions of disaster or extreme peril to life, property, and the resources of the State, and generally, to protect the health and safety and preserve the lives and property of the people of the State.

California Government Code Section 51178. This government code requires the State Fire Marshal to identify areas in the State as Moderate, High, and Very High Fire Hazard Severity Zones (MFHSZs, HFHSZs, and VHFHSZs, respectively) based on consistent statewide criteria and on the severity of fire hazard that is expected to prevail in those areas. MFHSZs, HFHSZs, and VHFHSZs shall be based on fuel loading, slope, fire weather, and other relevant factors, including areas where winds have been identified by the Office of the State Fire Marshal as a major cause of wildfire spread.

California Senate Bill 12. This regulation establishes new rules for construction of industrial, commercial, and residential projects to improve fire safety and prevention. These regulations apply to building materials that are more fire-resistant and defensible space incorporated into the design of projects.

California Building Code. Chapter 7A of the California Building Code (CBC) focuses primarily on preventing ember penetration into homes, a leading cause of structure loss from wildfires, through mitigating former structural vulnerabilities. Construction techniques and materials include roofs, eaves, exterior walls, vents, appendages, windows, and doors and result in hardened structures that have been proven to perform at high levels (resist ignition) during the typically short duration of exposure to burning vegetation from wildfires.

California Code of Regulations Title 8. California standards for workers dealing with hazardous materials are contained in CCR Title 8 and include practices for all industries (General Industrial Safety Orders), as well as specific practices for construction. Workers at hazardous waste sites (or workers who may be exposed to hazardous wastes that might be encountered during excavation of contaminated soils) must receive specialized training and medical supervision according to the Hazardous Waste Operations and Emergency Response regulations.[27] Additional regulations have been developed for construction workers potentially exposed to lead[28] and asbestos.[29]

4.9.4.3 Regional Regulations

Certified Unified Program Agency. SB 1082 established the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program), which was created to consolidate and coordinate the administration, permitting, inspection, and enforcement activities of statewide

[27] California Code of Regulations, Title 8, Section 5192.
[28] California Code of Regulations, Title 8, Section 1532.1.
[29] California Code of Regulations, Title 8, Section 1529.

environmental regulatory programs. The Unified Program provides for the designation of a local Certified Unified Program Agency (CUPA) that would be responsible for the permitting process and collection of fees regarding hazardous materials, overseen by CalEPA.

The County of Fresno Environmental Health Division, as the CUPA for the County, is responsible for implementing the following environmental and emergency management programs:

- Hazardous Waste (Hazardous Waste Generator [HWG] Program);
- Hazardous Materials Business Plan (HMBP);
- California Accidental Release Prevention Program (CalARP);
- Underground Hazardous Materials Storage Tanks (UST Program);
- Aboveground Petroleum Storage Act (APSA) Program (including Spill Prevention, Control, and Countermeasure [SPCC] requirements); and
- HWG and On-Site Hazardous Waste Treatment (tiered permitting) Programs.

The laws and regulations that established these programs require that businesses that use or store certain quantities of hazardous materials submit an HMBP that describes the hazardous materials usage, storage, and disposal required by the CUPA.

4.9.4.4 Local Regulations

Local General Plans. The Fresno COG Region contains Fresno County and 15 incorporated cities, each with an individual general plan prepared pursuant to California Government Code Section 65300. Each general plan contains goals and policies related to hazards and hazardous conditions within the particular jurisdiction. Although general plan element titles may vary, this information is typically found within the general plan safety element, or equivalent.

Local Municipal Codes. Fresno County and cities within the Fresno COG Region may have adopted local codes to address hazards and hazardous materials. This information is typically found in the Health and Safety Code, or equivalent.

Local Hazard Mitigation Plans. Fresno County and cities within the Fresno COG Region may have adopted Local Hazard Mitigation Plans to identify each jurisdiction's hazards, review and assess past disaster occurrences, estimate the probability of future occurrences, and set goals to mitigate potential risks to reduce or eliminate long-term risks to people and property from natural and manmade hazards. These plans are prepared pursuant to the requirements of the Disaster Mitigation Act of 2000 to achieve eligibility and potentially secure mitigation funding through the FEMA Flood Mitigation Assistance, Pre-Disaster Mitigation, and Hazard Mitigation Grant Programs.

4.9.5 Thresholds of Significance

The following thresholds of significance are based on Appendix G of the *State CEQA Guidelines*. Based on these thresholds, implementation of the proposed project would have a significant adverse impact with respect to hazards and hazardous materials if it would:

Threshold 4.9.1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;

Threshold 4.9.2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;

Threshold 4.9.3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;

Threshold 4.9.4: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, create a significant hazard to the public or the environment;

Threshold 4.9.5: 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;

Threshold 4.9.6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or

Threshold 4.9.7: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

4.9.6 Project Impacts

The following discussion describes the potential impacts related to hazards and hazardous materials that could result from implementation of the proposed project.

Threshold 4.9.1: Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Significant and Unavoidable Impact.

Construction. During construction of future transportation improvement and land use development projects under the proposed project, hazardous materials (e.g., fuel, oils, and paints) would be routinely transported, stored, and used at project sites. For projects that would result in land disturbance of 1 acre or more, management of soil and hazardous materials during construction activities would be subject to the requirements of the Stormwater Construction General Permit, consistent with **Project-Specific Mitigation Measure (PMM) HYD-1** (described in

detail in Section 4.10, Hydrology and Water Quality). This would require preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes hazardous materials storage requirements. For example, construction site operators must store chemicals in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed). Developments that would result in disturbance of less than 1 acre would generally handle smaller quantities of hazardous materials, which reduces the likelihood for the accidental release of significant quantities of hazardous materials.

Pursuant to **PMM HYD-2,** the lead agency would perform inspections of construction sites in accordance with the requirements of the Valley *National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements General Permit for Discharges from Municipal Separate Storm Sewer Systems, Order No. R5-2016-0040, NPDES No. CAS0085324* (Region-wide MS4 Permit). Inspections would ensure that potential sources of stormwater pollutants, including hazardous materials, are appropriately managed before being released to receiving waters.

Future transportation improvement and land use development projects facilitated by the proposed project would also result in the generation of various waste materials that would require recycling and/or disposal. Some of these waste materials could be classified as hazardous waste. Hazardous materials would be transported by a licensed hazardous waste hauler and disposed of at facilities that are permitted to accept such materials as required by USDOT, RCRA, and State regulations. However, increased transport of such materials does elevate the public's risk of exposure. Beyond these requirements, **PMM-HAZ-1** would reduce potentially substantial adverse effects related to the routine transport, use, or disposal of hazardous materials and hazardous materials releases through the preparation of a project-specific hazardous materials management plan and coordination with local jurisdictions and emergency response agencies prior to construction. Further, under **Fresno COG Mitigation Measure (FMM) HAZ-1**, the Fresno COG would be required to work with the California Department of Transportation (Caltrans) and the California Highway Patrol to reduce risks associated with the transport of hazardous materials in the Fresno COG Region through its consultation role, assisting in the development of routes designated for hazardous materials.

Operation. Operation of future projects would be subject to the Unified Program under SB 1082 and overseen by CalEPA. In the Fresno COG Region, the Environmental Health Division serves as the CUPA and is responsible for implementing hazardous materials and waste programs, including the HMBP Program, Hazardous Waste Generator Program, CalARP Program, UST Program, and APSA Program, as detailed above in Section 4.9.3, Existing Environmental Setting. Where hazardous materials storage would exceed regulatory thresholds, businesses would be required to prepare and submit an HMBP, and where applicable, a CalARP Risk Management Plan or SPCC Plan. The CUPA would review submittals, issue permits, and conduct routine inspections to ensure compliance with these plans. In addition, Fresno County's Environmental Health Division, the Fire Department, and the County's Building Division would coordinate permit reviews to ensure that hazardous materials requirements are met prior to construction, including proper hazardous materials storage facilities.

Accidental releases or spills of hazardous materials during operation could occur (e.g., fuel leaks, hydraulic fluid discharge, or improper disposal of maintenance-related wastes). Such incidents would be mitigated through adherence to applicable regulations, including Health and Safety Code, CCR, DOT, RCRA, and CUPA requirements, as well as implementation of containment, spill response, and training measures. Hazardous wastes generated during operation, including universal wastes such as fluorescent tubes, batteries, and mercury-containing devices, would be handled, transported, and disposed of in accordance with State and federal regulations to prevent exposure to the public or the environment.

Future projects would also involve the routine storage and use of small quantities of commercially available hazardous materials for routine maintenance (e.g., painting and cleaning). The storage and use of small quantities of commercially available hazardous materials would not pose a significant hazard to the public or environment. In addition, equipment installed at project sites could include hydraulic elevator systems, backup generators, and electrical equipment, and may involve the use and storage of hydraulic fluid, fuels, and other hazardous materials. The routine transport, use, or disposal of these hazardous materials could pose a potential hazard to the public and environment if improperly handled. Beyond these requirements, **FMM HAZ-1** would require the Fresno COG to work with Caltrans and the California Highway Patrol to reduce risks associated with the transport of hazardous materials in the region.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, this analysis represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. Adherence to applicable federal, State, and local hazardous materials regulations; **FMM HAZ-1;** and **PMMs HAZ-1, HAZ-2, HYD-1,** and **HYD-2** would reduce projects impacts related to the routine transport, use, or disposal of hazardous materials to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with the routine transport, use, or disposal of hazardous materials are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.9.2: Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Significant and Unavoidable Impact. The public and/or the environment could be affected by the release of hazardous materials from project sites into the environment if (1) hazardous building materials (e.g., lead paint, asbestos, or PCBs) are released into the environment during the demolition of existing structures; (2) leakage, spills, or improper disposal of hazardous materials occur during construction or operation of a project; or (3) projects would expose construction workers, the public,

future users of the project site, or the environment to potentially contaminated soil, groundwater, or soil vapor during the construction or operation of future projects.

Construction. Construction of future transportation improvement and land use development projects under the proposed project could 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. Construction activities such as demolition, excavation, grading, and renovation could encounter contaminated soil or groundwater, as well as hazardous building materials in older structures, as described below.

Subsurface Contamination. Construction activities could disturb contaminated soil or groundwater, leading to the release of dust or vapors, movement of contamination to new areas, or exposure of construction workers and the public. The Fresno COG Region contains more than 1.8 million acres of farmland, where agricultural chemicals such as pesticides and inorganic fertilizers have been applied, and urbanized areas may contain household hazardous waste. Subsurface contamination is also a concern. Given the scale of the Fresno COG Region, the exact presence of contamination is unknown; however, the region contains 169 hazardous materials facilities across incorporated cities and unincorporated areas, as identified in the Fresno County HMP, and 33 industrial facilities that report toxic chemical management under the EPA TRI Program. There is also potential for vapor intrusion from past sites or residual contamination from former USTs. In addition, subsurface contamination could exist in existing infrastructure, public rights-of-way, or private parcels that contain undocumented fill. Construction activities, including excavation, grading, or utility installation, could disturb these materials, creating potential exposure pathways for workers and the public.

Hazardous Building Materials. Future projects facilitated by the proposed project may involve demolition or renovation of existing structures as well as other construction activities that would involve the release of hazardous building materials, as many structures in the Fresno COG Region were built prior to the early 1970s and may contain hazardous building materials such as ACMs, LBP, PCB-containing equipment or materials, and mercury-containing devices.

- **Asbestos:** Asbestos is a known human carcinogen that was commonly used in building materials until the early 1980s. Asbestos-containing products remain in use within the United States and include some roof and non-roof coatings and other asbestos-containing building materials.[30] Pursuant to **PMM HAZ-2**, for projects involving demolition or renovation, a thorough survey for ACMs must be conducted prior to the commencement of any work. The survey must be performed by a certified asbestos inspector, as defined by Cal/OSHA. The survey must include sampling and laboratory analysis to confirm the presence or absence of ACMs, and the results must be documented and made available to the lead agency prior to the commencement of any regulated ACM removal or demolition activities. If ACMs are identified, their disturbance, removal, and management must comply with all applicable federal, State, and local regulations, including, but not limited to; CCR Title 8; Business and Professions Code, Division 3; and California Health

[30] United States Environmental Protection Agency (EPA). 2017. *Preliminary Information on Manufacturing, Processing, Distribution, Use, and Disposal: Asbestos.* February.

and Safety Code Sections 25915–25919.7. These procedures would ensure that asbestos is not released into the environment.

- **LBP:** Prior to 1978, lead compounds were commonly used in exterior and interior paints. Due to its health effects, the application of LBP on residential structures was banned in 1978; however, LBP can be found in commercial or industrial structures, regardless of construction date (because its use is still allowed in commercial and industrial applications).[31] The stabilization and/or removal of LBP prior to demolition or renovation of structures would be required in accordance with applicable laws and regulations, including but not limited to: Cal/OSHA's Construction Lead Standard, Title 8 CCR Section 1532.1, and Department of Health Services regulations in 17 CCR Sections 35001 through 36100, as may be amended.

- **Mercury-Containing Materials**. Fluorescent lighting tubes and ballasts, computer displays, and several other common items containing hazardous materials (including mercury, a heavy metal) are regulated as "universal wastes" by the State of California and may be present on future project sites within the Fresno COG Region. Universal waste regulations allow common, low-hazard wastes to be managed under less stringent requirements than other hazardous wastes. Management of other hazardous wastes is governed by DTSC hazardous waste rules. While the presence of mercury-containing materials is considered a lower-risk condition, construction activities associated with demolition or renovation would require identification, proper handling, and disposal of these materials in accordance with applicable regulations to ensure that mercury is not released into the environment.

  PCBs were historically used as coolants and lubricants in transformers, capacitors, heating/cooling equipment, and other electrical equipment, and were also used as plasticizers in paints, plastics, rubber products, and caulking. PCBs have been demonstrated to cause cancer and a variety of other adverse health effects in animals, including effects on the immune system, reproductive system, nervous system, and endocrine system. Although manufacturing of PCBs has been banned in the United States since 1979, PCBs may still be found in older electrical equipment and other building materials, such as light ballasts and caulking. During future construction activities facilitated by the proposed project, including demolition and renovation of older structures, PCB-containing materials could be encountered. Any identified PCB-containing materials would be handled, transported, and disposed of off site in accordance with TSCA, DTSC hazardous waste rules, and other applicable federal and State regulations. In addition, electrical and lighting equipment containing hazardous materials (e.g., mercury and PCBs) would be identified and managed according to applicable regulations. Other PCB-containing building materials, such as caulks, sealants, rubber window gaskets,

[31] Department of Toxic Substances Control (DTSC). 2006. *Interim Guidance Evaluation of School Sites with Potential Soil Contamination as a Result of Lead from Lead-Based Paint, Organochlorine Pesticides from Termiticides, and Polychlorinated Biphenyls from Electrical Transformers.* June 9 (Revised).

specialized paints, mastics, and adhesives, would require pre-construction testing to confirm presence and ensure proper handling and disposal during project construction.

Spills, Leaks, or Improper Disposal of Hazardous Materials. An accidental release of hazardous materials (e.g., oils, fuels, solvents, paints, or contaminated soil) during project construction could result in exposure of construction workers, the public, and/or the environment to hazardous materials. As discussed above, any future projects that would result in land disturbance of 1 acre or more would be subject to the requirements of the Construction General Permit pursuant to **PMM HYD-1**, which requires preparation and implementation of a SWPPP to reduce the risk of spills or leaks from reaching the environment. The SWPPP would include procedures to address spills of hazardous materials. Measures to control spills, leakage, and dumping must be addressed through structural as well as non-structural best management practices (BMPs), as required by the Construction General Permit.

In addition, the transportation of hazardous materials is subject to both RCRA and USDOT regulations. If a discharge or spill of hazardous materials occurs during transportation, the transporter is required to take appropriate immediate action to protect human health and the environment (e.g., notify local authorities and contain the spill). The transporter is responsible for the discharge cleanup. Compliance with **PMMs HYD-1** and **HYD-2** and the regulations described under Threshold 4.9.1.4 (including OSHA and Cal/OSHA regulations; the California Fire Code [CFC]; California Health and Safety Code Division 20, Chapter 6.5; the CCR; USDOT regulations; the RCRA, and other federal, State, regional, and local regulations) is mandatory and would ensure that potential impacts related to spills, leaks, or improper disposal of hazardous materials would be properly handled during construction of the project. Beyond these requirements, **PMM-HAZ-1** would reduce potentially substantial adverse effects related to the routine transport, use, or disposal of hazardous materials and hazardous materials releases through the preparation of a project-specific hazardous materials management plan and coordination with local jurisdictions and emergency response agencies prior to construction. Further, under **FMM HAZ-1**, the Fresno COG would be required to work with Caltrans and the California Highway Patrol to reduce risks associated with the transport of hazardous materials in the Fresno COG Region. Accordingly, potential impacts to improper disposal of hazardous materials would be reduced to the extent feasible.

Pursuant to **PMM HAZ-2**, each individual project facilitated by the proposed project would be required to complete a Phase I ESA for sites with potential hazardous contamination from historical land uses. If recommended in the Phase I ESA, a Phase II ESA would be prepared and submitted to the appropriate agency responsible for hazardous materials and waste oversight. The Phase II ESA would identify the nature and extent of contamination and include recommendations for remedial action, as appropriate. Identified remedial actions would be implemented under the oversight of the appropriate regulatory agency (e.g., RWQCB, DTSC), and written clearance or approval would be obtained prior to construction or operation, as required. With implementation of **PMMs HAZ-2**, **HYD-1**, and **HYD-2**, and compliance with applicable hazardous materials regulations, potential impacts to the public and the environment from the handling, transport, or disposal of hazardous materials would be reduced to the extent feasible.

Operation. Operation of future projects facilitated by the proposed project would involve the routine storage and use of small quantities of available hazardous materials for routine maintenance (e.g., paint and cleaning supplies). The accidental release of small quantities of commercially available hazardous materials would not pose a significant hazard to the public or environment. Operation of future projects would also include storage and use of hazardous materials and generation of hazardous waste. In addition, equipment installed at a project site, such as hydraulic elevator systems, backup generators, and electrical equipment, may involve the use and storage of hydraulic fluid, fuels, and other hazardous materials.

Accidental releases or spills of hazardous materials during operation could occur (e.g., fuel leaks, hydraulic fluid discharge, or improper disposal of maintenance-related wastes). Such incidents would be mitigated through adherence to applicable regulations, including Health and Safety Code, the CCR, USDOT regulations, the RCRA, and CUPA requirements, as well as implementation of containment, spill response, and training measures. Hazardous wastes generated during operation, including universal wastes such as fluorescent tubes, batteries, and mercury-containing devices, would be handled, transported, and disposed of in accordance with State and federal regulations to prevent exposure to the public or the environment. Future projects would also involve the routine storage and use of small quantities of commercially hazardous available materials for routine maintenance (e.g., painting and cleaning). The storage and use of small quantities of commercially available hazardous materials would not pose a significant hazard to the public or the environment. In addition, equipment installed at project sites could include hydraulic elevator systems, backup generators, and electrical equipment, and may involve the use and storage of hydraulic fluid, fuels, and other hazardous materials. However, under **FMM HAZ-1**, the Fresno COG would be required to work with Caltrans and the California Highway Patrol to reduce risks associated with the transport of hazardous materials in the Fresno COG Region.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, this analysis represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. Adherence to applicable federal, State, and local hazardous materials regulations; **FMM HAZ-1**; and **PMMs HAZ-1**, **HAZ-2, HYD-1,** and **HYD-2** would reduce projects impacts the routine transport, use, or disposal of hazardous materials to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with the routine transport, use, or disposal of hazardous materials are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.9.3: Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Significant and Unavoidable Impact. Future projects facilitated by the proposed project could increase the exposure risk of hazardous materials to existing or proposed schools. Future projects are proposed throughout the region. As described in Section 4.15, Public Services, there are total of 32 school districts within the Fresno COG Region.[32]

Construction. During construction activities associated with future transportation improvement and land use development projects, hazardous materials (e.g., fuel, oils, and paints) would be routinely transported, stored, and used at project sites. Construction may occur within 0.25 mile of an existing or proposed school. Compliance with the existing hazardous materials regulations described under Section 4.9.1.4 (e.g., CUPA Programs, OSHA and Cal/OSHA regulations, the CFC, the California Health and Safety Code, the CCR, USDOT regulations, the RCRA, and other federal, State, regional, and local regulations) and implementation of **PMM HAZ-3** would reduce potential construction related impacts related to hazardous emissions within 0.25 mile of schools to the extent feasible.

For proposed schools that may be constructed to accommodate the forecasted population growth identified in the proposed project, the California Education Code, including Education Code Section 17213(b), establishes requirements for assessments and approvals that address the potential for existing contamination on site and whether nearby land uses might reasonably be anticipated to emit hazardous air emissions or handle hazardous materials. Assessment of existing contamination is conducted in coordination with DTSC's School Property Evaluation and Cleanup Division, which is responsible for assessing, investigating, and cleaning up proposed school sites. This division ensures that selected properties are free of contamination or, if the properties were previously contaminated, that they have been cleaned up to a level that protects the students and staff who would occupy a new school. In addition, implementation of the proposed project could facilitate transportation and land use development projects that may be located near newly planned or constructed schools. Therefore, future projects must evaluate potential hazards, emissions, or other impacts in proximity to these schools as part of their individual project-level environmental review, consistent with applicable federal, State, and local regulations.

Operation. Implementation of future projects, specifically land use development projects, would increase density and population in the Fresno COG Region. Future land use development facilitated by the proposed project would include a variety of land uses, ranging from residential to commercial or industrial, that would increase the potential for hazardous emissions or handling within 0.25 mile of an existing or proposed school. Accordingly, development of such projects would generally increase the use, storage, and transport of hazardous materials. Accidents that result from transporting, pumping, pouring, emptying, injecting, spilling, dumping, or disposing could release hazardous materials into the environment near schools.

As discussed in Section 4.15, Public Services, urbanization and associated population growth in the Fresno COG Region are anticipated to increase significantly by the proposed project horizon year of 2049 regardless of whether the 2026 RTP/SCS is implemented. However, future

[32] California Department of Education. 2025. 2024-25 K-12 Enrollment by Age Range. Website: https://dq.cde.ca.gov/dataquest/dqcensus/EnrAgeGrdLevels.aspx?cds=10&agglevel=County&year=2024-25 (accessed December 10, 2025).

transportation improvement and land use development projects under the proposed project have the potential increase the capacity for the transport of hazardous materials or change routing of these materials to bring them into closer contact with existing/planned schools. Scenario C (Enhanced Transit and Smart Growth) emphasizes sustainable urban growth focused on existing urban centers and established areas, and higher-density growth with mixed-use development. This would reduce the potential for accidents involving hazardous materials in proximity to sensitive receptors, including schools. However, depending on the scale of each project, this infrastructure and/or personnel could require expansion and/or new facilities. In addition, the proposed project does not preclude future development within urban fringe or rural areas, which could also result in the need for expansion and/or new facilities. As stated above, compliance with the existing hazardous materials regulation described under Section 4.9.1.4 (e.g., CUPA Programs, OSHA and Cal/OSHA regulations, the CFC, the California Health and Safety Code, the CCR, USDOT regulations, the RCRA, and other federal, State, regional, and local regulations) and implementation of **PMM HAZ-3** would reduce potential operational impacts related to hazardous emissions within 0.25 mile of schools to the extent feasible. Further, under **FMM HAZ-1**, the Fresno COG would be required to work with Caltrans and the California Highway Patrol to reduce risks associated with the transport of hazardous materials in the Fresno COG Region.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, this analysis represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. Through adherence to federal, State, regional, and local regulations and implementation of **FMM HAZ-1** and **PMM HAZ-3,** project impacts associated with the exposure risk of hazardous materials to existing or proposed schools would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would remain below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with exposure risk of hazardous materials to existing or proposed schools **significant and unavoidable** for the purposes of this analysis.

Threshold 4.9.4: Would the project 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?

Significant and Unavoidable Impact. Future projects implemented as a result of the proposed project may be located on a site included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Given the intensity of past use of land within the region, there are a number of contaminated sites on the Cortese List in the Fresno COG Region. In addition, as detailed in Section 4.9.3, Existing Environmental Setting, the region also contains a variety of sites with known hazardous materials or contamination, including 20 active LUST sites with an open status; 30 Superfund sites, including 5 NPL sites; 46 cleanup sites with an active status; 3 solid waste disposal

sites that process hazardous waste; 1,678 small-quantity hazardous waste generators and 150 large-quantity hazardous waste generators; and agricultural operations adjacent to urbanized areas, which present risks associated with agricultural chemicals.[33] As the design, intensity, and location of each individual project is currently unknown, it is uncertain whether future transportation or land use development projects would be located on a site that is on a list of hazardous materials sites. Note that the Cortese List is continually updated as well, so future projects would need to be evaluated against the sites known at the time of their subsequent environmental clearance. Member agencies would review development proposals for consistency with applicable plans, policies, and regulations, ensuring that proposed projects avoid or minimize potential hazards from known contaminated sites.

Construction. As stated above, there are numerous sites where historical releases of hazardous materials or wastes have occurred within the Fresno COG Region. These sites range from small releases that have had localized effects on private property and have already been remediated to large-scale releases from long-term historical industrial practices that have had wider-ranging effects on groundwater. Specific sites of documented contamination are not evaluated in this analysis, given the scale of the proposed project. Furthermore, because the design and location of individual transportation improvements and land use projects facilitated by the proposed project are currently unknown, it is not possible at this time to evaluate whether project activities could affect specific contaminated sites within the region.

Construction activities such as grading, excavation, and dewatering could expose workers and the public to hazardous substances in soil or groundwater that are not apparent from existing site information. These activities could inadvertently disperse contamination, accelerate the migration of contaminated groundwater, or release it to surface waters. Potential hazards to human health include ignition of flammable liquids or vapors, inhalation of toxic vapors in confined spaces, and skin contact with contaminated soil or water. Risks would be greatest for construction workers, although nearby residents could be affected if sufficient volumes of contamination are disturbed. Without coordination with ongoing remediation, construction could temporarily interfere with site controls, including soil containment areas. Potential temporary effects include localized spread of contamination; exposure to chemical compounds in soil, soil gas, or groundwater; airborne release of hazardous substances from demolition or construction; operational failures of treatment systems; and interference with ongoing remediation. Similarly, development near active or abandoned oil and gas wells would be evaluated by the permitting agency in coordination with the property owner or developer on a parcel-by-parcel basis.

Pursuant to **PMM HAZ-2**, each individual project facilitated by the proposed project would be required to complete a Phase I ESA for sites with the potential for hazardous residual materials from historical land uses. If warranted by the Phase I ESA, a Phase II ESA would be prepared and submitted to the appropriate agency responsible for hazardous materials and waste oversight. The Phase II ESA would identify the nature and extent of contamination and include recommendations for remedial action, as appropriate. Identified remedial actions would be implemented under the oversight of the appropriate regulatory agency (e.g., RWQCB, DTSC), and written clearance or

[33] California Department of Education. 2025. 2024-25 K-12 Enrollment by Age Range. Website: https://dq.cde.ca.gov/dataquest/dqcensus/EnrAgeGrdLevels.aspx?cds=10&agglevel=County&year=2024-25 (accessed December 10, 2025).

approval would be obtained prior to construction or operation, as required. Accordingly, implementation of **PMM HAZ-2** and compliance with applicable local State and federal regulations would reduce impacts related to construction on a Cortese List site to the extent feasible.

Operation. As stated above, the Fresno COG Region contains numerous sites with known hazardous materials or contamination. Specific sites of documented contamination are not evaluated in this analysis, given the scale of the proposed project. Furthermore, because the design and location of individual transportation improvement and land use development projects facilitated by the proposed project are currently unknown, it is not possible at this time to evaluate whether project activities could affect specific contaminated sites within the region.

Operation of future transportation and land use development projects could create hazards if future projects are located on or near known hazardous materials sites or listed sites pursuant to Government Code Section 65962.5. Projects located on or adjacent to these sites may have an increased potential for exposure to residual contamination from historic land uses. Additionally, operational activities could also involve routine storage and use of hazardous materials for maintenance and equipment operation, such as fuels, hydraulic fluids, paints, cleaning agents, backup generators, or hydraulic elevator systems.

Operation of future projects would be subject to the Unified Program under SB 1082 and overseen by CalEPA. In the Fresno COG Region, the Environmental Health Division serves as the CUPA and is responsible for implementing hazardous materials and waste programs, including the HMBP Program, Hazardous Waste Generator Program, CalARP Program, UST Program, and APSA Program, as detailed above in Section 4.9.3, Existing Environmental Setting.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, this analysis represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. With adherence to **PMM HAZ-2** and compliance with local State and federal regulations, project impacts associated with hazardous materials sites would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts associated with hazardous materials sites are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.9.5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

Significant and Unavoidable Impact. As described in Section 4.13, Noise, the Fresno COG Region contains nine public use airports that serve commercial and general aviation and are subject to ALUCPs developed by the Fresno County ALUC to protect public health, safety, and welfare by minimizing exposure to noise and safety hazards around airports. ALUCPs establish local noise and safety compatibility criteria for land uses within the AIA boundaries of the ALUCP. In addition, the Fresno COG Region contains portions of the NAS Lemoore military airport, which is located in both Fresno and Kings counties and represents the United States Navy's largest and only West Coast Master Jet Base. The primary purpose of NAS Lemoore is to support the Strike Fighter Wing, United States Pacific Fleet, and to train, equip, and deploy West Coast Strike Fighter squadrons.

ALUCs may request that all or selected land use actions (including general plans, specific plans, zoning ordinances, building regulations, land acquisitions, annexations, or large development projects) within an AIA be submitted for review to determine consistency with the ALUCPs. California statutes require disclosure of a project's proximity to an airport and its potential exposure to aircraft overflight, noise, and safety hazards for most residential real estate transactions, including new subdivisions, located within 2 miles of an airport or within an ALUCP-defined AIA. The Caltrans Division of Aeronautics reviews proposed school sites located within 2 miles of an existing or planned airport runway to assess potential hazards related to aircraft operations and noise exposure.[34] In addition, the FAA evaluates projects located within 2 miles of a public use airport, as well as other projects that may pose a potential hazard or excessive noise for people residing or working in the project area, due to height, visual hazard, or the attraction of wildlife. The FAA also requires notice of proposed construction for projects within 20,000 feet of a public use airport (or a shorter distance for runways under 3,200 feet in length). Accordingly, each subsequent individual project facilitated by the proposed project would undergo review by the applicable ALUC and adhere to Fresno COG ALUCP policies governing the project location. Each project would also be required to comply with the land use policies and criteria contained within the relevant ALUCP. Projects located near public use airports would be subject to FAA review for potential airspace hazards.

Each ALUCP identifies noise policies, including noise compatibility standards, related to the siting of new development. Future projects facilitated by the proposed project located farther than 2 miles from an airport would not be subject to substantial noise from airport operations. However, the design, intensity, and location of each individual project is currently unknown. As a result, it is possible that future development under the proposed project would be proposed to be located within an airport land use plan or within a 2-mile radius of an airport, potentially exposing sensitive receptors to excessive noise. According to the Fresno COG ALUCP, standard residential land uses are considered conditionally compatible in areas exposed to 60 to 64 A-weighted decibels (dBA) Community Noise Equivalent Level (CNEL) if: (1) an avigation easement is required as a condition of development approval or building permit issuance, and (2) sound insulation is provided to reduce interior noise levels by at least 25 decibels (dB). Within the 65 to 70 dBA CNEL range, residential dwellings are incompatible and generally not allowable, although exceptions for infill development may be permitted per ALUCP policy. Within the 75 dBA CNEL contour, all residential, public/institutional, and commercial uses are incompatible and not allowable, while industrial and agricultural uses are considered compatible. Accordingly, future development under the proposed project could occur in

[34] California Department of Transportation (Caltrans). 2026. Aeronautics. Website: https://dot.ca.gov/programs/aeronautics (accessed March 25, 2026).

areas exposed to 65 or 70 dBA CNEL, exceeding the recommended airport noise threshold of 65 dBA CNEL for residential land uses.

In addition to exterior noise, increases in interior noise levels near airports have the potential to cause sleep disturbance at nearby sensitive land uses. Local land use compatibility standards contained in city and county general plans typically dictate whether site-specific review is required for sensitive land uses in areas potentially affected by aircraft noise. Given the regional scale of the proposed project, forecasted land use patterns could result in exposure to exterior and interior noise levels from existing airports or airstrips that exceed applicable thresholds.

Military airfields are required to adopt plans that evaluate compatible land uses in the vicinity of military airfields, such as NAS Lemoore. The United States Department of Defense has established two types of studies to support compatible land use near military installations. The first is the Air Installation Compatible Use Zone (AICUZ) program, which identifies noise exposure contours and accident potential zones. The second is the Joint Land Use Study (JLUS), a cooperative effort between the Department of Defense and surrounding communities to develop land use planning documents that enhance compatibility near military installations. According to these studies, land uses within the Restructure Use Easement (an area of approximately 10,639 acres in Fresno and Kings counties taken for use by the United States) are restricted to agricultural purposes and mineral exploration, development, and production. Structures unrelated to farming or mining and not intended for habitation are prohibited, and any permitted structures may not exceed 25 feet above ground level.

Future land use development projects facilitated by the proposed project could include a variety of project types and land uses, ranging from residential to commercial or industrial. However, the design, intensity, and location of each individual project is currently unknown. As a result, it is uncertain whether future land use development projects would create a safety hazard within an AIA, AICUZ, or other airport hazard zone. Future development could increase the number of new land uses in these areas, potentially introducing hazards from tall structures, glare-producing objects, bird or wildlife attractants, radio waves from communication centers, or other features that could interfere with aircraft operations or otherwise impact safety.

Accordingly, each subsequent individual project facilitated by the proposed project would undergo review by the applicable ALUC and adhere to Fresno COG ALUCP policies governing the project location. Each project would also be required to comply with the land use policies and criteria contained within the relevant ALUCP or AICUZ to protect the safety of people, property, and aircraft both on the ground and in the air. Projects located near public use airports would be subject to FAA review for potential airspace hazards.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. With implementation of the ALUCP's guidelines and noise compatibility criteria, impacts related to aircraft noise exposure and safety hazards would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve

these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. As such, potential impacts associated with aircraft noise exposure and safety hazards are considered are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.9.6: Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Significant and Unavoidable Impact. As described in Section 4.20, Wildfire, emergency response and evacuation plans are prepared by the Office of Emergency Services (OES) for the Fresno COG Region. These plans outline evacuation procedures, which help prevent (or minimize) loss of life and property. In addition, cities in the Fresno COG Region generally provide procedures for coordinating with neighboring cities and other jurisdictions. This provides mutual assistance in the event of an emergency or natural disaster. Cities also establish disaster recovery programs. The proposed project would comply with OES and city policies/plans. This would minimize the potential for subsequent projects under this proposed project to interfere with adopted emergency response plans during construction and operation.

Section 4.15, Public Services, addresses the potential for the proposed project to result in substantial physical impacts associated with the construction of new or physically alter fire stations that would be required to maintain acceptable service ratios and response time for fire protective services. Additionally, each incorporated city within the Fresno COG Region contains general plans which include safety elements that discuss critical infrastructure systems and services to ensure adequate circulation, communications, and transportation services. The proposed project would be implemented in coordination with these general plans and safety elements, ensuring that future transportation and land use projects support emergency access, maintain fire service capacity, and minimize impacts to critical infrastructure and emergency response systems to the extent feasible.

Construction. Construction facilitated by the proposed project could require temporary closure of traffic lanes or roadways adjacent to, or within, a specific project site. Depending upon the timing, location, and duration of construction activities, temporary traffic congestion from lane restrictions, and/or road closures could delay emergency vehicle response times or otherwise disrupt delivery of emergency response services. Detours could increase travel time and associated response times as well. Finally, emergency routes could be impaired. As such, individual projects with temporary roadway closures would be required to implement a Traffic Control Plan to maintain traffic flow, provide detours for vehicles, pedestrians, and bicycles, schedule truck trips outside peak hours, limit lane closures, and ensure access to sensitive facilities, pursuant to **PMM HAZ-4**. This would reduce temporary impacts to emergency response and evacuation plans to the extent feasible.

Operation. Implementation of the proposed project would facilitate a range of future transportation improvement and land use development projects that could result in substantial adverse effects on adopted emergency response and evacuation plans. Transportation network improvements and programs facilitated by the proposed project would provide a safe and reliable

system of multimodal transportation. This would help facilitate emergency response and movement of people during emergencies.

As discussed in Section 4.14, Population and Housing, urbanization and associated population growth in the Fresno COG Region are anticipated to increase significantly by the proposed project horizon year of 2049 regardless of whether the 2026 RTP/SCS is implemented. Scenario C (Enhanced Transit and Smart Growth) emphasizes sustainable urban growth concentrated in existing urban centers and established areas with higher-density, mixed-use development. As growth and development occurs under the proposed project, member agencies would review and approve projects for consistency with applicable plans, policies, and regulations. Under this scenario, growth within existing urban areas would result in denser and more intensive development compared to existing conditions. In the event of an emergency, such as wildfire, high-density development could increase the number of people using the same evacuation routes. Evacuation could be impaired if emergency response and evacuation plans are not updated to reflect changes in land use associated with the proposed project.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. Adherence to **PMM HAZ-4** (which requires the implementation of a Traffic Control Plan to maintain traffic flow; provide detours for vehicles, pedestrians, and bicycles; schedule truck trips outside peak hours; limit lane closures; and ensure access to sensitive facilities) will reduce impacts to emergency response or evacuation plans to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts during construction and operation would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with the impairment to an adopted emergency response plan or emergency evacuation plan are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.9.7: Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Significant and Unavoidable Impact. As described in Section 4.20, Wildfire, areas along the Sierra Nevada foothills east of SR-99 are designated as State Responsibility Area (SRA) Moderate to VHFHSZ, and areas west of I-5 near the City of Coalinga are designated as SRA Moderate to HFHSZ. However, a majority of the Fresno COG Region is not considered at high risk of wildfire. Wildfire risk in the region is most prevalent in the Sierra Nevada mountain range in the eastern portion of the Fresno COG Region as well as the Coast Ranges in the western portion of the Fresno COG Region. These wildfire risk areas are undeveloped and contain large tracts of vegetation cover that can act as fire fuel. Developed, urban areas of the Fresno COG Region are at lower risk for wildland fires because flammable vegetation has been displaced by structures, roadways, parking lots, and other similar features.

Construction. Construction of future individual projects facilitated by the proposed project would result in a temporary increase in human activity and potential ignition sources. Heat or sparks from construction equipment, vehicles, and the use of flammable hazardous materials have potential to ignite adjacent vegetation and start a fire, especially during weather events that include low humidity and high wind speeds. Construction activities, particularly in forested or vegetation-rich areas and within wildfire-prone areas (e.g., MFHSZs, HFHSZs, VHFHSZs, and WUI areas) would further increase the potential for fire risk.

Accordingly, construction of future projects would be required to adhere to applicable policies and actions set forth in local plans within the Fresno COG Region. In addition, new development would be subject to the CFC, which includes measures to reduce fire risk such as ignition-resistant construction materials; and PRC Section 4427, which restricts the use of spark-generating equipment during fire-prone conditions and requires implementation of fire prevention measures, including vegetation clearance and the availability of fire suppression tools on site. Consistent with **PMM WILD-2**, future projects would be required to prepare a Construction Fire Prevention Plan to reduce potential impacts to the extent feasible. With compliance with applicable local, State, and federal regulations, and implementation of **PMM WILD-2**, potential impacts from the significant risk of loss, injury, or death involving wildland fires would be reduced to the extent feasible.

Operation. Direct damage from fire to homes, infrastructure, and ecosystems could occur to future projects facilitated by the proposed project. Indirect impacts associated with air and water quality effects may extend beyond the immediate fire footprint due to the transport of smoke, ash, and debris. As described in Chapter 3.0, Project Description, the regional growth forecast for the Fresno COG Region estimates that by 2050 the region will support approximately 1,125,490 residents, 476,330 jobs, and 367,576 households. As the region's population increases, wildfire and wildland fire hazards may also increase, particularly where development expands into WUI areas.

Land use development facilitated by the proposed project would increase population and development intensity and could include a range of uses (e.g., residential, commercial, and industrial) that may exacerbate existing fire risk. Development adjacent to or within VHFHSZs could increase ignition potential and influence wildfire behavior, thereby increasing the risk of exposure of people and structures to wildfire and wildland-related hazards, including loss, injury, or death. Human-caused ignitions are commonly associated with equipment use, debris burning, electrical infrastructure, vehicles, smoking, and other sources. In addition, post-fire conditions may increase the risk of secondary hazards such as erosion, flooding, and landslides.

Future discretionary development would be required to comply with applicable local, State, and federal regulations, including CCR Title 24, the CFC, CCR Title 19, CCR Title 8, and the California Health and Safety Code. These regulations include measures to reduce wildfire risk, such as ember-resistant design, automatic fire sprinkler systems, adequate water supply, fire apparatus access, and defensible space. CCR Title 14 establishes minimum standards for emergency access, fuel modification, setbacks, signage, and water supply to reduce wildfire hazards. Compliance with applicable local, State, and federal regulations would reduce (to the extent feasible) the risk of loss, injury, or death involving wildland fires.

Although transportation improvements under the proposed project would generally enhance circulation and emergency access, expansion or extension of transportation infrastructure may also increase exposure to wildfire hazards, particularly along the urban edge. Increased access into previously undeveloped or wildfire-prone areas can elevate the potential for human-caused ignitions due to greater activity and the introduction of ignition sources (e.g., vehicles, equipment, and roadside incidents) along transportation corridors.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. With adherence to **PMM WILD-2** and compliance with applicable local, State, and federal regulations, impacts associated with the significant risk of loss, injury or death involving wildland fires would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with the significant risk of loss, injury, or death involving wildland fires are considered **significant and unavoidable** for the purposes of this analysis.

4.9.7 Level of Significance Prior to Mitigation

Prior to mitigation, the proposed project would have potentially significant impacts related to hazards and hazardous materials.

4.9.1 Mitigation Measures

4.9.1.1 Fresno COG Measures

FMM HAZ-1 The Fresno Council of Governments (COG) shall work with the California Department of Transportation (Caltrans) and the California Highway Patrol to reduce risks associated with the transport of hazardous materials in the Fresno COG Region through its consultation role assisting in the development of routes designated for hazardous materials.

4.9.1.2 Project-Specific Measures

The following mitigation measures would be applied to future transportation improvement and land use development projects to reduce potentially significant impacts related to hazards and hazardous materials to the extent feasible:

PMM WILD-2: *Please refer to Section 4.20, Wildfire, of this PEIR.*

PMM-HAZ-1 Implementing agencies shall consider the following mitigation measures to reduce substantial adverse effects related to the routine transport, use, or disposal of hazardous materials and hazardous materials releases, as applicable and feasible:

- Prior to construction, a project-specific hazardous materials management plan shall be prepared to identify the types, quantities, storage locations, and handling procedures for hazardous materials used during construction. These plans would be implemented by the Construction Contractor during construction.

- Prior to construction, coordination shall be conducted with local emergency response agencies (e.g., fire departments, emergency operations centers) to ensure adequate emergency access, response planning, and integration of the project into existing emergency response plans.

- For projects involving substantial transport of hazardous materials (e.g., rail or highway corridors), coordination shall be conducted with local jurisdictions and emergency response providers prior to construction regarding the nature of materials transported and emergency contact procedures, consistent with applicable federal regulations (e.g., 49 Code of Federal Regulations Part 15).

PMM-HAZ-2 Implementing agencies shall consider the following mitigation measures to reduce significant hazards to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, as applicable and feasible:

- A records review shall be performed during the environmental review of a project to determine whether there is existing permitted use of hazardous materials, or documented evidence of hazardous waste contamination, within the project site.

- A Phase I Environmental Site Assessment (Phase I ESA) shall be completed during a project's environmental review when it includes any site with the potential for residual hazardous materials as a result of historical land uses or release. The Phase I ESA shall be prepared in conformance with the ASTM E1527-21 standard and shall include the following:

    - A review of federal, State, and local regulatory agency databases for hazardous materials sites;

    - A review of historical sources, including aerial photographs, fire insurance maps, and prior land use records;

    - A site reconnaissance to identify evidence of hazardous materials use, storage, or disposal;

    - Interviews with current and past owners, operators, or other knowledgeable persons, as available;

  - Identification of recognized environmental conditions (RECs), historical RECs, and controlled RECs;

  - Conclusions and recommendations regarding the need for further investigation, if applicable.

- If recommended by the Phase I ESA, a Phase II ESA report shall be prepared for the project prior to construction. The Phase II ESA shall make recommendations for remedial action, if appropriate, and be signed by a professional geologist or professional engineer. Recommendations provided in the Phase II ESA shall be implemented.

- During design, the appropriate local, State, and federal environmental regulatory agencies shall be consulted to ensure sufficient minimization of risk to human health and environmental resources has been implemented. Coordination shall include construction and post-construction considerations, and consider risk posed by soil contamination, groundwater contamination (including dewatering effluent), or other surface hazards such as underground storage tanks, fuel distribution lines, waste pits, and sumps.

- During construction, work shall be stopped if soil, groundwater (including dewatering effluent), or other environmental medium with suspected contamination is encountered unexpectedly. Contamination could be identified by odor or visual staining, or if any underground storage tanks, abandoned drums, or other hazardous materials or wastes are encountered. The Construction Contractor shall secure the area and take all appropriate measures to protect human health and the environment, including, but not limited to, notification of regulatory agencies and identification of the nature and extent of contamination. Construction in the affected area shall be halted until appropriate measures have been implemented, consistent with the guidance of applicable regulatory authorities.

- Soil generated by construction activities shall be stockpiled on site in a secure and safe manner. All contaminated soils determined to be hazardous or non-hazardous waste shall be adequately sampled by the Construction Contractor prior to acceptable reuse or disposal at an appropriate off-site location. Sampling, handling, and transport procedures for reuse or disposal shall be followed in accordance with applicable local, State, and federal laws and policies.

- Groundwater (including dewatering effluent) pumped from the subsurface shall be evaluated for the presence of contaminants prior to discharge or disposal. If contamination is suspected or identified, groundwater shall be characterized in accordance with applicable State and federal hazardous waste regulations to determine appropriate handling, treatment, and disposal requirements. Groundwater pumped from the subsurface shall be contained on site in a secure and controlled manner to prevent releases to the environment and exposure to

construction workers and the public. Contaminated groundwater, if identified, shall be managed, treated, and/or disposed of in accordance with applicable California Department of Toxic Substances Control (DTSC), RWQCB, and other regulatory agency requirements, including hazardous waste regulations, as appropriate. Engineering controls, including impermeable or vapor barriers, shall be installed to prevent groundwater-related contaminant movement and vapor intrusion into structures.

- Prior to issuance of any demolition, grading, or building permit, the implementing agency (or other appropriate government agency) shall obtain written verification that the appropriate federal, State, and/or local oversight authorities have granted all required clearances and confirmed that all applicable standards, regulations, and conditions have been met for previous contamination at the site.

- During construction, the Construction Contractor shall develop, train, and implement appropriate worker awareness and protective measures to ensure that worker and public exposure are minimized to an acceptable level and to prevent any further environmental contamination as a result of construction.

- During project design, potential presence asbestos-containing materials (ACMs), lead-based paint (LBP), and any other building materials classified as hazardous waste by State or federal law shall be assessed for projects that include the demolition or modification of structures constructed prior to 1978.

- If ACMs are present in building materials, the implementing agency shall retain a California Occupational Safety and Health Administration (Cal/OSHA) certified Asbestos Inspector/Assessor to prepare specifications for the removal, encapsulation, or enclosure of ACMs. These specifications shall be signed by the certified Inspector/Assessor and submitted to the implementing agency and any applicable local regulatory agencies prior to issuance of demolition or renovation permits and prior to commencement of construction activities that could disturb ACMs. The Construction Contractor shall implement the specifications during demolition or renovation. All ACM removal, encapsulation, or enclosure activities shall be conducted in accordance with applicable federal, State, and local laws and regulations, including, but not limited to: California Code of Regulations (CCR), Title 8 (Section 1529); California Business and Professions Code (BPC) Division 3, (Sections 7058.5, 7180-7189.6, and 7028.1); California Health and Safety Code Sections 25915–25919.7; and any other local regulations. In addition, a completed San Joaquin Valley Air Pollution Control District (SJVAPCD) Asbestos Notification Form shall be submitted at least 10 working days in advance, and all ACMs shall be removed and disposed of by an accredited contractor in accordance with SJVAPCD Rule 8021 (Asbestos NESHAP), the United States Environmental Protection Agency (EPA), Cal/OSHA, and other applicable federal, State, and local standards.

- Where the remediation of LBP is required, the project sponsor shall retain Cal/OSHA-certified Lead Inspector/Assessor or certified Lead Supervisor, Project Monitor, or Project Designer to prepare specifications for the stabilization and/or removal of identified LBP. These specifications shall be submitted to the implementing agency and the appropriate local regulatory agency (e.g., Fresno County Environmental Health Division/Certified Unified Program Agency [CUPA]) prior to issuance of demolition or renovation permits and prior to commencement of construction activities that could disturb LBP. The Construction Contractor shall implement these specifications during demolition or renovation. All stabilization and/or removal activities shall be conducted in accordance with applicable laws and regulations, including, but not limited to: Cal/OSHA's Construction Lead Standard (CCR Title 8, Section 1532.1) and Department of Health Services regulations (17 CCR Sections 35001–36100), as may be amended. If other materials classified as hazardous waste by State or federal law are present, the project sponsor shall submit written confirmation to the appropriate local agency that all State and federal laws and regulations are being followed when profiling, handling, treating, transporting, and/or disposing of such materials.

PMM-HAZ-3 Implementing agencies shall consider mitigation measures to reduce significant hazards to the public, including those within 0.25 mile of an existing or proposed school, involving the release or transport of hazardous materials, as applicable and feasible:

- During construction of for individual RTP/SCS projects within 0.25 mile of an existing or proposed school, the implementing agency shall require the Construction Contractor to avoid the transport of hazardous materials during school hours, where feasible. Where avoidance is not feasible, the Construction Contractor shall provide advance written notification to affected schools regarding the schedule and nature of such transport.

- During project operation of individual RTP/SCS projects, the project operator shall ensure that any project-related transport of hazardous materials within 0.25 mile of an existing or proposed school avoids school hours, where feasible. Where avoidance is not feasible, the project operator shall ensure that advance written notification is provided to affected schools regarding the schedule and nature of such transport.

PMM-HAZ-4 Implementing agencies shall consider mitigation measures to reduce impacts to an adopted emergency response plan or emergency evacuation plan, as applicable and feasible:

- Prior to construction, all necessary local and State road and railroad encroachment permits shall be obtained. All applicable conditions of approval shall be compiled and tracked for reference during project construction. If required as a permit condition, the Construction Contractor shall prepare a traffic

control plan in accordance with professional engineering standards prior to construction. Traffic control plans shall include the following requirements:

- Identification of all roadway locations where special construction techniques (e.g., directional drilling or nighttime construction) would be used to minimize impacts to traffic flow.
- Development of circulation and detour plans to minimize impacts to traffic circulation. This may include the use of signing and flagging to guide vehicles through and/or around the construction zone.
- Scheduling of truck trips outside of peak morning and evening commute hours to the maximum extent feasible.
- Limiting lane closures during peak hours to the maximum extent feasible.
- Use of designated haul routes to minimize truck traffic on local roadways to the maximum extent feasible.
- Inclusion of detours for bicycles and pedestrians in all areas potentially affected by project construction.
- Development of access plans for highly sensitive land uses such as police and fire stations, transit stations, hospitals, and schools prior to construction. The access plans will include input from the facility owner or administrator. To minimize disruption to emergency vehicles, the plans shall consider the timing, location, and duration of construction activities including detours and lane closures.
- Storage of construction materials only in designated areas.

4.9.2 Level of Significance After Mitigation

While implementation of **FMM HAZ-1**; **PMMs HYD-1, HYD-2, HAZ-1** through **HAZ-4;** and **WILD-2** would assist the Fresno COG and lead agencies of future transportation improvement and land use development projects in reducing impacts related to hazardous and hazardous materials to the extent feasible, the analysis presented in this section is general in nature. Given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future transportation improvement and land use development projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. As appropriate and feasible, the Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified. Nevertheless, impacts related to hazardous and hazardous materials are considered **significant and unavoidable** for the purposes of this analysis.

4.9.3 Cumulative Impacts

As defined in Section 15130 of the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for hazards and hazardous materials.

A cumulative effect related to hazardous materials would require that multiple projects result in the use, transport, storage, disposal, or release of hazardous materials within the same geographic area, or affect similar receptors; therefore, the geographic area of concern for cumulative hazardous materials-related impacts is the Fresno COG Region and surrounding areas.

Future projects facilitated by the proposed project, in combination with other reasonably foreseeable cumulative projects within the Fresno COG Region, would involve the routine transport, use, storage, and disposal of hazardous materials during construction and operation. These activities would include, but are not limited to, the use of fuels, oils, paints, solvents, and other hazardous substances; the generation and disposal of hazardous waste; demolition or renovation activities that could disturb hazardous building materials (e.g., ACMs, LBP, and PCBs); and construction in areas with known or unknown subsurface contamination, including sites listed pursuant to the Cortese List, leaking LUST sites, and other cleanup sites identified in DTSC EnviroStor and GeoTracker databases.

Future projects facilitated by the proposed project, in combination with other reasonably foreseeable cumulative projects within the Fresno COG Region, could also increase the potential for the accidental release of hazardous materials into the environment due to construction-related spills, improper handling, or exposure to contaminated soil, groundwater, or soil vapor. In addition, cumulative development from projects in the region could increase the number of receptors located near hazardous materials use, transport corridors, or contaminated sites. This could include sensitive receptors such as schools.

All projects in the region would be required to comply with existing hazardous materials regulations, including OSHA and Cal/OSHA regulations, the CFC, the California Health and Safety Code, the CCR, USDOT regulations, the RCRA, and other federal, State, regional, and local regulations. Implementation of PMMs, including **PMMs HYD-1** and **HYD-2**, and **HAZ-1** through **HAZ-4**, would reduce the proposed project's impacts associated with hazardous materials to the extent feasible by requiring preparation of SWPPPs, implementation of BMPs for spill prevention and response, completion of Phase I and Phase II ESAs, proper handling and disposal of hazardous waste, and coordination with emergency responders.

As stated above under Section 4.9.6, impacts of the proposed project related to hazardous and hazardous materials are considered significant and unavoidable given the programmatic nature of the proposed project, the scale of the Fresno COG Region, and the inability of the Fresno COG to enforce project-specific mitigation or make land use approvals. Because the proposed project would result in significant adverse environmental impacts with respect to hazards and hazardous materials, these impacts would represent an incremental contribution to the environmental impacts of other cumulative or related projects, including other regional-scale plans, ultimately leading to a **cumulatively considerable impact** to hazardous and hazardous materials in the cumulative impact area.

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4.10 HYDROLOGY AND WATER QUALITY

This section of the Draft Program Environmental Impact Report (PEIR) describes existing hydrologic conditions within the Fresno Council of Governments (COG) Region and evaluates potential impacts to hydrology and water quality conditions associated with implementation of the 2026 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (proposed project). Specifically, this section addresses existing conditions and the proposed project's adherence to local, regional, State, and federal standards, including whether the project would: alter the quantity or quality of surface water flows, drainage patterns, or groundwater recharge; violate water quality standards or waste discharge requirements; substantially increase runoff that could lead to flooding, erosion, or sedimentation; or otherwise degrade surface water or groundwater resources. The section also considers potential implementation of best management practices (BMPs) to control runoff and reduce pollutants in stormwater.

4.10.1 Scoping Process

Potential impacts related to hydrology and water quality were not identified during the public scoping meeting held for the proposed project on May 28, 2025.

The Fresno COG received no comment letters in response to the Notice of Preparation (NOP) issued for the proposed project between May 13 and June 12, 2025, concerning the proposed project's potential impacts related to hydrology and water quality.

4.10.2 Methodology

Information regarding hydrology and water quality within the Fresno COG Region was obtained from agency websites and planning documents. Information was also obtained from the County of Fresno General Plan Background Report[1] and General Plan PEIR.[2]

This section analyzes the potential hydrology and water quality impacts of future transportation improvement projects and land use developments facilitated by the proposed project to the extent feasible. Although hydrology and water quality regulations are based on the effects of proposed development on an entire watershed, their success requires site-specific and detailed analyses at an individual improvement project and new development project level rather than the programmatic level that characterizes this PEIR. Subsequent project-specific California Environmental Quality Act (CEQA) documents may be required to further analyze the transportation improvements or new development facilitated by the proposed project to determine the magnitude of impacts to hydrology and water quality, and to identify appropriate project-specific mitigation measures.

1 County of Fresno. 2023. *Fresno County General Plan Background Report. General Plan Review and Revision.* April.

2 County of Fresno. 2024. *Fresno County General Plan Policy Document. General Plan Review.* February.

4.10.3 Existing Environmental Setting

4.10.3.1 Stormwater Drainage Infrastructure Overview

Stormwater drainage systems throughout the Fresno COG Region consist of street gutters, inlets, underground storm drains, retention basins, pumping stations, and open channels to collect and control stormwater runoff.

Local and regional stormwater drainage infrastructure within a majority of the Fresno COG Region is provided and managed by the Fresno Metropolitan Flood Control District (District), which is the only flood control district in the Fresno COG Region.[3] The District primarily services the cities of Fresno and Clovis, including the unincorporated areas east of the two cities. District infrastructure includes drainage facilities, flood control watercourses, and retention basins.

Some individual communities in the Fresno COG Region have stormwater drainage systems serviced by community services and public utilities districts, including Biola, Caruthers, Del Rey, Easton, Riverdale, and Tranquillity.[4] Drainage infrastructure in these areas includes retention basins to collect stormwater.

4.10.3.2 Regional Drainage

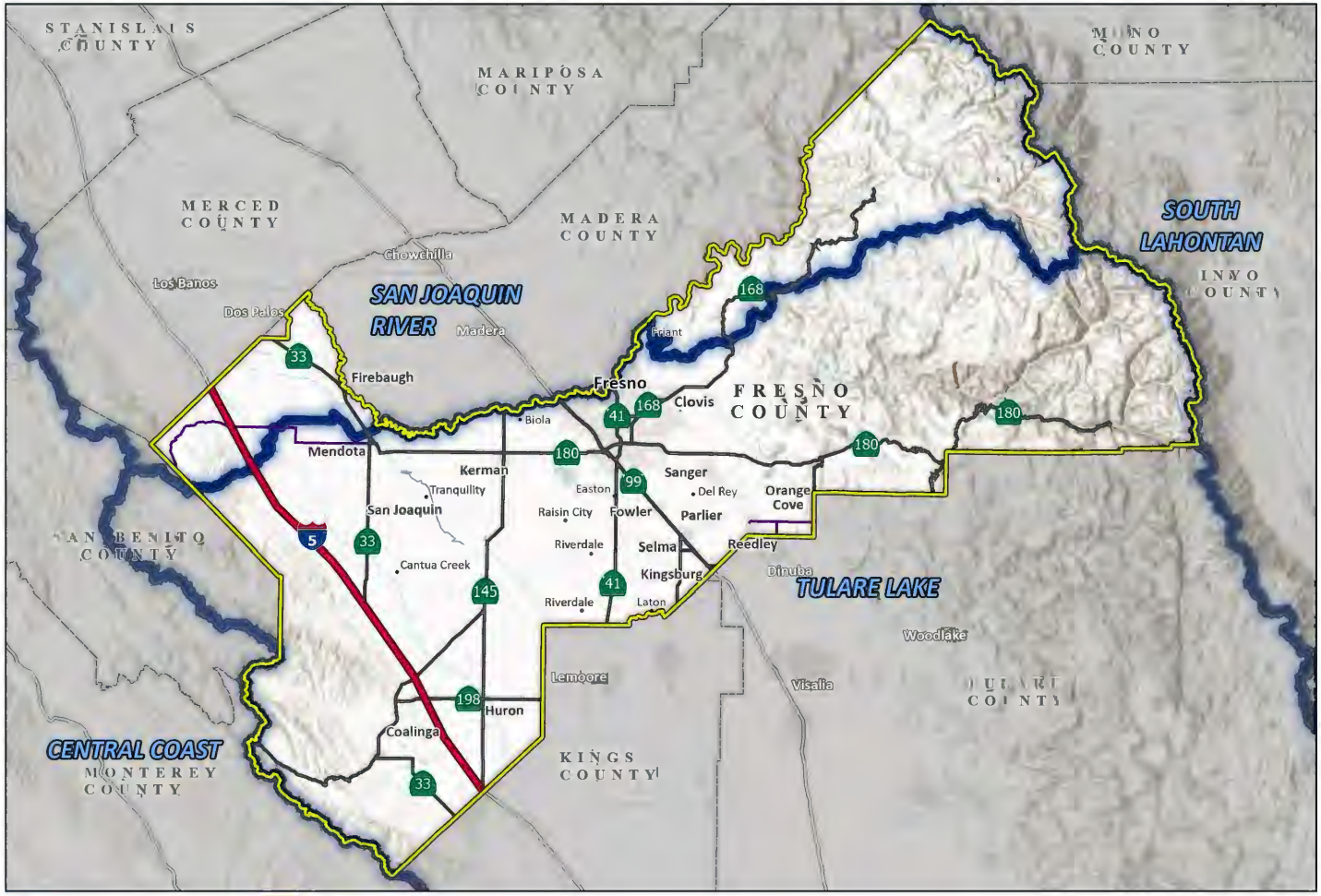
As shown on Figure 4.10-1, the Fresno COG Region is located in the Tulare Lake and San Joaquin River hydrologic regions. As shown on Figure 4.10-2, the majority of the eastern portion of the Fresno COG Region is in the Upper Kings Watershed, while the northeastern portion of the Fresno COG Region is in the Upper San Joaquin Watershed. The Central Valley portion of the Fresno COG Region consists of multiple watersheds, including the Middle San Joaquin-Lower Chowchilla Watershed, the Upper Dry Watershed, the Tulare Lakebed Watershed, and the Upper Kaweah Watershed. The western portion of the Fresno COG Region is also split among several watersheds, including the Tulare Lakebed Watershed, the Upper Dry Watershed, the Middle San Joaquin-Lower Chowchilla Watershed, and a sliver of the Panoche-San Luis Reservoir Watershed. Watersheds within the Fresno COG Region contribute to recharge of the San Joaquin Valley Groundwater Basin, which underlies the Fresno COG Region and is discussed further in Section 4.10.3.5.

4.10.3.3 Surface Water Quality

As shown on Figure 4.10-3, major surface waters in the Fresno COG Region include the Kings River and the San Joaquin River. The primary storage reservoir for the Kings River is the Pine Flat Lake, while the primary storage reservoir for the San Joaquin River is the Millerton Lake Reservoir. Other surface waters consist of streams and creeks. Generally, surface water quality is higher in the rivers' headwaters, which originate in the Sierra Nevada mountains, due to the higher elevation and lower

[3] County of Fresno. 2024. *General Plan Background Report.* February. Page 6-32. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/planning-and-land-use/general-plan/background-report-2024.pdf (accessed January 8, 2026).

[4] Ibid. Page 6-33.

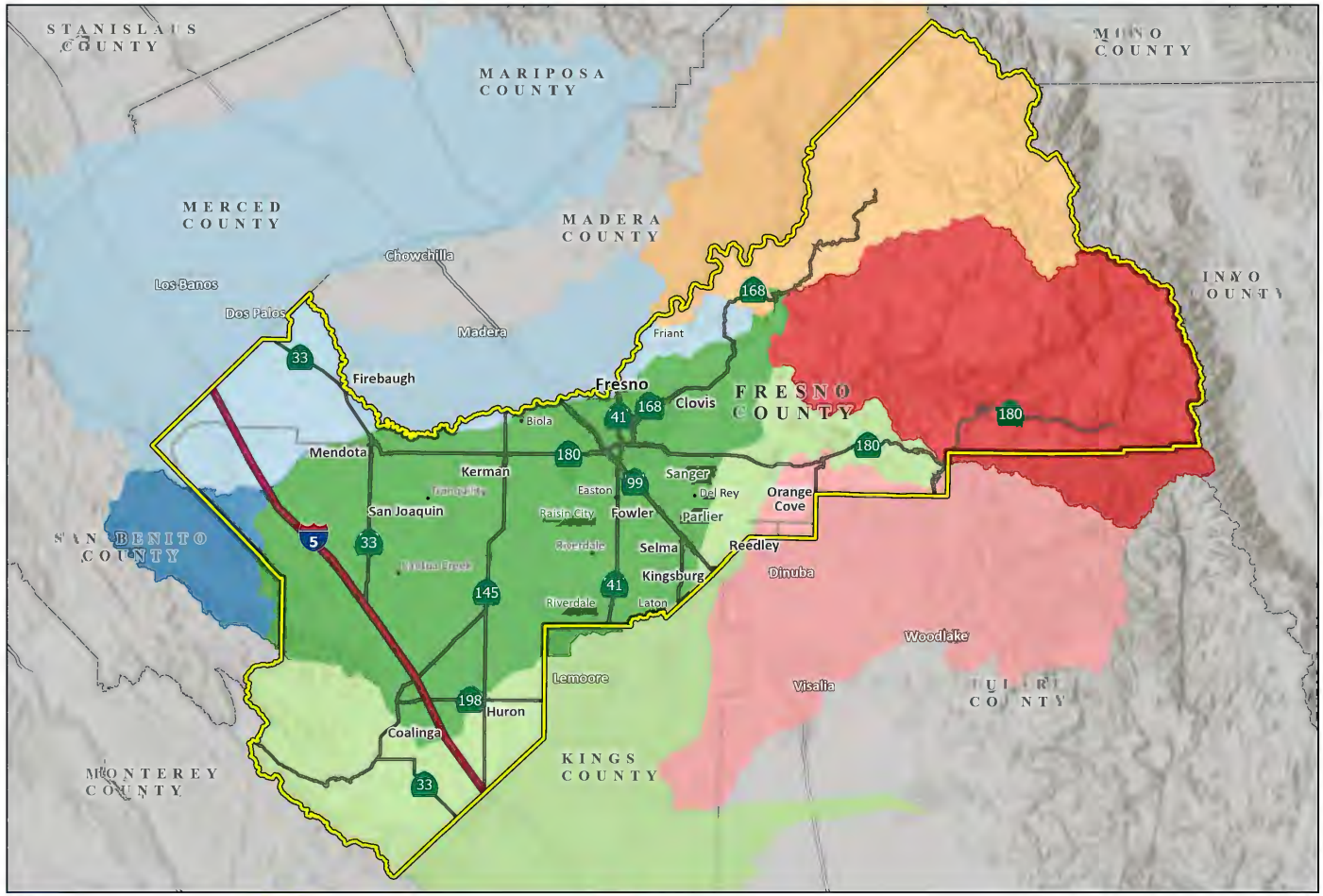


LSA

FIGURE 4.10-1

Regional Transportation Plan/Sustainable Communities Strategy
Fresno COG Region Hydrologic Regions

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LSA

Fresno COG Region

Subbasin

- Middle San Joaquin-Lower Chowchilla
- Panoche-San Luis Reservoir
- Tulare Lake Bed
- Upper Dry
- Upper Kaweah
- Upper King
- Upper San Joaquin

0 9 18
Miles

SOURCE: Esri, USGS (2024), CDOC (2022)

I:\2025\20252196\GIS\Pro\Fresno COG RTP EIR\Fresno COG EIR for 2026 RTP SCS.aprx (3/4/2026)

FIGURE 4.10-2

Regional Transportation Plan/Sustainable Communities Strategy
Fresno COG Region Watersheds

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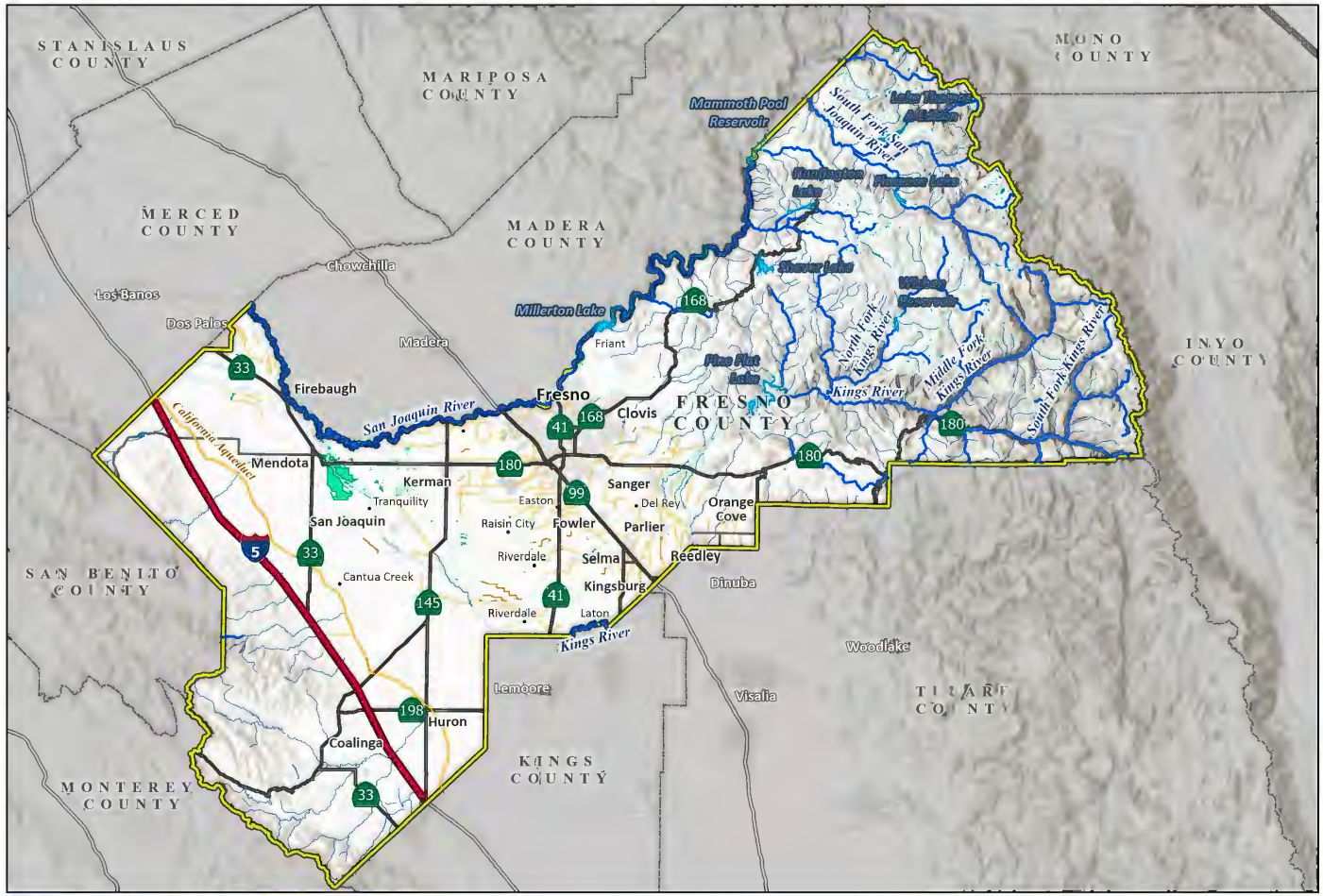


FIGURE 4.10-3

Regional Transportation Plan/Sustainable Communities Strategy
Fresno COG Region Surface Waters

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scale of development. Surface water quality generally declines as it reaches the Fresno COG Region, where agricultural activities occur.[5] As described in Section 4.2, Agriculture and Forestry Resources, agricultural land comprises approximately half of the region's overall land area and serves as the main economic driver of the Fresno COG Region. Given the scale and nature of these activities, agricultural drainage has been identified as a prevalent contaminant of surface and groundwater. These pollutants can include pesticides, fertilizers, animal waste, suspended solids, oil, grease, and pathogens.

Table 4.10.A, below, lists the surface waters, or segments thereof, that have been listed as impaired by the State Water Resources Control Board (SWRCB) in accordance with Section 303(d) of the Clean Water Act (CWA) (discussed further in Section 4.10.4), meaning their designated beneficial uses of a particular water body are being compromised by water quality.

Table 4.10.A: Fresno COG Region Impaired Water Bodies

Water Body	Pollutant(s)
California Aqueduct (Panoche Creek to Grapevine)	pH
Cantua Creek	Pesticides (chlorpyrifos, DDT); metals (selenium)
Fresno Slough	Pesticides (chlorpyrifos); toxicity
Hume Lake	Nutrients (dissolved oxygen); pH
James Bypass	Toxicity
Kings River – Lower	Salinity/total dissolved solids/chlorides/sulfates; metals (molybdenum, boron, copper, lead); pesticides (toxaphene, bifenthrin, pyrethroids, paraquat); nutrients (dissolved oxygen); toxicity; pH; alkalinity
Kings River – Main Fork	Alkalinity
Kings River – South Fork	Alkalinity
Kings River – Upper North Fork	Alkalinity
Little Panoche Creek	Toxicity
Long Meadow Creek	Nutrients (dissolved oxygen); pH
Los Gatos Creek	Metals (lead, selenium)
Mendota Pool	Metals (mercury, selenium)
Mill Creek	Toxicity
Millerton Lake	Metals (mercury); pH
Panoche Creek	Metals (selenium, mercury); sediment; toxicity
Pine Flat Lake	Metals (mercury); alkalinity
Poso Slough	Toxicity
Ramona Lake	Pathogens (indicator bacteria); salinity/total dissolved solids/chlorides/sulfates; toxicity
San Joaquin River	pH; invasive species; water temperature
Ten Mile Creek	Nutrients (dissolved oxygen)
Unnamed tributary (near Table Mountain Rancheria)	Salinity/total dissolved solids/chlorides/sulfates

Source: State Water Resources Control Board (SWRCB). 2024. *2024 California Integrated Report (Clean Water Act Section 303(d) List and 305(b) Report).*
COG = Council of Governments DDT = dichlorodiphenyltrichloroethane

[5] County of Fresno. 2024. *General Plan Background Report.* February. Page 7-2. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/planning-and-land-use/general-plan/background-report-2024.pdf (accessed January 8, 2026).

4.10.3.4 Groundwater Quality

As shown on Figure 4.10-4, the Fresno COG Region is located in the San Joaquin Valley Groundwater Basin, which is within the San Joaquin River and Tulare Lake hydrologic regions. Specifically, the Fresno COG Region overlies four subbasins of the San Joaquin Valley Groundwater Basin: the Kings, Delta-Mendota, Westside, and Pleasant Valley subbasins.

Recharge of the San Joaquin Valley Groundwater Basin occurs through rainfall percolation/infiltration, stream seepage from the Kings and San Joaquin River watersheds, deep percolation of irrigation water, canal seepage, and intentional recharge.[6] As with surface water, pesticides and fertilizers associated with agricultural activities are the main contaminants affecting groundwater. Other contaminants associated with human activity include those associated with failing or failed septic tanks, improperly managed rangeland, and improperly sealed wells. Another contributor to poor groundwater quality is geologic conditions. The Kings River Watershed is largely underlain by granitic rocks; as a result, the Kings subbasin experiences high concentrations of total dissolved solids (TDS), including salts. These contaminants limit the beneficial uses of groundwater in the Fresno COG Region, including municipal and water supply, as well as agricultural supply.

4.10.3.5 Water Supply

Water supplied to unincorporated portions of the Fresno COG Region is sourced from both surface water and groundwater via 16 County service areas, 5 County waterworks districts, and numerous private water districts, irrigation districts, and individual sources.[7] In addition, incorporated cities within the Fresno COG Region are served by municipal or private water districts, such as the City of Fresno Department of Public Utilities Water Division.

Surface water supplied to Fresno COG Region residents is sourced from the Kings River, the San Joaquin River (via the Friant-Kern Canal), and the Central Valley Project (CVP) Delta Export Division. Groundwater supplied to Fresno COG Region residents is sourced from the San Joaquin Valley Groundwater Basin, including the Kings, Delta-Mendota, Westside, and Pleasant Valley subbasins. The Department of Water Resources (DWR) has designated the Kings, Delta-Mendota, and Westside subbasins as high-priority overdraft areas,[8] meaning the average annual amount of groundwater extraction exceeds the long-term average annual supply of water to the basin.[9]

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6 County of Fresno. 2024. *General Plan Background Report.* February. Page 7-6. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/planning-and-land-use/general-plan/background-report-2024.pdf (accessed February 18, 2026).

7 Ibid. Page 7-5.

8 Ibid. Page 7-6.

9 California Department of Water Resources. n.d. Critically Overdrafted Basins. Website: https://water.ca.gov/programs/groundwater-management/bulletin-118/critically-overdrafted-basins (accessed January 8, 2026).

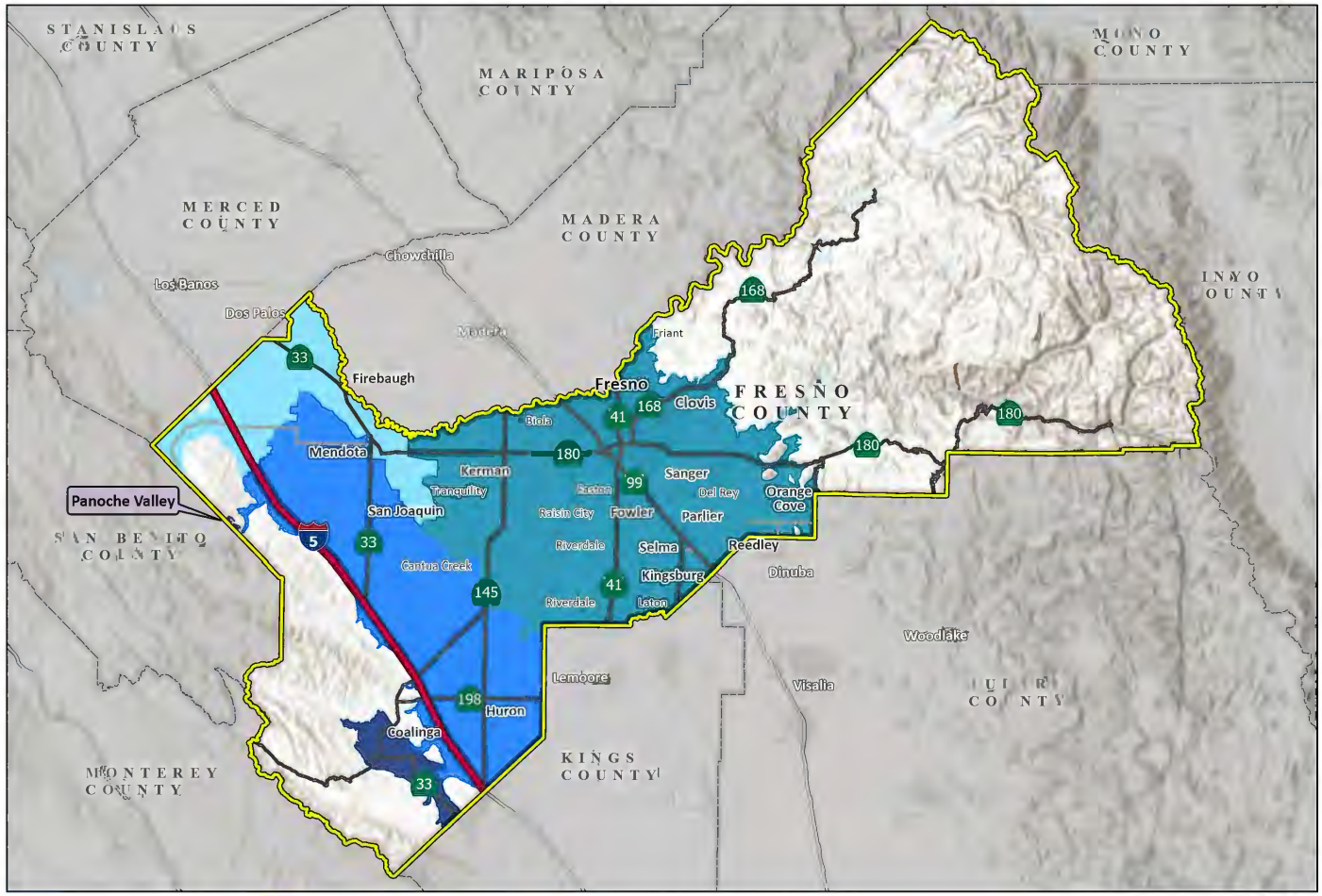


FIGURE 4.10-4

Regional Transportation Plan/Sustainable Communities Strategy
Fresno COG Region Groundwater Basins

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As described further in Section 4.10.4.2, the Sustainable Groundwater Management Act (SGMA) requires governments and water agencies of high- and medium-priority basins to halt overdrafts of groundwater basins. The SGMA requires the formation of local groundwater sustainability agencies (GSAs) that are required to adopt Groundwater Sustainability Plans (GSPs) to manage the sustainability of the groundwater basins. GSPs have been prepared for each subbasin within the Fresno COG Region, including the three high-priority overdraft areas as well as the Pleasant Valley subbasin.

4.10.3.6 Flooding

Floodplains. According to the County's Hazard Mitigation Plan, a floodplain is an area adjacent to a channel of water and often refers to the area that is inundated by the 100-year flood, the flood that has a 1 percent chance in any given year of being equaled or exceeded. Flooding risks include both localized flooding, where heavy rainfall accumulates in a relatively small drainage area, and riverine flooding, where a river, stream, or creek exceeds its capacity and overflows.

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP), which provides flood insurance, floodplain management, and flood hazard mapping. FEMA produces Flood Insurance Rate Maps (FIRMs) that identify properties and buildings in flood insurance risk areas. Flood hazards related to storm events are generally described in terms of 100- or 500-year floods. These are floods that, respectively, have a 1 percent and 0.2 percent chance of occurring every year. The 100-year flood is the national minimum standard to which communities regulate their floodplains through the NFIP.

FEMA utilizes flood zone designations in its FIRMs to characterize flooding risk. As shown on Figure 4.10-5 and quantified in Table 4.10.B, below, the vast majority of the Fresno COG Region is not located within the 100- or 500-year floodplain.

Table 4.10.B: Fresno COG Region Breakdown by FEMA Flood Zone

FEMA Zone Designation	Total Acreage in Fresno COG Region	Percentage of Total Fresno COG Region Area
0.2% Annual Chance Flood Hazard	67,785	1.76%
1% Annual Chance Flood Hazard	261,812	6.81%
Area of Undetermined Flood Hazard	50	<0.00%
Area with Reduced Risk Due to Levee	588	0.02%
Regulatory Floodway	4,343	0.11%
Other Land	3,511,767	91.30%
Total	**3,846,345**	**100.00%**

Sources: County of Fresno. 2024. *Fresno County, California Hazard Mitigation Plan.* May.
Federal Emergency Management Agency. n.d. FEMA Flood Map Service Center.
COG = Council of Governments
FEMA = Federal Emergency Management Agency

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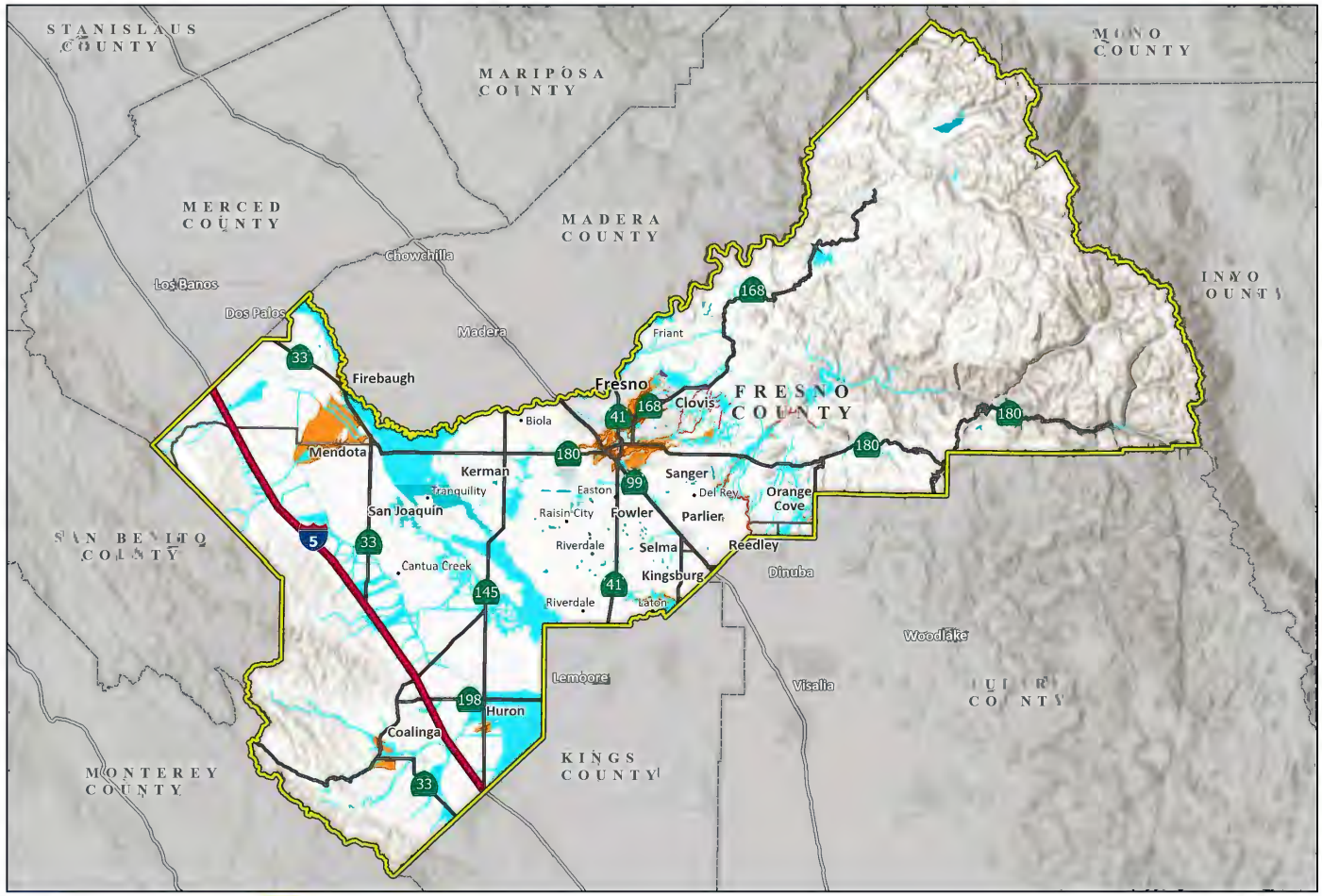


FIGURE 4.10-5

Regional Transportation Plan/Sustainable Communities Strategy
Fresno COG Region Flood Risks

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Dam Failure. The Fresno COG Region contains various dams of different sizes and purposes. The National Inventory of Dams identifies 29 dams currently under the County's jurisdiction.[10] Of these dams, 11 are considered extremely high hazard, 8 are considered high hazard, 2 are considered significant hazard, and 8 are low hazard. Several other dams located within Madera County and Kern County could also pose a threat to the Fresno COG Region based on the topography and hydrological flow characteristics of the land. According to the District, in a worst-case scenario of a hypothetical failure of a dam or its critical structures, the areas that would be impacted by flooding would include areas east of State Route (SR-)168, areas to the west of SR-99, and any neighborhood or business touching SR-41.[11] In addition, the cities of Fresno, Clovis, and Sanger and the eastern unincorporated parts of Fresno County are at greater risk given that they are downstream and below the dams on the valley floor. While failure of a major dam has never occurred in the Fresno COG Region, the potential exists for future dam failures in the region.

4.10.4 Regulatory Setting

Federal, State, and local regulations and programs related to hydrology and water quality that are applicable to the proposed project are described below.

4.10.4.1 Federal Regulations

Clean Water Act. In 1972, Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to the waters of the United States from any point source unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. Known today as the CWA, this legislation has been amended by Congress several times. The objective of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." In the 1987 amendments, Congress directed dischargers of stormwater from municipal and industrial/construction point sources to comply with the NPDES permit scheme. Important CWA sections are as follows:

- Sections 303 and 304 require states to promulgate water quality standards, criteria, and guidelines and have those standards approved by the United States Environmental Protection Agency (EPA).

  Water quality standards consist of designated beneficial uses for a particular water body (e.g., wildlife habitat, agricultural supply, fishing), along with water quality criteria necessary to support those uses. Water quality criteria are set concentrations or levels of constituents (e.g., lead, suspended sediment, and fecal coliform bacteria) or narrative statements that represent the quality of water that support a particular use. Because California had not

[10] California Department of Water Resources Division of Safety of Dams. 2025. Dams Within Jurisdiction of the State of California – Dams Listed Alphabetically by County. September. Website: https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/All-Programs/Division-of-Safety-of-Dams/Files/Publications/Annual-Data-Release/2025/DAMS-WITHIN-JURISDICTION-OF-THE-STATE-OF-CALIFORNIA-DAMS-LISTED-ALPHABETICALLY-BY-COUNTY-SEPT-2025.pdf (accessed February 16, 2026).

[11] County of Fresno. 2024. *Fresno County, California Hazard Mitigation Plan.* May. Page 27. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/resources/hazard-mitigation-plan/draft-2024-fresno-county-hazard-mitigation-plan.pdf (accessed February 16, 2026).

established a complete list of acceptable water quality criteria for toxic pollutants, EPA Region IX established numeric water quality criteria for toxic constituents in the form of the California Toxics Rule (CTR).

When designated beneficial uses of a particular water body are being compromised by water quality, Section 303(d) of the CWA requires identifying and listing that water body as impaired. Once a water body has been deemed impaired, a Total Maximum Daily Load (TMDL) must be developed for each impairing water quality constituent. A TMDL is an estimate of the total load of pollutants from point, nonpoint, and natural sources that a water body may receive without exceeding applicable water quality standards (often with a "factor of safety" included, which limits the total load of pollutants to a level well below that which could cause the standard to be exceeded). Once established, the TMDL is allocated among current and future dischargers into the water body.

The SWRCB, in compliance with Section 303(d) of the CWA, prepared a list of impaired water bodies in California as part of the *2024 California Integrated Report.* The SWRCB approved the 2024 California Integrated Report (CWA Section 303(d) List/305(b) Report) on February 6, 2024, and the EPA partially approved the California Integrated Report on December 13, 2024. The EPA approved the majority of the 303(d) list but identified 53 water body pollutant combinations it is considering adding to the 303(d) list. The 2024 California Integrated Report is the current integrated report except for the 53 water body-pollutant combinations in review by the EPA.[12] Impaired receiving waters within the Fresno COG Region are listed above in Section 4.10.3.3.

- Section 401 Certification requires an applicant for a federal license or permit to conduct any activity that may result in a discharge to waters of the United States to obtain certification from the State that the discharge will comply with other provisions of the act. (This is most frequently required in tandem with a Section 404 permit request and is discussed further below.)

- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the United States. The EPA delegated the implementation and administration of the NPDES program to the California SWRCB. The SWRCB established nine Regional Water Quality Control Boards (RWQCBs). The SWRCB enacts and enforces the federal NPDES program and all water quality programs and regulations that cross regional boundaries. The nine RWQCBs enact, administer, and enforce all programs, including NPDES permitting, within their jurisdictional boundaries. Section 402(p) requires permits for discharges of stormwater from industrial, construction, and Municipal Separate Storm Sewer Systems (MS4s). To comply with the MS4 permits, stormwater pollution controls must be implemented for construction and operational activities that discharge either directly to surface waters or indirectly through separate municipal storm drains. Pollution control is achieved by establishing engineering measures that have been designed, tested, and successfully implemented throughout the past decades, such as detention basins and sediment traps, during both the construction period and the operational phases of a project.

[12] State Water Resources Control Board (SWRCB). 2024. *2024 California Integrated Report.* Website: https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2024-integrated-report.html (accessed February 16, 2026).

Direct discharges of pollutants into waters of the United States are not allowed except in accordance with the NPDES program established in Section 402 of the CWA.

- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the United States. This permit program is administered by the United States Army Corps of Engineers (USACE). Waters of the United States are defined and discussed in greater detail in Section 4.4, Biological Resources, of this PEIR.

  Pursuant to Section 404 of the CWA, the USACE regulates discharges of dredged or fill material into waters of the United States. These waters include wetlands and non-wetland bodies of water that meet specific criteria, including a direct or indirect connection to interstate commerce. The USACE regulatory jurisdiction pursuant to Section 404 of the CWA is founded on a connection, or nexus, between the water body in question and interstate commerce. This connection may be direct (through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce) or indirect (through a nexus identified in the USACE regulations). The USACE typically regulates as non-wetland waters of the United States any body of water displaying an ordinary high water mark (OHWM). To be considered a jurisdictional wetland under Section 404, an area must possess three wetland characteristics: hydrophytic vegetation, hydric soils, and wetland hydrology. Each characteristic has a specific set of mandatory wetland criteria that must be satisfied in order for that particular wetland characteristic to be met.

Safe Drinking Water Act. The Safe Drinking Water Act (SDWA) (42 United States Code [USC] Section 300f et seq.) was enacted in 1974 to protect public health by regulating the nation's public drinking water supply. The federal SDWA authorizes the EPA to set national standards for drinking water to protect against both naturally occurring and man-made contaminants.

National Flood Insurance Act. Congress acted to reduce the costs of disaster relief by passing the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. The intent of these acts was to reduce the need for large, publicly funded flood control structures and disaster relief efforts by restricting development in floodplains. FEMA administers the NFIP, which provides flood insurance, floodplain management, and flood hazard mapping. Communities subject to flood hazards voluntarily participate in the NFIP by adopting and enforcing floodplain management ordinances to reduce the potential for flood damage. In turn, the NFIP offers federally funded flood insurance to homeowners, renters, and business owners in participating communities. Under this program, FEMA produces FIRMs that identify properties and buildings in flood insurance risk areas. Flood hazards related to storm events are generally described in terms of 100- or 500-year floods. These are floods that, respectively, have a 1 percent and 0.2 percent chance of occurring every year.

4.10.4.2 State Regulations

Urban Water Management Planning Act. The Urban Water Management Planning Act (UWMP Act) (California Water Code [CWC], Division 6, Part 2.6, §10610 et seq.) was enacted in 1983. The UWMP Act applies to municipal water suppliers that provide water service directly to more than 3,000 connections. The UWMP is a public document prepared by water suppliers to guide long-term water management planning over a 20-year period and ensure adequate water supplies are available to

meet existing and future water demands. The UWMP Act requires these suppliers to update their UWMPs every 5 years to demonstrate an appropriate level of reliability in supplying anticipated short-term and long-term water demands during normal, dry, and multiple dry years.

Porter-Cologne Water Quality Control Act of 1970. The federal CWA places the primary responsibility for the control of water pollution and planning the development and use of water resources with the states, although it does establish certain guidelines for the states to follow in developing their programs.

California's primary statute governing water quality and water pollution is the Porter-Cologne Water Quality Control Act of 1970 (Porter-Cologne Act). The Porter-Cologne Act grants the SWRCB and the nine RWQCBs broad powers to protect water quality and is the primary vehicle for the implementation of California's responsibility under the federal CWA. The Porter-Cologne Act grants the SWRCB and RWQCBs the authority and responsibility to adopt plans and policies, to regulate discharges to surface water and groundwater, to regulate waste disposal sites, and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, oil, or petroleum product.

Each RWQCB must formulate and adopt a water quality plan for its region. The regional plans are to conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its State water policy. The Porter-Cologne Act also provides that an RWQCB may include in its region a regional plan with water discharge prohibitions applicable to particular conditions, areas, or types of waste. The Fresno COG Region is within the jurisdictional boundaries of the Central Valley RWQCB (Region 5).

National Pollutant Discharge Elimination System Program. Section 402(p) of the CWA requires the issuance of NPDES permits for five categories of stormwater dischargers, including MS4s. The EPA defines an MS4 as "any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over stormwater, that are designed or used for collecting or conveying stormwater." The SWRCB or the RWQCB issues NPDES permits for 5 years, and permit requirements remain active until a new permit has been adopted.

Municipal Separate Storm Sewer System. The Municipal Stormwater Permitting Program regulates stormwater discharges from MS4s. The NPDES MS4 permits are issued in two phases by the SWRCB and RWQCBs. Phase I MS4 Permits are issued to medium municipalities (serving between 100,000 and 250,000 people) and large municipalities (serving more than 250,000 people). Most of these permits are issued to a group of co-permittees encompassing an entire metropolitan area. The Phase II MS4 Permits are issued to smaller municipalities (populations of less than 100,000 people). The Phase II Small MS4 Permit covers Phase II permittees statewide and became effective on July 1, 2013. The Phase I and Phase II MS4 Permits require the permittees to develop a stormwater management program and individual dischargers to develop and implement a Storm Water Management Plan.

California Toxics Rule. As stated previously, because California had not established a complete list of acceptable water quality criteria for toxic pollutants, EPA Region IX established numeric water quality criteria for toxic constituents in the form of the CTR. The CTR provides water quality criteria for certain potentially toxic compounds for inland surface waters, enclosed bays, estuaries, and waters designated for human health or aquatic life uses. The CTR is often used by the RWQCBs when establishing water quality objectives and TMDLs. Although the CTR criteria do not apply directly to discharges of stormwater runoff, they are utilized as benchmarks for toxics in urban runoff. The CTR is used as a benchmark to evaluate the potential ecological impacts of stormwater runoff to receiving waters. The CTR establishes acute and chronic surface water quality standards for certain water bodies. Acute criteria provide benchmarks for the highest permissible concentration below which aquatic life can be exposed for short periods of time without negative effects. Chronic criteria provide benchmarks for an extended period of time (i.e., 4 days or more) without negative effects. The acute CTR criteria have a shorter relevant averaging period (less than 4 days) and provide a more appropriate benchmark for comparison for stormwater flows.

CTR criteria apply to the receiving water body and are calculated based on the probable hardness values of the receiving waters. At higher hardness values for receiving waters, certain constituents (including copper, lead, and zinc) are more likely to be complexed (bound with) components in the water column. This in turn reduces the bioavailability and resulting potential toxicity of these metals.

General Construction Activity Storm Water Permit. The *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities,* Order No. 2022-0057-DWQ, NPDES No. CAS000002 (Construction General Permit), adopted by the SWRCB, regulates construction activity that includes clearing, grading, and excavation resulting in soil disturbance of at least 1 acre of total land area. The Construction General Permit authorizes the discharge of stormwater to surface waters from construction activities.

The Construction General Permit requires that all developers of land where construction activities will occur over more than 1 acre do the following:

- Complete a Risk Assessment to determine pollution prevention requirements pursuant to the three risk levels established in the General Permit;
- Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the United States;
- Develop and implement a Stormwater Pollution Prevention Plan (SWPPP) that specifies BMPs that will reduce pollution in stormwater discharges to the Best Available Technology/ Economically Achievable/Best Conventional Pollutant Control Technology standards;
- Perform inspections and maintenance of all BMPs; and
- Conduct stormwater sampling, if required based on risk level.

To obtain coverage under the Construction General Permit, a project applicant must electronically file all permit registration documents with the SWRCB prior to the start of construction. Permit registration documents must include a:

- Notice of Intent (NOI);
- Risk Assessment;
- Site map;
- SWPPP;
- Annual fee; and
- Signed certification statement.

Typical BMPs contained in SWPPPs are designed to minimize erosion during construction, stabilize construction areas, control sediment, and control pollutants from construction materials. The SWPPP must also include a discussion of the program to inspect and maintain all BMPs.

Groundwater Management Act (Assembly Bill 3030). The Groundwater Management Act (California Water Code, Sections 10750–10756) provides a systematic procedure for an existing local agency to develop a groundwater management plan. Assembly Bill (AB) 3030 allows a local agency whose service includes a groundwater basin that is not already subject to groundwater management pursuant to law or court order to adopt and implement a groundwater management plan and includes plans to mitigate overdraft conditions, control brackish water, and monitor and replenish groundwater.

Sustainable Groundwater Management Act of 2014 (Senate Bills 1168 and 1319, AB 1739). In March 2014, the Governor's Office released a draft framework soliciting input on actions that can be taken to ensure local groundwater managers have the tools and authority to manage groundwater sustainably. In response, Senate Bill (SB) 1168 and AB 1739 were introduced. These bills moved through the legislation process in nearly identical form while the authors and administration convened multiple stakeholder meetings and further developed the provisions of the bills. On August 22, 2014, both bills were amended to divide the provisions between the two bills. In tandem, SB 1168 and AB 1739 provide a comprehensive groundwater sustainability management program.[13] In September 2014, SB 1168, SB 1319, and AB 1739 were enacted, amending and adding to the State's Government and Water Codes relative to the management of groundwater resources. The three bills comprise SGMA. The SGMA provides for the formation of local GSAs, which are responsible for monitoring and sustainably managing groundwater basins.

Cobey-Alquist Flood Plain Management Act (Sections 8000–9651 of the California Water Code). The Cobey-Alquist Flood Management Act states that a large number of land resources of the State of California are subject to recurrent flooding. The public interest necessitates sound development of land use, as land is a limited, valuable, and irreplaceable resource, and the floodplains of the State are a land resource to be developed in a manner that, in conjunction with economically justified structural measures for flood control, would result in prevention of loss of life and of economic loss

[13] Association of California Water Agencies. 2014. *Sustainable Groundwater Management Act of 2014.* Website: https://water.ca.gov/programs/groundwater-management/sgma-groundwater-management (accessed July 8, 2024).

caused by excessive flooding. The primary responsibility for planning, adoption, and enforcement of land use regulations to accomplish floodplain management rests with local levels of government. It is policy of the State of California to encourage local government to plan land use regulations to accomplish floodplain management and to provide State assistance and guidance. As part of its discretionary review process, the City must determine how the project will comply with this act and not create flooding impacts on new occupied land uses.

California Fish and Game Code Section 1602. California Fish and Game Code Section 1602 requires any person, State, local governmental agency, or public utility to notify the California Department of Fish and Wildlife (CDFW) prior to beginning any activity that may do one or more of the following:

- Divert or obstruct the natural flow of any river, stream, or lake;
- Change the bed, channel, or bank of any river, stream, or lake;
- Use material from any river, stream, or lake; or
- Deposit or dispose of material into any river, stream, or lake.

If the project activity may substantially adversely affect fish and wildlife resources, CDFW requires the project to obtain a Lake or Streambed Alteration Agreement.

Senate Bill 610. SB 610 requires that detailed information regarding water availability be provided to relevant city and county decision makers prior to approval of specified large development projects (as defined in Water Code Section 10912 [a]). Under SB 610, water assessments must be furnished to local governments for inclusion in any environmental documentation for certain projects subject to CEQA.[14]

Senate Bill 221. Under SB 221, approval by a city or county of residential subdivisions, including the proposed residential development of more than 500 dwelling units, except that for a public water system that has fewer than 5,000 service connections, requires an affirmative written verification of sufficient water supply.

4.10.4.3 Regional Regulations

Water Quality Control Plan for the Tulare Lake Basin. The Tulare Lake Basin comprises the 10.5-million-acre drainage area of the San Joaquin Valley south of the San Joaquin River. The first edition of the Water Quality Control Plan for the Tulare Lake Basin was adopted by the California RWQCB, Central Valley Region, in July 1975, and became effective following approval by the SWRCB in August 1975 and the EPA in June 1976. Several revisions were adopted and approved since 1975, and the plan was comprehensively updated in May 2018.

The Water Quality Control Plan for the Tulare Lake Basin delineates water resource area boundaries based on hydrological features. For the purposes of achieving and maintaining water quality

[14] California Department of Water Resources (DWR). 2003. *Guidebook for Implementation of SB 610 and SB 221 to Assist Water Suppliers, Cities, and Counties in Integrating Water and Land Use Planning.* October 10. Website: https://cawaterlibrary.net/document/guidebook-for-implementation-of-sb-610-and-sb-221-to-assist-water-suppliers-cities-and-counties-in-integrating-water-and-land-use-planning/ (accessed February 23, 2026).

protection, specific beneficial uses have been identified for each of the surface waters and groundwater management zones described in this plan. Once beneficial uses are designated, appropriate water quality objectives can be established, and programs that maintain or enhance water quality can be implemented to ensure the protection of beneficial uses.

Beneficial uses of surface receiving waters for the Fresno COG Region include: municipal and domestic supply (MUN); agricultural supply (AGR); industrial service supply (IND); industrial process supply (PRO); hydropower generation (POW); water contact recreation (REC-1); non-contact water recreation (REC-2); warm freshwater habitat (WARM); cold freshwater habitat (COLD); wildlife habitat (WILD); rare, threatened, or endangered species (RARE); spawning, reproduction, and/or early development (SPWN); migration of aquatic organisms (MIGR); ground water recharge (GWR); freshwater replenishment (FRSH); aquaculture (AQUA); preservation of biological habitats of special biological significance (BIOL); and navigation (NAV).

The Water Quality Control Plan for the Tulare Lake Basin also establishes implementation programs to achieve water quality objectives to protect beneficial uses and require monitoring to evaluate the effectiveness of the programs. These objectives comply with the State antidegradation policy (State Board Resolution No. 68-16), which is designed to maintain high-quality waters while allowing some flexibility if beneficial uses are not unreasonably affected.

The Water Quality Control Plan for the Tulare Lake Basin has established narrative and numeric water quality objectives for inland surface streams and groundwater. If water quality objectives are exceeded, the Central Valley RWQCB can use its regulatory authority to require municipalities to reduce pollutant loads to the affected receiving waters.

Water Quality Control Plan for the Sacramento River Basin and the San Joaquin River Basin. The Sacramento and San Joaquin river drainage basins are bound by the Sierra Nevada mountains to the east and the Coast Ranges and Klamath Mountains to the west. The first edition of the Water Quality Control Plan for the Sacramento River Basin and the San Joaquin River Basin was adopted in 1975, the second edition was published in 1989, and the third edition was published in 1994. The current edition, last revised in February 2019, incorporates new amendments approved since the previous edition.

The Water Quality Control Plan for the Sacramento River Basin and the San Joaquin River Basin delineates water resource area boundaries based on hydrological features and identifies specific beneficial uses, similar to the Water Quality Control Plan for the Tulare Lake Basin.

Beneficial uses of surface receiving waters for the Fresno COG Region include: MUN; AGR; IND; PRO; GWR; FRSH; NAV; POW; REC-1; REC-2; commercial and sport fishing (COMM); AQUA; WARM; COLD; estuarine habitat (EST); WILD; BIOL; RARE; MIGR; and shellfish harvesting (SHELL).

The Water Quality Control Plan for the Sacramento River Basin and the San Joaquin River Basin also establishes implementation programs to achieve water quality objectives to protect beneficial uses and require monitoring to evaluate the effectiveness of the programs, and has established narrative and numeric water quality objectives for inland surface streams and groundwater. If water quality

objectives are exceeded, the Central Valley RWQCB can use its regulatory authority to require municipalities to reduce pollutant loads to the affected receiving waters.

Central Valley Region-wide MS4 Permit. The Central Valley RWQCB adopted the *National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements General Permit for Discharges from Municipal Separate Storm Sewer Systems, Order No. R5-2016-0040, NPDES No. CAS0085324* (Region-wide MS4 Permit) on June 23, 2016. The Region-wide MS4 Permit prohibits discharges, sets limits on pollutants being discharged into receiving waters, and requires implementation of technology-based standards. On April 19, 2018, the City of Clovis; the City of Fresno; the County of Fresno; California State University, Fresno; and the District submitted NOIs to obtain coverage under the Region-wide MS4 Permit. After review of the NOIs, the Central Valley RWQCB determined that these enrollees qualified for coverage under the Region-wide MS4 Permit and assigned them each enrollee an individual General Order Number. The County was assigned General Order No. R5-2016-0040-015.

Kings Basin Integrated Regional Water Management Plan. As previously described, the Kings Basin is a subbasin of the San Joaquin Valley San Joaquin Valley Groundwater Basin, which underlies the Fresno COG Region. The Kings Basin Integrated Regional Water Management Plan (IRWMP) was developed by the Kings Basin Water Authority and adopted by Member Agencies, including the County and several cities within the Fresno COG Region, on October 17, 2018. The purpose of the IRWMP is to establish a plan to manage water resources in the Kings Basin and achieve regional goals of reducing groundwater overdraft, increasing water supply reliability, improving water quality and drinking water reliability, enhancing flood protection; and enhancing ecosystems and the services they provide.

Westside-San Joaquin Integrated Regional Water Management Plan. The Westside-San Joaquin IRWMP was prepared for the San Luis and Delta Mendota Water Authority (SLDMWA), which was established as a Joint Powers Authority in January 1992 and consists of 28 member agencies, including several local water agencies within the Fresno COG Region (e.g., Tranquillity Irrigation District). Twenty-six Member Agencies contract with the United States Bureau of Reclamation (USBR) for the delivery of water from the CVP, for a total of approximately 3.3 million acre-feet of water per year. The IRWMP is used to provide guidance for future water management and planning decisions.

Southern Sierra Integrated Regional Water Management Plan. The Southern Sierra Integrated Regional Water Management region contains the foothill and Sierra Nevada portions of Madera, Fresno, and Tulare counties; lands representing several Native American Tribes; and jurisdictional areas for several federal land agencies. The Southern Sierra IRWMP was prepared for the Southern Sierra Regional Water Management Group (RWMG) in November 2014 and revised in November 2018. The Southern Sierra RWMG consists of 18 members and 43 interested stakeholders who participate but have no voting rights. The Southern Sierra IRWMP was developed to improve coordination and collaboration on regional water management in the Southern Sierra Region.

County of Fresno Code of Ordinances. Title 14, Water and Sewage, of the Code of Ordinances contains the County's water regulations, including requirements related to water conservation, groundwater management, water and sewer connections, and wastewater and stormwater discharges.

Water Supplier Urban Water Management Plans. As previously described, the UWMP Act applies to municipal water suppliers that provide water service directly to more than 3,000 connections. Therefore, service districts within the Fresno COG Region providing water service to more than 3,000 connections are required to develop a UWMP for submittal to DWR within 30 days and reviewed 60 days prior to public hearing for plan adoption and implementation. The preparation of the plan includes a guidebook, workshops, and programming for comprehensive strategies to conserve water. These suppliers will also be required to update their UWMPs every 5 years to demonstrate an appropriate level of reliability in supplying anticipated short-term and long-term water demands during normal, dry, and multiple dry years.

4.10.4.4 Local Regulations

Local General Plans. The Fresno COG Region contains Fresno County and 15 incorporated cities, each with an individual general plan prepared pursuant to California Government Code Section 65300. Each general plan contains goals and policies related to hydrology and water quality within the particular jurisdiction. Although general plan element titles may vary, this information is typically found within the general plan conservation element, or equivalent.

Local Municipal Codes. Fresno County and cities in the Fresno COG Region may have established water regulations, including requirements related to water conservation, groundwater management, water and sewer connections, and wastewater and stormwater discharges.

Local MS4 Permits. As previously described, the Central Valley RWQCB has adopted the Region-wide MS4 Permit, under which the City of Clovis and the City of Fresno qualify for coverage. The City of Clovis was assigned General Order No. R5-2016-0040-013, while the City of Fresno was assigned General Order No. R5-2016-0040-014.

4.10.5 Thresholds of Significance

The following thresholds of significance are based on Appendix G of the *State CEQA Guidelines*. Based on these thresholds, implementation of the proposed project would have a significant adverse impact with respect to hydrology and water quality if it would:

Threshold 4.10.1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality;

Threshold 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;

Threshold 4.10.3: 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:

i. Result in substantial erosion or siltation on- or off-site;

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

iii. Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff; or

iv. Impede or redirect flood flows;

Threshold 4.10.4: In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; or

Threshold 4.10.5: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

4.10.6 Project Impacts

The following discussion describes the potential impacts related to hydrology and water quality that could result from implementation of the proposed project.

Threshold 4.10.1: Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Significant and Unavoidable Impact.

Construction. Pollutants of concern during construction generally include sediment, trash, petroleum products, concrete waste (dry and wet), sanitary waste, and chemicals. Each of these pollutants, on its own or in combination with other pollutants, can have a detrimental effect on water quality. During construction activities associated with future transportation improvement projects and land use developments, excavated soil would be exposed, and there would be a temporary increased potential for soil erosion and sedimentation compared to existing conditions. In addition, chemicals, liquid products, petroleum products (e.g., paints, solvents, and fuels), and concrete-related waste may be spilled or leaked during construction. Sediment from increased soil erosion and chemicals from spills and leaks have the potential to be transported via stormwater runoff into receiving waters, depending on the location of the individual project.

Future transportation improvement projects and land use developments facilitated by the proposed project that disturb greater than 1 acre of soil would be subject to the requirements of the SWRCB's *NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities,* Order No. 2022-0057-DWQ, NPDES No. CAS000002

(Construction General Permit).[15] As required by the Construction General Permit, each construction contractor would be required to prepare a SWPPP and implement construction BMPs detailed in the SWPPP during construction activities. Construction BMPs would include, but not be limited to, erosion and sediment control (designed to minimize erosion and retain sediment on site), and good housekeeping practices to prevent spills, leaks, and discharge of construction debris and waste into receiving waters. BMPs would be submitted for review and approval by the lead agency for each proposed project.

In addition, pursuant to **Project-Specific Mitigation Measure (PMM) HYD-1**, implementing agencies would require the submittal of an Erosion and Sedimentation Control Plan for review and approval by the lead agency and other government agencies, as appropriate. The Erosion and Sedimentation Control Plan would be required to include BMPs for dust, erosion, and water quality, including those listed in **PMM HYD-1**, which would further address construction-period water quality concerns.

Groundwater depths vary throughout the Fresno COG Region. In addition, seasonal fluctuations of groundwater elevations are expected over time. In general, groundwater levels fluctuate with the seasons, and local zones of perched groundwater can be present within the near-surface deposits due to local seepage or during rainy seasons. Excavation depths are anticipated to vary by the type and scale of each future transportation improvement project or land use development facilitated by the proposed project. For example, roadway resurfacing would require minimal excavation, while the preparation of building foundations and utility trenching could reach dozens of feet below ground surface (bgs). In the event that excavation during construction of an individual project is expected to extend to a depth that may encounter groundwater, groundwater dewatering may be required. Groundwater dewatering activities could affect surface water quality through the discharge of polluted groundwater, if present, to surface water bodies, such as the receiving waters for the site where the project is proposed. If future projects include construction dewatering and it is necessary to discharge the groundwater to waters of the United States, these projects may require coverage under the *NPDES General Order for Limited Threat Discharges to Surface Water, Order No. R5-2016-0076-01, NPDES No. CAG995002* (Limited Threat General Order).[16] When applicable, project proponents would be required to submit a complete Notice of Intent to the Central Valley RWQCB to obtain coverage under the Limited Threat General Order. In compliance with the Limited Threat General Order, groundwater would be tested and treated (if necessary) prior to discharge to surface water.

[15] California State Water Resources Control Board. 2022. *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities,* Order No. 2022-0057-DWQ, NPDES No. CAS000002. Website: https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2022/wqo_2022-0057-dwq.pdf (accessed February 19, 2026).

[16] California Regional Water Quality Control Board Central Valley Region. 2022. *National Pollutant Discharge Elimination System (NPDES) CAG995002 Order R5-2022-0006-01 Waste Discharge Requirements Limited Threat Discharges to Surface Water.* February 11. Website: https://www.waterboards.ca.gov/rwqcb5/board_decisions/adopted_orders/general_orders/r5-2022-0006-01.pdf (accessed February 19, 2026).

Adherence to the Construction General Permit, Limited Threat General Order, and city and County codes, as applicable, as well as preparation of an Erosion and Sedimentation Control Plan (**PMM HYD-1**), would reduce erosion or siltation during construction of each future transportation improvement project and land use development project.

Operation. During operation, anticipated pollutants of concern associated with the proposed project include bacterial indicators, metals, nutrients, pesticides, toxic organic compounds, sediments, trash and debris, and oils and grease. Potential sources of these pollutants associated with the proposed project include the following:

- **Bacterial Indicators:** Food wastes, sediment, pavement runoff, and landscaping areas
- **Metals and Toxic Organic Compounds:** Automobiles and surface parking areas
- **Nutrients:** Fertilizers, sediment, and trash/debris
- **Pesticides:** Landscaping activities
- **Sediment:** Disturbed or unstabilized landscaping areas and disturbed earth surfaces
- **Trash and Debris:** Landscaping activities, food wrappers, and food wastes
- **Oil and Grease:** Internal streets and parked vehicles

As described in Table 4.10.A, several water bodies in the Fresno COG Region are listed on the most recent EPA-approved 303(d) list (2024) as impaired for a variety of pollutants, including metals, toxicity, and pH. As stated in the 303(d) list, some TMDL implementation plans have already been developed, while others are anticipated to be complete as late as 2035. Once established, the TMDL is allocated among current and future dischargers into the water body. Direct discharges of pollutants into waters of the United States are not allowed except in accordance with the NPDES program established in Section 402 of the CWA. Project-specific water quality analyses are conducted for future transportation improvement projects and land use developments facilitated by the proposed project would include an analysis of each site's receiving waters. Should a project site's receiving waters be listed on the most recent EPA-approved 303(d) list as impaired at the time the project is proposed, the project proponent would be required to adhere to TMDLs in place at the time. With adherence to applicable TMDLs as required by federal regulations, receiving waters for each project site would not exceed applicable water quality standards during operation of each project.

As previously discussed, the County is a Co-Permittee of the Central Valley Region-wide MS4 Permit. Specifically, the County was assigned General Order No. R5-2016-0040-015. The Region-wide MS4 Permit establishes minimum "management practices, control techniques and system, design and engineering methods, and other such provisions where applicable"[17] to all

[17] California Regional Water Quality Control Board Central Valley Region. 2018. *National Pollutant Discharge Elimination System (NPDES) Order R5-2016-0040, NPDES No. CAS008532 Permit and Waste Discharge Requirements General Permit for Discharges from Municipal Separate Storm Sewer Systems.* June. Website: https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2016-0040_ms4.pdf (accessed February 23, 2026).

development projects. In addition, projects identified as Priority Development Projects[18] are required to implement source and treatment control BMPs that will minimize the generation of pollutants during project operation. Source control BMPs are preventative measures that are implemented to prevent the introduction of pollutants into stormwater. Treatment control BMPs are structural BMPs designed to treat and reduce pollutants in stormwater runoff prior to releasing it to receiving waters.

Under **PMM HYD-2**, all future transportation improvement projects and land use developments facilitated by the proposed project, regardless of priority status, would be required to implement, where applicable and feasible, low-impact development (LID) BMPs,[19] infiltration BMPs, and hydromodification to mimic the natural hydrology of the site and retain and/or treat pollutants in stormwater runoff prior to discharging to and from the MS4. Under transportation improvement projects facilitated by the proposed project, drainage of roadway runoff will be required to comply with California Department of Transportation (Caltrans) stormwater discharge requirements and, where feasible, will be designed to convey stormwater through vegetated median strips that provide detention capacity and allow for infiltration before reaching culverts.

Under **PMM HYD-2**, implementing agencies would require that pre-project flow velocities, rates, and volumes are not exceeded and that projects do not cause or contribute to conditions that degrade the physical integrity or ecological function of any downstream receiving waters. This could be accomplished through providing culverts, vegetated earthen drainage channels, retention and/or detention basins, expansion and restoration of wetlands and riparian buffer areas, and incorporation of natural vegetation.

As described in Chapter 3.0, Project Description, the design of each transportation improvement project and land use development project facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur under implementation of the proposed project. With adherence to the Construction General Permit, the Limited Threat General Order, and the Region-wide MS4 Permit; as well as implementation of BMPs to address pollutants of concern in stormwater runoff pursuant to **PMMs HYD-1** and **HYD-2**, project impacts associated with the violation of water quality standards or waste discharge requirements or the degradation of surface or groundwater water quality during project construction and operation would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately

[18] As defined in the Region-wide MS4 Permit, a Priority Development Project is a new development or redevelopment project that meets specific size and land use characteristics outlined in Attachment C of the Region-Wide MS4 Permit.

[19] LID BMPs mimic a project site's natural hydrology by using design measures that capture, filter, store, evaporate, detain, and infiltrate runoff rather than allowing runoff to flow directly to piped or impervious storm drains.

belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts associated with applicable water quality standards or waste discharge requirements are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.10.2: Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Significant and Unavoidable Impact. As previously discussed, the Fresno COG Region lies within the boundaries of the San Joaquin Valley Groundwater Basin, including four subbasins of the San Joaquin Valley Groundwater Basin: the Kings, Delta-Mendota, Westside, and Pleasant Valley subbasins. Groundwater depths vary throughout the Fresno COG Region and also vary by season.

Construction. As described above under Threshold 4.10.1, excavation depths during construction are anticipated to vary by the type and scale of each future transportation improvement project or land use development facilitated by the proposed project. In the event that excavation during construction of an individual project is expected to extend to a depth that may encounter groundwater, groundwater dewatering may be required, which could potentially decrease groundwater supplies where already limited (given the designations of the Kings, Delta-Mendota, and Westside subbasins as high-priority overdraft areas). However, compared to the total volume of groundwater in storage in the San Joaquin Valley Groundwater Basin, the amount of water typically extracted during dewatering would not be substantial and would only occur temporarily during construction. Upon completion of construction, water would be treated (if necessary) and returned to groundwater storage, resulting in no permanent groundwater loss during construction.

Operation. Future transportation improvement projects and land use development projects facilitated by the proposed project are anticipated to result in the conversion of pervious surfaces to impervious surfaces through paving or structural development, which would decrease the potential for on-site infiltration. As previously stated, infiltration is one of the ways in which recharge of the San Joaquin Valley Groundwater Basin occurs.

As with groundwater levels, infiltration characteristics of land vary throughout the Fresno COG Region. Factors affecting a site's infiltration characteristics include climate, soil absorption potential, soil saturation, land cover, and topography.[20] If a site has favorable infiltration characteristics and an available path to groundwater, it is considered a significant source of groundwater recharge via infiltration. If a site has poor infiltration characteristics or lacks a path to the aquifer, it is not considered a significant source of groundwater recharge via infiltration, and an increase in impervious surface area would not be anticipated to significantly decrease groundwater supplies or interfere with groundwater recharge in a manner that may impede sustainable groundwater management.

[20] United States Geologic Survey (USGS). 2019. *Infiltration and the Water Cycle.* June 8. Website: https://www.usgs.gov/water-science-school/science/infiltration-and-water-cycle#overview (accessed February 23, 2026).

Future transportation improvement projects and land use development projects will generally be evaluated in design-level geotechnical evaluations at the time they are proposed. Geotechnical evaluations typically include a discussion of a site's infiltration characteristics based on soil type, which can be utilized in subsequent project-specific CEQA documents to determine the magnitude of infiltration impacts and to identify appropriate potential mitigation for each individual transportation improvement or land use development project. Pursuant to **PMM HYD-2**, projects would be required to implement, where applicable and feasible, a variety of BMP types to reduce, treat, infiltrate, and manage stormwater runoff flows in all new developments. Facilities that may be included in project designs to maintain infiltration include vegetated median strips and vegetated earthen drainage channels. These vegetated features, in addition to any areas proposed for ornamental landscaping, would provide pervious areas where stormwater runoff can collect and continue to infiltrate. Therefore, with implementation of **PMM HYD-2**, stormwater recharge throughout the Fresno COG Region could continue to occur during operation of future transportation improvement projects and land use development projects.

As previously stated, groundwater from the San Joaquin Valley Groundwater Basin makes up a portion of the surface water supplied to Fresno COG Region residents. Future transportation improvement projects and land use development projects facilitated by the proposed project are anticipated to use water to varying degrees during operation and therefore would at least result in indirect groundwater use. Water demand associated with these projects could include both indoor (drinking and plumbing) and outdoor (landscape irrigation) uses. Under SB 610, sponsors of large-scale projects facilitated by the proposed project would be required to prepare a Water Supply Assessment (WSA) to determine if adequate water supplies would be available to support additional development during normal, dry-year, and multiple-dry-year demands so as not to contribute to the depletion of water within the San Joaquin Valley Groundwater Basin or any subbasins, as applicable. Similarly, SB 221, which applies to subdivisions of more than 500 dwelling units, would require sponsors of applicable projects to demonstrate that a sufficient water supply is available to serve the proposed development.

As discussed in Section 4.10.4, Regulatory Setting, the SGMA requires the formation of GSAs, which are responsible for monitoring and sustainably managing groundwater basins. All high- and medium-priority basins are required to prepare and implement a GSP to return the groundwater basin to sustainable use. As previously described, the Kings, Delta-Mendota, and Westside subbasins are designated as high-priority overdraft areas and are subject to the requirements of applicable GSPs. Subsequent project-specific CEQA documents will include an evaluation of whether each project would substantially decrease groundwater supplies such that it would impede sustainable groundwater management of the basin, including consistency with the current GSP(s) applicable to the project site at the time the project is proposed, and would identify appropriate potential mitigation in addition to the project-level mitigation identified in this PEIR.

As described in Chapter 3.0, Project Description, the design of each transportation improvement project and land use development facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably

foreseeable impacts that could occur under implementation of the proposed project. With adherence to the Region-wide MS4 Permit, WSA requirements (e.g., SB 610 and SB 221), and implementation of design features and BMPs to ensure adequate infiltration and groundwater recharge pursuant to **PMM HYD-2**, project impacts associated with substantially decreasing groundwater supplies or interfering substantially with groundwater recharge would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts associated with substantially decreasing groundwater supplies or interfering substantially with groundwater recharge are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.10.3(i): Would the project 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: (i) Result in substantial erosion or siltation on-or off- site?

Significant and Unavoidable Impact.

Construction. During construction of future transportation improvement projects and land use developments facilitated by the proposed project, soil would be exposed and disturbed, drainage patterns would be temporarily altered during grading and other construction activities, and there would be a temporary increase in the potential for soil erosion and siltation compared to existing conditions. Additionally, during a storm event, soil erosion and siltation could occur at an accelerated rate. As discussed under Threshold 4.10.1, implementing agencies would require that each project obtain coverage under the Construction General Permit, which requires preparation and implementation of a SWPPP for construction activities that disturb 1 acre or more of soils. As required under the Construction General Permit, project-specific SWPPPs would be required to address site-specific conditions related to potential sources of sedimentation and erosion and would list the required BMPs that are necessary to reduce or eliminate the potential of erosion or alternation of a drainage pattern during construction activities. In addition, pursuant to **PMM HYD-1**, project-specific Erosion and Sediment Control Plans would be required to incorporate all applicable BMPs for the construction industry, including BMPs for dust, erosion, and water quality.

Common types of construction BMPs include:

- Silt fencing, fiber rolls, or gravel bags;
- Street sweeping and vacuuming;
- Storm drain inlet protection;
- Stabilized construction entrance/exit;
- Vehicle and equipment maintenance, cleaning, and fueling;

- Hydroseeding;
- Materials delivery and storage;
- Stockpile management;
- Spill prevention and control;
- Solid waste management; and/or
- Concrete waste management.

The implementation of the standard construction requirements, as well as **PMM HYD-1,** would reduce erosion or siltation during construction of each future transportation improvement projects and land use developments.

Operation. As previously stated, an increase in impervious surface area increases the rate and volume of runoff during a storm, which can more effectively transport sediments to receiving waters. However, impervious surface areas included in future transportation improvement projects and land use developments would not be prone to on-site erosion or siltation because there would be no exposed soil. Areas of pervious surfaces under future projects would be landscaped with ornamental vegetation, where appropriate, that would stabilize the soil and promote infiltration, thereby minimizing on-site erosion and siltation.

In addition, stormwater runoff from the addition of impervious surfaces from development of each project would be conveyed to LID BMPs, as feasible, that have been designed to maintain existing runoff rates/volumes and meet the requirements of the Region-wide MS4 Permit. Pursuant to **PMM HYD-2**, projects would be required to implement BMPs that minimize the rate and volume of stormwater runoff, thereby minimizing on-site erosion and siltation.

As described in Chapter 3.0, Project Description, the design of each transportation improvement project and land use development facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur under implementation of the proposed project. With adherence to the Construction General Permit and the Region-wide MS4 Permit, as well as identification and implementation of erosion control measures pursuant to **PMM HYD-2**, project impacts associated with on-site or off-site erosion or siltation during project construction and operations would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts associated with on-site or off-site erosion or siltation are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.10.3(ii): Would the project 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: (ii) Substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site?

Significant and Unavoidable Impact.

Construction. As previously discussed, construction of future transportation improvement projects and land use developments facilitated by the proposed project would comply with the requirements of the Construction General Permit, including the preparation and implementation of a SWPPP, as applicable. The SWPPP would include BMPs to control the rate and amount of on-site surface runoff and direct flows to ensure that stormwater runoff from each construction site does not result in on- or off-site flooding.

Operation. As previously stated, the introduction of new impervious surfaces under future transportation improvement projects and land use development projects facilitated by the proposed project could have the potential to increase the volume and rate of stormwater runoff discharged from each project site, potentially resulting in on- or off-site flooding.

However, pursuant to **PMM HYD-2**, projects would be required to implement, where applicable and feasible, a variety of BMP types to reduce, infiltrate, and manage stormwater runoff flows in all new developments. All BMPs needed to accommodate stormwater runoff would be appropriately sized to detain stormwater runoff so that on- and off-site flooding would not occur. Facilities that may be included in project designs to maintain infiltration include vegetated median strips and vegetated earthen drainage channels. These vegetated features, in addition to any areas proposed for ornamental landscaping, would provide pervious areas where stormwater runoff can percolate rather than collect on the surface and potentially result in flooding. Under **PMM HYD-2,** implementing agencies would require each project to mitigate changes to the runoff volumes, including maintaining pre-project flow velocities, rates, and volumes. Following implementation of **PMM HYD-2,** each project site would imitate the existing hydrologic pattern in terms of pre- and post-project storm flow and velocity.

As described in Chapter 3.0, Project Description, the design of each transportation improvement project and land use development facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur under implementation of the proposed project. With adherence to the Construction General Permit, as well as identification and implementation of stormwater volume control measures pursuant to **PMMs HYD-1** and **HYD-2**, project impacts associated with on- or off-site flooding and stormwater runoff in excess of stormwater system capacity, and additional sources of polluted runoff during project construction and operations would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed

applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts associated with on-site or off-site flooding, on- or off-site flooding, runoff water in excess of stormwater system capacity, and additional sources of polluted runoff are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.10.3(ii): Would the project 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: (iii) Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

Significant and Unavoidable Impact.

Construction. As previously discussed, construction of future transportation improvement projects and land use developments facilitated by the proposed project would comply with the requirements of the Construction General Permit, including the preparation and implementation of a SWPPP as applicable. The SWPPP would include BMPs to control the rate, volume, and quality of on-site surface runoff and direct flows during construction of each project. Implementation of these requirements would help to ensure that stormwater runoff from construction sites does not 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.

In addition, pursuant to **PMM HYD-1**, implementing agencies would require that an Erosion and Sedimentation Control Plan be submitted for review and approval by the lead agency and other government agencies, as appropriate. The Erosion and Sedimentation Control Plan would be required to include BMPs for dust, erosion, and water quality, including those listed in **PMM HYD-1**, which would further address construction-period impacts related to polluted runoff.

Operation. As previously stated, the introduction of new impervious surfaces under future transportation improvement projects and land use development projects facilitated by the proposed project could have the potential to increase the volume and rate of stormwater runoff discharged from each project site, potentially resulting in runoff that would exceed the capacity of existing or planned stormwater drainage systems, or additional sources of polluted runoff. A hydrologic condition of concern (HCOC) occurs when post-development runoff conditions exceed pre-development runoff conditions, and discharge from a project site has a flow rate greater than 110 percent of the pre-development 2-year peak flow. Generally, projects are exempt from HCOC analysis if: (1) they disturb less than 1 acre; (2) the volume and time of concentration of stormwater runoff under post-development conditions are within 5 percent of pre-development

conditions for a 2-year return frequency 24-hour storm; or (3) all downstream conveyance channels discharge to an adequate sump.[21]

The potential for additional sources of polluted runoff would be addressed through **PMM HYD-2**, which requires the implementation of structural water quality control features such as drainage channels, detention basins, oil and grease traps, filter systems, and vegetated buffers where required by applicable urban stormwater runoff discharge permits. **PMM HYD-2** would also address potential impacts related to increased runoff volumes in excess of system capacities through requiring project sponsors mitigate changes to the runoff volumes, including maintaining pre-project flow velocities, rates, and volumes.

In addition, where feasible, transportation improvement projects involving the design of new roadways would be designed to convey stormwater through vegetated median strips that provide detention capacity to reduce the volume of runoff originating from the roadway and allow for infiltration, if feasible based on site characteristics, before reaching culverts. Implementing agencies would also require that upgrades to stormwater drainage facilities be included in projects in order to accommodate any increased runoff volumes. All proposed drainage facilities and BMPs needed to accommodate stormwater runoff would be appropriately sized to detain stormwater runoff so that pre-project runoff volumes are maintained. During future project-specific CEQA review, projects would be required to model and analyze stormwater runoff as compared to existing infrastructure to ensure existing infrastructure is sized sufficiently to handle project-generated stormwater runoff. This process may involve coordination with the appropriate agency responsible for the maintenance of this infrastructure, which may be the District or another community service/public utility district. Based on the analysis of project-specific stormwater runoff, the agency may require infrastructure improvements or development impact fees to ensure they can accommodate projected runoff volumes.

As described in Chapter 3.0, Project Description, the design of each transportation improvement project and land use development facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur under implementation of the proposed project. With adherence to the Construction General Permit, as well as and identification and implementation of stormwater volume control measures pursuant to **PMMs HYD-1** and **HYD-2**, project impacts associated with stormwater runoff in excess of stormwater system capacity, and additional sources of polluted runoff during project construction and operations would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts associated with runoff water in excess of stormwater system

[21] A "sump" generally refers to a low-lying area designed to collect and store water, usually runoff, groundwater, or drainage from a system.

capacity, and additional sources of polluted runoff are considered significant and unavoidable for the purposes of this analysis.

Threshold 4.10.3(iv): Would the project 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: (iv) impede or redirect flood flows;

Or:

Threshold 4.10.4: In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

Significant and Unavoidable Impact.

Flooding. As described in Section 4.10.4, certain regulations apply specifically to watercourses such as streams, rivers, and creeks. As applicable, future transportation improvement projects and land use developments located in the vicinity of a watercourse or multiple watercourses would be required to obtain all permits and authorizations (e.g., a Section 1602 Lake and Streambed Alteration Agreement) from agencies responsible for regulation of the affected watercourse(s), which may include the USACE, the Central Valley RWQCB, CDFW, the California Coastal Commission, and local jurisdictions, and would be required to comply with all conditions issued by applicable agencies.

As described in Section 4.10.3, based on FEMA flood insurance risk area mapping, a majority of the Fresno COG Region is not located within the 100- or 500-year floodplain, which generally represent areas of higher risk of flooding. However, the potential exists for future transportation improvement projects and land use developments to be developed within these areas, which could create a potential to impede or redirect flood flows, or risk release of pollutants due to project inundation.

As previously stated, future transportation improvement projects and land use development projects will generally be evaluated in subsequent project-specific CEQA documents to determine the magnitude of flooding risks and to identify appropriate potential mitigation for each individual transportation improvement or land use development project.

It should be noted that flood prevention infrastructure, such as channels and levees, are generally already in place to manage flood flows in many waterways, particularly on the valley floor. Nevertheless, as previously described, projects in the vicinity of a watercourse are required to obtain all necessary regulatory permits and authorizations from applicable agencies. Further, projects would be required to comply with local, State, and federal floodplain regulations.

Dam Inundation. As described in Section 4.10.3, the National Inventory of Dams identifies 29 dams currently under the jurisdiction of the County, including dams designated as extremely high hazard, high hazard, and significant hazard. Several other dams located in neighboring counties could also pose a threat to the Fresno COG Region based on the topography and

hydrological flow characteristics of the land. Areas susceptible to flooding from dam failure would include areas east of the SR-168, areas to the west of SR-99, and any neighborhood or business touching SR-41.[22] In addition, the cities of Fresno, Clovis, and Sanger and eastern unincorporated County areas are at greater risk, given that they are downstream and below the dams on the valley floor.

While the potential exists for future transportation improvement projects and land use developments to create a potential to impede or redirect flood flows, or risk release of pollutants due to project inundation from dam failure, these dams are under strict safety regulations and maintenance enforced by the Division of Safety of Dams, USACE, and DWR. Further, as previously stated, CEQA reviews for individual projects would assist in determining the magnitude of flooding risks and identifying appropriate potential mitigation for each individual transportation improvement or new land use development project.

Tsunami. The Fresno COG Region is approximately 100 to 150 miles east of the Pacific Ocean, and is separated from the Pacific Ocean by various topographical features. Based on the distance from the Pacific Ocean and the presence of intervening topographical features, the Fresno COG Region would not be susceptible to inundation from a tsunami, and there is no risk of a release of pollutants from sites during a tsunami.

Seiche. Seiches are oscillations in enclosed bodies of water (e.g., a bay, lake, or harbor) that are caused by a number of factors, most often wind or seismic activity. Seiches go up and down or oscillate and do not progress forward like standard ocean waves. Enclosed bodies of water exist throughout the Fresno COG Region, including the Millerton Lake Reservoir and the Pine Flat Lake, as previously described.

As previously described, projects in the vicinity of a watercourse are required to obtain all necessary regulatory permits and authorizations from applicable agencies. Further, projects would be required to comply with local, State, and federal floodplain regulations. As previously stated, CEQA reviews for individual projects would assist in determining the magnitude of seiche risks and identifying appropriate potential mitigation for each individual transportation improvement or land use development project.

Summary. As described in Chapter 3.0, Project Description, the design of each transportation improvement project and land use development facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. With adherence to applicable floodplain and watercourse regulations, project impacts associated with impeding or redirecting flood flows and risking release of pollutants due to project inundation would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would remain below levels of significance. The

[22] County of Fresno. 2024. *Fresno County, California Hazard Mitigation Plan.* May. Page 27. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/resources/hazard-mitigation-plan/draft-2024-fresno-county-hazard-mitigation-plan.pdf (accessed February 16, 2026).

responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts associated with impeding or redirecting flood flows and risking release of pollutants due to project inundation are considered significant and unavoidable for the purposes of this analysis.

Threshold 4.10.5: Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Significant and Unavoidable Impact. As previously described, the Fresno COG Region is within the jurisdiction of the Central Valley RWQCB. As described in Section 4.10.4, various water quality control plans have been established to regulate surface and groundwater within the Fresno COG Region and establish the water quality objectives and standards necessary to protect those beneficial uses. Specifically, the Water Quality Control Plan for the Tulare Lake Basin or the Water Quality Control Plan for the Sacramento River Basin and the San Joaquin River Basin would be applicable to future transportation improvement projects and land use developments facilitated by the proposed project, depending on their location within the Fresno COG Region.

Future transportation improvement projects and land use developments facilitated by the proposed project would comply with the Construction General Permit and the existing Region-wide MS4 Permit, which require implementation of construction and operational BMPs to reduce pollutants of concern in stormwater runoff. Adherence to regulatory requirements established by the Central Valley RWQCB and city and County codes, as applicable, as discussed throughout this section, would ensure that projects would not result in water quality impacts that would conflict with the applicable water quality control plan.

SGMA, enacted in September 2014, requires governments and water agencies located within high- and medium-priority groundwater basins to halt overdraft of the basins. SGMA requires the formation of local GSAs, which are required to adopt GSPs to manage the sustainability of the groundwater basins. The Fresno COG Region is within the boundaries of the San Joaquin Valley Groundwater Basin, including the Kings, Delta-Mendota, Westside, and Pleasant Valley subbasins. The DWR has designated the Kings, Delta-Mendota, and Westside subbasins as high-priority subbasins. Each subbasin has its own GSA(s), which are responsible for preparing GSPs to manage the sustainability of the groundwater basins. The overarching goal of each GSP is to manage groundwater resources in a way that facilitates long-term, sustainable use of the groundwater of each subbasin. The GSPs also identify projects and management actions that can be implemented by the members of the GSA to further the goals of the GSP. Subsequent project-specific CEQA documents will include an evaluation of whether each project would substantially decrease groundwater supplies such that it would impede sustainable groundwater management of the basin, including consistency with the current GSP(s) applicable to the project site at the time the project is proposed, and would identify appropriate potential mitigation in addition to the project-level mitigation identified in this PEIR.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore,

the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. With adherence to the regulations and mitigation measures identified throughout this section, project impacts associated with water quality control plan and sustainable groundwater management plan consistency would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts associated with water quality control plan and sustainable groundwater management plan consistency are considered **significant and unavoidable** for the purposes of this analysis.

4.10.7 Level of Significance Prior to Mitigation

Prior to mitigation, the proposed project would have potentially significant impacts related to hydrology and water quality.

4.10.8 Mitigation Measures

4.10.8.1 Fresno COG Measures

There are no applicable mitigation measures to be undertaken by the Fresno COG pertaining to hydrology and water quality. However, as appropriate and feasible, the Fresno COG will encourage the implementation of the project-specific mitigation strategies listed below.

4.10.8.2 Project-Specific Measures

The following mitigation measures are required for each future transportation improvement and land use development project to reduce potentially significant impacts related to hydrology and water quality to the extent feasible:

PMM HYD-1 Implementing agencies shall consider mitigation measures to reduce project impacts that may violate water quality standards or waste discharge requirements, or otherwise substantially degrade surface water or groundwater quality, as applicable and feasible:

- Prior to construction, the implementing agency shall require the project sponsor to retain a qualified civil engineer to prepare an erosion and sedimentation control plan for review and approval by the appropriate regulatory agency. Applicable BMPs shall include, but are not limited to, the following:
    - On sloped properties, the downhill end of the construction area shall be protected with perimeter control measures (e.g., silt fence, sandbags, filter fabric, silt curtains) and measures (e.g. hay bales) oriented parallel to the contours of the slope at a constant elevation to prevent erosion and limit sediment from entering streets, gutters, and storm drains.

- In accordance with an approved erosion control plan, the Construction Contractor shall use mechanical and vegetative measures to reduce erosion and sedimentation, including appropriate seasonal maintenance. One hundred percent degradable erosion control fabric shall be installed on all graded slopes to protect and stabilize the slopes during construction and before permanent vegetation is established. All graded areas shall be temporarily protected from erosion by seeding with fast-growing annual species. All bare slopes shall be covered with staked tarps when rain is occurring or is expected.

- The removal of natural vegetation or ground cover from the site shall be minimized during project design and construction to reduce the potential for erosion. Disturbed areas shall be stabilized with native vegetation as soon as possible.

- During construction, filter materials shall be installed at storm drain inlets prior to the start of the wet weather season, site dewatering activities, street washing activities, and saw cutting asphalt or concrete. Filter materials shall be maintained and/or replaced, as necessary, to ensure effectiveness and prevent street flooding.

- During construction, concrete/granite supply trucks or concrete/plaster finishing operations shall not be allowed to discharge wash water into watercourses, street gutters, or storm drains.

- Tool and equipment cleaning locations shall be selected so that wash water does not discharge into the street, gutters, or storm drains.

- The Construction Contractor shall provide a contained and covered area for storage of bags of cement, paints, flammables, oils, fertilizers, pesticides, or any other materials that could be discharged to a storm drain system by the wind or in the event of a material spill.

- Construction debris shall be gathered on a regular basis and placed in a dumpster or other container that is emptied or removed on regular basis (interval approved by the implementing agency). When appropriate, tarps shall be used to collect fallen debris or splatters that could contribute to stormwater pollution.

- During and following construction, dirt, gravel, refuse, and green waste shall be removed from sidewalks, street pavement, and storm drain systems within and near the project.

- As appropriate, the Construction Contractor shall sweep street pavement adjacent to the project on a daily basis. Caked-on mud or dirt shall be scraped from these areas prior to sweeping. At the end of each workday, the

entire site shall be cleaned and secured against potential erosion, dumping, or discharge to the street, gutter, and/or storm drains.

- All erosion and sedimentation control measures installed during construction shall be in accordance with the control standards listed in the latest edition of the Erosion and Sediment Control Field Manual published by the Central Valley RWQCB.

- During construction, all erosion and sedimentation control measures shall be monitored regularly by the Construction Contractor. If measures are insufficient to control sedimentation and erosion, the Construction Contractor, in coordination with the project sponsor, shall develop and implement additional and more effective measures immediately.

PMM HYD-2 Implementing agencies shall consider mitigation measures to reduce project impacts that may violate water quality standards or waste discharge requirements, or otherwise substantially degrade surface water or groundwater quality, as applicable and feasible:

- During project design, the implementing agency shall incorporate low impact development (LID) BMPs, infiltration BMPs, and hydromodification measures to mimic the natural hydrology of the site. These would maintain pre-project flow velocities/rates/volumes and retain/treat pollutants in stormwater runoff prior to discharge. Design elements may include, but are not limited to, the following:

  - New drainage channels/culverts;
  - Detention/retention basins;
  - Oil and grease traps;
  - Filter systems;
  - Vegetated buffers/median strips;
  - Incorporation of natural spaces;
  - Wetland/riparian area restoration.

4.10.9 Level of Significance After Mitigation

While implementation of **PMMs HYD-1** through **HYD-2** would assist the Fresno COG and lead agencies of future transportation improvement and land use development projects in reducing impacts related to hydrology and water quality to the extent feasible, the analysis presented in this section is general in nature, and given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future transportation improvement and land use development projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. As appropriate and feasible, the Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce

the significant impacts identified. Nevertheless, impacts related to hydrology and water quality are considered **significant and unavoidable** for the purposes of this analysis.

4.10.10 Cumulative Impacts

As defined in Section 15130 of the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for hydrology and water quality.

The cumulative impact area for hydrology and water quality related to the proposed project consists of the watersheds within the Fresno COG Region (Upper King Watershed, Upper San Joaquin Watershed, Middle San Joaquin-Lower Chowchilla Watershed, Upper Dry Watershed, Tulare Lakebed Watershed, and Upper Kaweah Watershed) and the area encompassing the San Joaquin Valley Groundwater Basin.

The region's watercourses have generally been either channelized or left in natural conditions, and drainage systems have been put into place within urbanized portions of the region. Other projects in the cumulative impact area could potentially increase the volume of stormwater runoff and contribute to pollutant loading in stormwater runoff reaching the stormwater drainage system and nearby watercourses, thereby resulting in cumulative impacts to hydrology and surface water quality. In addition, the construction and operation of these projects could result in localized degradation of groundwater quality that could eventually impair the continued use of the San Joaquin Valley Groundwater Basin if pollutant discharge quantities are large enough. Cumulative impacts to groundwater supply could also occur due to increases in impervious surfaces that impair groundwater recharge and increases in consumptive uses of groundwater.

Past, present, and future projects in the cumulative impact area would be required to include BMPs to reduce construction- and operation-related impacts to water quality and hydrology in compliance with applicable NPDES permits and local plans and ordinances. Specifically, all projects that disturb 1 acre or more of soil must comply with the requirements of the Construction General Permit. The preparation and approval of a SWPPP and an Erosion and Sediment Control Plan would be required for all projects to determine the appropriate BMPs to treat potential water quality impacts and control the rate and volume of stormwater runoff during construction.

All projects must also consider and address impacts to impaired receiving waters and comply with applicable TMDLs for receiving waters during operation. The TMDL program is a cumulative approach to identifying all constituents that adversely affect the beneficial uses of water bodies and then identifying appropriate reductions in pollutant loads or concentrations from all sources so that the receiving waters can maintain/attain the beneficial uses in the Basin Plan. Thus, by complying with TMDLs, a project's cumulative impacts to overall surface water quality in the cumulative impact area are taken into account. Moreover, lead agencies review development projects on a case-by-case basis to ensure that sufficient local and regional drainage capacity is available.

Past, present, and future projects within the boundaries of the San Joaquin Valley Groundwater Basin would also be subject to the applicable GSP(s) and the Limited Threat General Order, if groundwater dewatering and discharge to waters of the United States are required. Additionally,

large-scale projects would be required to prepare a WSA pursuant to SB 610 to determine if adequate water supplies would be available to support additional development during normal, dry-year, and multiple-dry-year demands so as not to contribute to the depletion of water within the groundwater basins. Furthermore, the Region-wide MS4 Permit Program requires the incorporation of LID techniques that mimic a project site's natural hydrology by using design measures that capture, filter, store, evaporate, detain, and infiltrate runoff rather than allowing runoff to flow directly to piped or impervious storm drains, thereby offsetting any negative impacts to groundwater quality and groundwater recharge that could result from increasing impervious surfaces.

Regional programs and BMPs, such as TMDL programs and the Region-wide MS4 Permit, have been designed to address the cumulative effects of proposed development. Future transportation improvement projects and land use developments facilitated by the proposed project would be required to comply with the requirements of the Construction General Permit, the Limited Threat General Order, and the Region-wide MS4 Permit and to implement construction and operational BMPs to reduce pollutants in stormwater runoff and address the volume of post-project stormwater runoff. Compliance with these regional programs and permits constitutes compliance with programs intended to address cumulative water quality impacts. As stated above, future projects would be required to develop a Project-specific SWPPP and an Erosion and Sediment Control Plan, and would be evaluated individually to determine appropriate BMPs and treatment measures to reduce impacts to surface water quality and hydrology.

As stated above under Section 4.10.9, impacts of the proposed project related to hydrology and water quality are considered significant and unavoidable given the programmatic nature of the proposed project, the scale of the Fresno COG Region, and the inability of the Fresno COG to enforce project-specific mitigation or make land use approvals. Because the proposed project would result in significant adverse environmental impacts with respect to hydrology and water quality, these impacts would represent an incremental contribution to the environmental impacts of other cumulative or related projects, including other regional-scale plans, ultimately leading to a cumulatively considerable impact to hydrology and water quality in the cumulative impact area.

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4.11 LAND USE AND PLANNING

This section of the Draft Program Environmental Impact Report (PEIR) discusses existing land uses within the Fresno COG Council of Governments (COG) Region and in the surrounding area and evaluates the potential for the proposed 2026 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (proposed project) to 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. Information presented in this section is based on information provided in the County of Fresno (County) General Plan and General Plan PEIR,[1] the County Code of Ordinances (including the Zoning Ordinance), and other applicable local and regional planning documents.

4.11.1 Scoping Process

Potential impacts related to land use and planning were not identified during the public scoping meeting held for the proposed project on May 28, 2025. The Fresno COG received no comment letters in response to the Notice of Preparation (NOP) issued for the proposed project between May 13 and June 12, 2025, concerning the proposed project's potential impacts related to land use and planning.

4.11.2 Methodology

The impact analysis presented in this section evaluates potential physical impacts associated with implementation of the proposed project on land use compatibility and considers whether the proposed project would result in potential inconsistencies with relevant plans or policies contained in applicable planning documents adopted by the County and the various cities in the Fresno COG Region. Neither the California Environmental Quality Act (CEQA) nor the *State CEQA Guidelines* set forth standards for determining whether or not a project is consistent with an applicable plan; rather, the final determination that a project is consistent or inconsistent with an applicable plan is made by the lead agency when it acts on the project. The analysis in this PEIR discusses the findings of policy review and is meant to provide a guide for decision makers during policy interpretation.

A project's inconsistency with a plan or policy is only considered significant if such inconsistency would result in a significant physical environmental impact (per *State CEQA Guidelines* Section 15382). This PEIR section determines whether or not the proposed project would conflict with any adopted land use policies or programs and whether mitigation is feasible. Under this approach, a policy or program conflict is not in and of itself considered a significant environmental impact. An inconsistency between the proposed project and an applicable plan is a legal determination that may or may not indicate the likelihood of an environmental impact. In some cases, an inconsistency may be evidence that an underlying physical impact is significant and adverse.

[1] County of Fresno. 2023. *General Plan Review and Zoning Ordinance Update Program Environmental Impact Report Public Review Draft.* April. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/environmental-impact-reports/1_draft-program-environmen.pdf (accessed November 12, 2025).

4.11.3 Existing Environmental Setting

4.11.3.1 Geographical Setting

As discussed in Section 3.0, Project Description, the Fresno COG Region encompasses approximately 5,963 square miles and is located in the Central San Joaquin Valley, approximately 120 miles south of Sacramento. The Fresno COG Region contains Fresno County and 15 incorporated cities, as listed below:[2]

- Clovis
- Coalinga
- Firebaugh
- Fowler
- Fresno
- Huron
- Kerman
- Kingsburg
- Mendota
- Orange Cove
- Parlier
- Reedley
- San Joaquin
- Sanger
- Selma

In addition to the official boundaries of each city, the Fresno County Local Agency Formation Commission (LAFCO)[3] has adopted Spheres of Influence (SOIs) for each city. An SOI is a boundary line surrounding cities and special service districts that defines the area into which the city or district may expand and extend public services.[4]

4.11.3.2 Existing Land Uses

In addition to planned land uses, the County's General Plan Background Report[5] includes a discussion of existing land uses based on the Fresno County Assessor's Database and geographic information system (GIS) tools. According to this discussion, the majority of the Fresno COG Region's land (approximately 97 percent) is unincorporated, while the remaining 3 percent is associated with the County's 15 incorporated cities. Major land uses within the Fresno COG Region include agriculture, residential, commercial, industrial, institutional, and open space. Figure 4.11-1 illustrates the differences in land use type throughout the Fresno COG Region.

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2 State of California Department of Finance (DOF). 2025. Population and Housing Estimates for Cities, Counties, and the State, January 1, 2024, and 2025. May 1. Website: https://dof.ca.gov/media/docs/forecasting/Demographics/estimates-e1/E-1_2025_InternetVersion.xlsx (accessed November 19, 2025).

3 As described in Section 4.11.4, an LAFCO holds the power to review and decide on proposals for the expansion of city or special district boundaries, pursuant to the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (California Government Code §56000 et. seq.).

4 County of Fresno. 2024. *General Plan Policy Document.* February. Page 1-16. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/planning-and-land-use/general-plan/fcgpr_general-plan_county_final_2024_02.pdf (accessed November 19, 2025).

5 County of Fresno. 2024. *General Plan Background Report.* February. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/planning-and-land-use/general-plan/background-report-2024.pdf (accessed December 5, 2025).

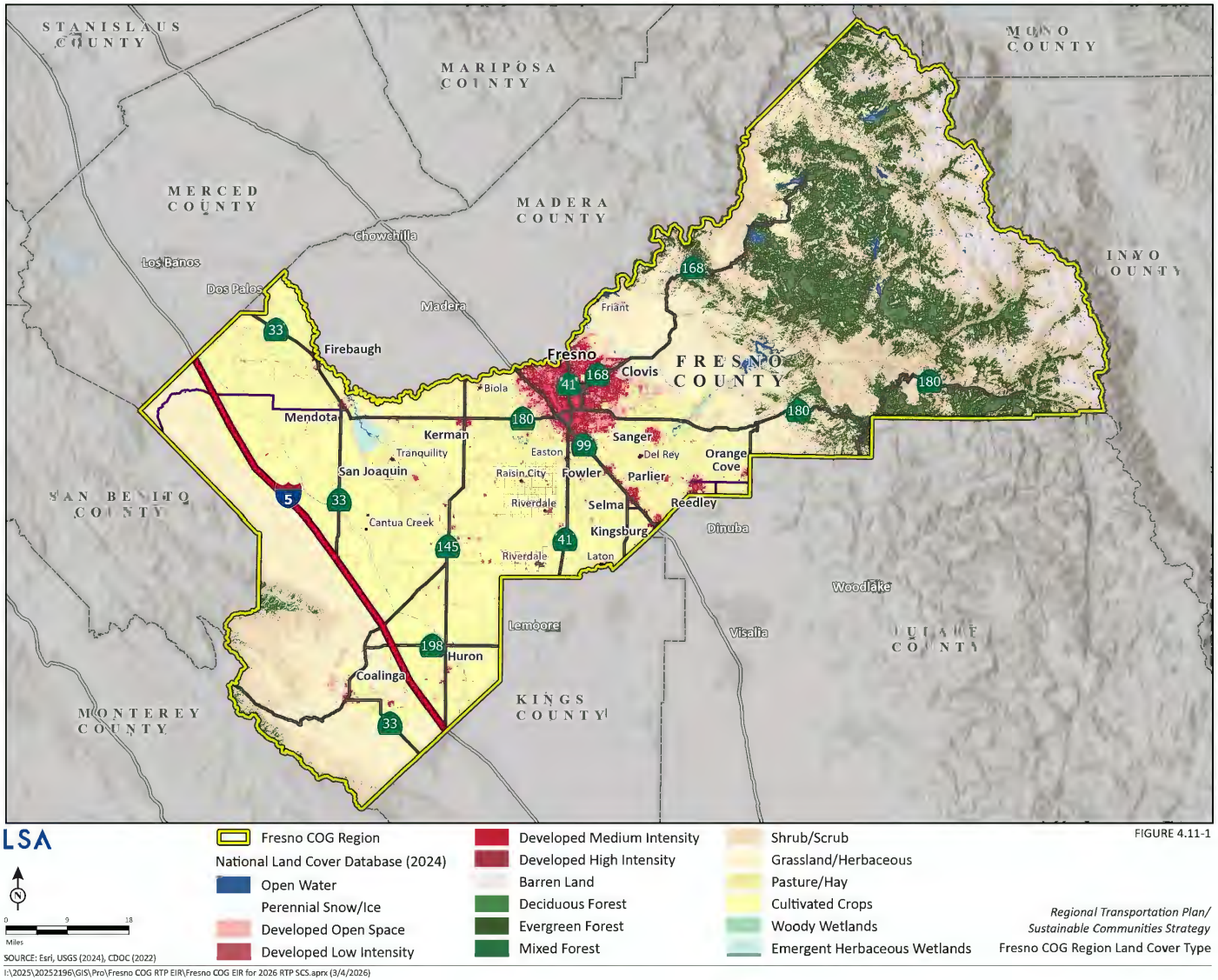


FIGURE 4.11-1

Regional Transportation Plan/ Sustainable Communities Strategy
Fresno COG Region Land Cover Type

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Agricultural. The most common land use within the Fresno COG Region is agricultural land, comprising approximately half of the Fresno COG Region's total land area.[6] Agricultural land uses within the Fresno COG Region include irrigated row crop production, dry land farming, orchards and vineyards, and grazing of livestock.

Residential. Residential land uses within the Fresno COG Region consist of a variety of housing types, including rural residential, detached single-family, multi-family (duplexes, apartments, etc.), planned unit developments, condominiums, and mobile homes.

Commercial. Commercial land uses within the Fresno COG Region include offices, retail establishments, and outdoor uses such as car sales, lumber yards, and plant nurseries. Commercial businesses are generally located in urban areas and along major transportation corridors in the Fresno COG Region. Downtown Fresno, downtown Clovis, and the Shaw Avenue corridor in those cities serve as key business districts.

Industrial. Industrial land uses within the Fresno COG Region consist of both light and heavy industrial uses. Light industrial uses include warehouses and mini-storage businesses, while heavy industrial uses involve the manufacturing of large items and/or using large manufacturing equipment. Industrial uses are generally located along the State Route (SR-)99 corridor, particularly south of Fresno, as well as along the Interstate (I-)5 corridor.

Institutional. Institutional uses exist throughout the Fresno COG Region, including government, education, religious, and community service developments. Given the community-facing aspect of these land uses, they are typically found in locations that are easily accessible to members of the public, including city or town centers or along major transportation corridors.

Parks/Open Space. Parks/open space vary by size and purpose throughout the Fresno COG Region. For example, some open space areas are not accessible to the public and are intended for conservation of their natural state. Others are specifically intended for recreational use, such as manufactured and maintained local parks. These spaces can vary by size and are located throughout the Fresno COG Region, from residential neighborhoods to the Sierra Nevada mountains.

4.11.3.3 Planned Land Uses

There are several types of planned land use delineations within the Fresno COG Region. The designations and guidelines contained in the Agriculture and Land Use Element of the County's General Plan, city general plans, regional plans, community plans, and specific plans collectively guide land use in Fresno County. Additionally, the zoning ordinances adopted by the County and each of the cities in the Fresno COG Region regulate permissible and conditionally permissible uses and establish development standards that apply to properties within their jurisdiction. These planning documents and zoning ordinances are discussed in further detail below.

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6 County of Fresno. 2023. *General Plan Review and Zoning Ordinance Update Program Environmental Impact Report Public Review Draft.* April. Page 4.1-17. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/environmental-impact-reports/1_draft-program-environmen.pdf (accessed November 12, 2025).

General Plan Land Use Designations. The Countywide Land Use Diagram, contained in the County's General Plan Agriculture and Land Use Element, designates planned land uses within Fresno County. In addition, incorporated cities are not subject to the County's land use designations, but rather are subject to the plan land use designations included in their locally adopted general plans. The following land use categories are applicable to land within the County:

- Agriculture
- Irrigated Agriculture
- Westside Rangeland
- Eastside Rangeland
- Open Space
- Public Lands and Open Space
- Rural Residential
- Mountain Residential
- Foothill Rural Residential
- Low-Density Residential
- Medium-Density Residential
- Medium High-Density Residential
- Mountain Urban
- Mountain Commercial
- Rural Settlement Area
- Planned Rural Community
- Neighborhood Commercial
- Office Commercial
- Community Commercial
- Central Business Commercial
- Regional Commercial
- Highway Commercial
- Service Commercial
- Special Commercial
- Limited Industry
- General Industry
- Public Facilities
- Reserve Overlay
- San Joaquin River Corridor Overlay
- Westside Freeway Corridor Overlay
- Golden State Industrial Corridor Overlay
- Special Study Area

Zoning Designations. The County of Fresno Zoning Ordinance is located in Division 6 of the Fresno Code of Ordinances and is the primary tool for implementing the County's General Plan. The Zoning Ordinance establishes residential districts, commercial districts, industrial districts, and other districts that are mainly related to agriculture, timber, and other resource-related land uses. Figure 4.11-2 illustrates the general zoning types applicable to unincorporated County land. As shown on this figure, incorporated cities are not subject to the County's zoning but rather are subject to their own locally adopted zoning ordinances and municipal codes. The following zoning categories are applicable to land within unincorporated Fresno County:

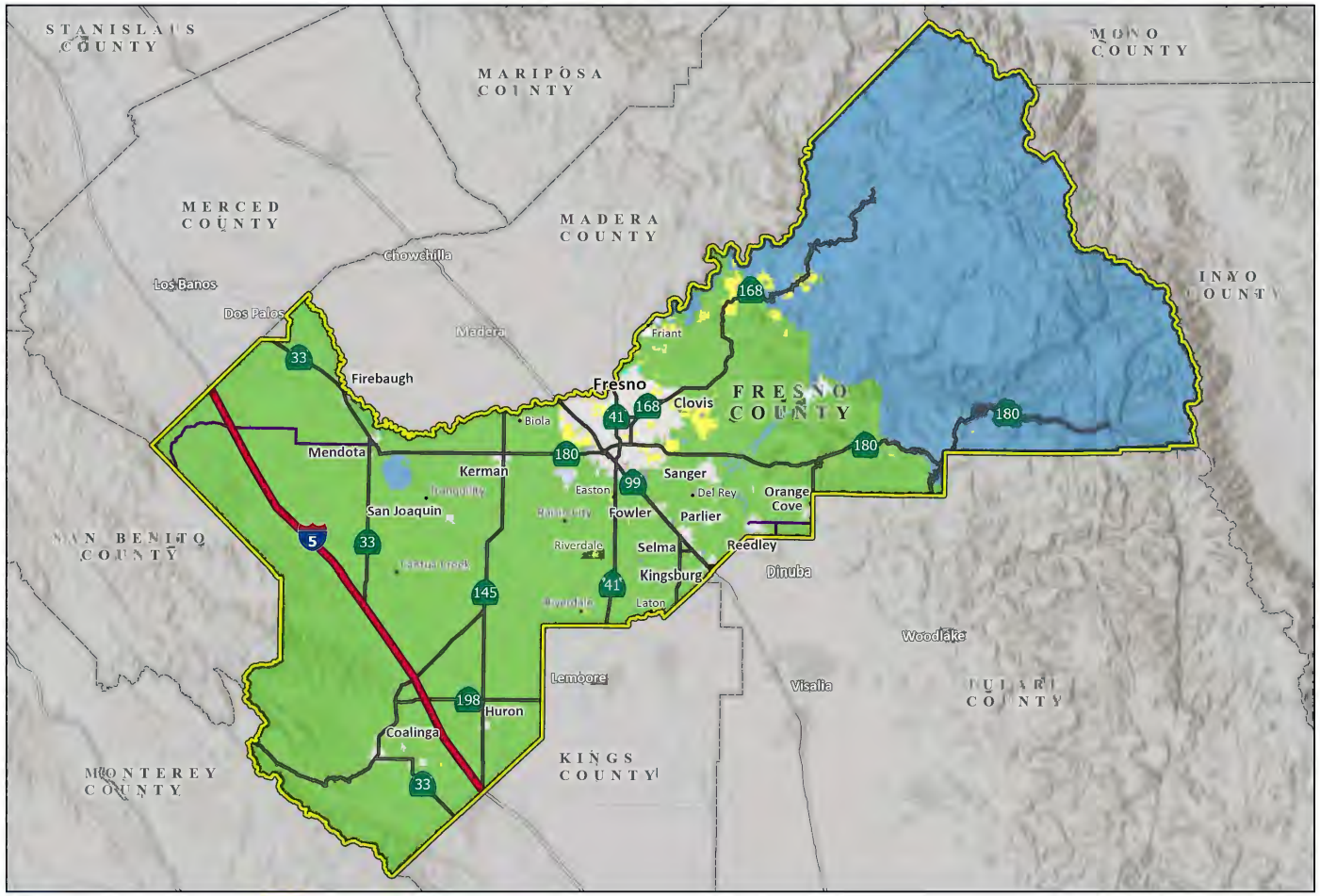


FIGURE 4.11-2

Regional Transportation Plan/Sustainable Communities Strategy
Fresno County Zoning Categories

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- Rural Residential
- Single Family Residential Agricultural
- Single Family Residential
- Single Family Residential A
- Single Family Residential B
- Single Family Residential C
- Single Family Residential Estate
- Low Density Multiple Family Residential
- Medium Density Multiple Family Residential
- High Density Multi-Family Residential
- Trailer Park Residential
- Residential and Professional Office
- Off-Street Parking
- Administrative and Professional Office
- Neighborhood Shopping Center
- Community Shopping Center
- Regional Shopping Center
- Central Trading District
- General Commercial
- Agricultural Commercial
- Rural Commercial Center
- Commercial Recreation
- Commercial and Light Manufacturing
- Light Manufacturing
- General Industrial
- Heavy Manufacturing
- Exclusive Railroad District
- Resource Conservation
- Timberland Preserve
- Recreation
- Mountain Overlay
- Open Conservation
- Exclusive Agriculture
- Limited Agriculture
- Agriculture
- General Agricultural
- Rural Settlement

Other more specific land use plans in the Fresno COG Region include the following:

- **Regional Plans.** The County has prepared four regional plans for areas outside incorporated cities and community plan areas where more precise policies and standards are needed to address specific resource issues relevant to the particular area.[7] Regional plans prepared by the County include the Sierra-North Regional Plan, the Coalinga Regional Plan, the Kings River Regional Plan, and the Sierra-South Regional Plan.

- **Community Plans.** The County has prepared nine community plans to address the issues and concerns unique to select unincorporated areas.[8] These include the Biola Community Plan, the Caruthers Community Plan, the Del Rey Community Plan, the Friant Community Plan, the Lanare Community Plan, the Laton Community Plan, the Riverdale Community Plan, the Shaver Lake Community Plan, and the Tranquillity Community Plan.

- **Specific Plans.** The County has established six specific plans for areas of the County where specific development guidance is necessary to address unique circumstances. Specific plans established by the County include the Shaver Lake Forest Specific Plan, the Bretz Mountain Village Specific Plan, the Wildflower Village Specific Plan, the Millerton Specific Plan, the Quail

[7] County of Fresno. 2024. *General Plan Background Report.* February. Page 3-20. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/planning-and-land-use/general-plan/background-report-2024.pdf (accessed December 5, 2025).

[8] Ibid. Page 3-24.

Lake Specific Plan, and the Friant Ranch Specific Plan. In addition, individual cities within the Fresno COG Region have established their own specific plans.[9]

4.11.4 Regulatory Setting

This section includes applicable federal, State, regional, and local policies and regulations.

4.11.4.1 Federal Regulations

There are no federal land use and planning regulations applicable to the proposed project.

4.11.4.2 State Regulations

California Environmental Quality Act. CEQA requires the evaluation of the potential environmental impacts that could result from implementation of certain discretionary projects. Lead agencies undertaking the projects shall consider the environmental impact analysis prior to taking any discretionary action on a proposed project. Pursuant to *State CEQA Guidelines* Section 15382, a project's inconsistency with a plan or policy is only considered significant if such inconsistency would result in a significant physical environmental impact.

California State Planning and Zoning Law. This law, which is codified in California Government Code Sections 65000–66037, delegates most of the State's local land use and development decisions to cities and counties. The California Government Code establishes specific requirements pertaining to the regulation of land uses by local governments, including general plan requirements, specific plans, subdivisions, and zoning. California Government Code Section 65302 requires that all California cities and counties include the following seven elements in their general plan:

- Land Use
- Circulation
- Housing
- Conservation
- Open Space
- Noise
- Safety

Since 2003, jurisdictions in the San Joaquin Valley are also required to prepare an air quality element in their general plans. Additionally, cities and counties that have identified disadvantaged communities must also address environmental justice (EJ) in their general plans, including air quality.[10]

California Government Code Section 65080 et seq. Government Code Section 65080 et seq. requires each transportation-planning agency in urban areas to adopt and submit an updated RTP to

[9] County of Fresno. 2024. *General Plan Background Report.* February. Page 3-25. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/planning-and-land-use/general-plan/background-report-2024.pdf (accessed December 5, 2025).

[10] Senate Bill (SB) 1000, adopted in 2016, requires both cities and counties that have disadvantaged communities to incorporate EJ policies into their general plans, either in a separate EJ element or by integrating related goals, policies, and objectives throughout the other elements. This update, or revision if the local government already has EJ goals, policies, and objectives, must happen "upon the adoption or next revision of two or more elements concurrently on or after January 1, 2018."

the California Transportation Commission (CTC) and the California Department of Transportation (Caltrans) every 4 years. Refer to Section 2.0, Introduction, for more information about this requirement.

Sustainable Communities and Climate Protection Act of 2008 (Senate Bill 375). Senate Bill (SB) 375 was enacted to reduce greenhouse gas (GHG) emissions from automobiles and light trucks through integrated transportation, land use, housing, and environmental planning. SB 375 requires California's regional planning agencies to include an SCS or an Alternative Planning Strategy (APS)[11] in their RTP. The SCS provides a plan for meeting the regional emissions reduction targets established by the California Air Resources Board (CARB). SB 375 also offers local governments regulatory and other incentives to encourage more compact new development and transportation alternatives. The requirements of SB 375 are reflected in the proposed 2026 RTP/SCS, as evaluated in this PEIR.

California Transportation Plan 2050. In February 2021, Caltrans published the California Transportation Plan 2050 (CTP 2050), which outlines goals and recommendations to guide transportation decisions and investments by all levels of government and the private sector. The CTP 2050 builds on concurrent efforts included in Caltrans' six modal plans, RTPs, other statewide plans and studies, the Strategic Highway Safety Plan, and the Statewide Housing Assessment. It also draws from research on demographic shifts, technology trends, and economic growth to help inform where we are going as a State, what strategies we can employ, and what challenges and opportunities we may face along the way. To evaluate future conditions and plan benefits, the CTP 2050 employed a suite of technical tools and models to help inform policy-decision making.

Cortese-Knox-Hertzberg Local Government Reorganization Act. The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (California Government Code §56000 et. seq.) established procedures for local government changes of organization, including city incorporations, annexations to a city or special district, and city and special district consolidations. Pursuant to this regulation, each County has an LAFCO with the power to review and decide on proposals for the expansion of city or special district boundaries.

4.11.4.3 Regional Regulations

Regional Plans. As previously described, the County has prepared four regional plans for areas outside incorporated cities and community plan areas where more precise policies and standards are needed to address specific resource issues relevant to the particular area. Each plan covers three primary topics: land use, transportation, and environmental resource management.[12]

Sierra-North Regional Plan. The Sierra-North Regional Plan covers a large land area in the Sierra Nevada mountains in the eastern portion of the Fresno COG Region. The Sierra-North Regional

[11] If the emissions reduction targets cannot be met through the SCS, an APS must be prepared that demonstrates how the reduction targets would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies (see California Government Code Section 65080[(b][2][I]).

[12] County of Fresno. 2024. *General Plan Background Report.* February. Page 3-20. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/planning-and-land-use/general-plan/background-report-2024.pdf (accessed December 5, 2025)

Plan discusses development constraints, rural residential development, public facilities and services, and population forecasts. The Land Use Element of this Regional Plan provides policies for non-intensive (open space and rangeland) and intensive (residential, commercial, and industrial) land uses and includes guidance for the location of new towns.

Coalinga Regional Plan. The Coalinga Regional Plan covers land in the western portion of the Fresno COG Region, including the City of Coalinga and surrounding lands in all directions. The Coalinga Regional Plan discusses projected population decline, economic implications of the proposed Coalinga Air Cargo Port, and development constraints such as preservation of agricultural and range land, natural hazards, water availability, habitat preservation policies, and expanded oil field operations. The Land Use Element provides goals and policies, as well as development standards and criteria for residential, commercial, industrial, and open space/agricultural land uses. The Environmental Resources Management Element emphasizes the need for groundwater management and the need for sensitive development of expanded oil and mineral resource extraction operations.

Kings River Regional Plan. The Kings River Regional Plan encompasses the Kings River and associated land on both sides of the river. The Kings River Regional Plan discusses goals to protect biological and agricultural resources along the river, protect people and property from flood damage, and facilitate mineral resource extraction with minimal impacts from the extraction activities. The plan provides policies and standards intended to preserve large-lot agriculture and open space along the river, and to limit the expansion of residential and other intensive uses to areas where impacts on the river system and surrounding resources will be minimized.

Sierra-South Regional Plan. The Sierra-South Regional Plan covers land in the Sierra Nevada mountains just southwest of the Sierra-North Regional Plan Area. The Sierra-South Regional Plan discusses goals to preserve the scenic open space character of the plan area and to concentrate new development in appropriate locations where impacts to sensitive resources can be minimized. Constraints to development include water supply, sensitive natural habitat, wildfire hazards, and expansive soils.

Fresno County Airport Land Use Compatibility Plan. In 2023, the Fresno County Airport Land Use Commission (ALUC) prepared a comprehensive Airport Land Use Compatibility Plan (ALUCP) for Coalinga Municipal Airport, Firebaugh Municipal Airport, Fresno Chandler Executive Airport, Fresno Yosemite International Airport, Harris Ranch Airport, Reedley Municipal Airport, Selma Airport, Sierra Sky Park Airport, William Robert Johnston Municipal Airport, and Naval Air Station Lemoore. The ALUCP provides a blueprint for implementation of the land use compatibility policies and criteria related to proposed development in the vicinity of public use airports and portions of Naval Air Station Lemoore within the Fresno COG Region. It also establishes the planning boundaries around each of these airport facilities that define safety areas, noise contours, and height/airspace protection for policy implementation and areas within which notification is required as part of real estate transactions.

4.11.4.4 Local Regulations

Local General Plans. The Fresno COG Region contains Fresno County and 15 incorporated cities, each with an individual general plan prepared pursuant to California Government Code Section 65300. Each general plan contains guidelines, regulations, goals, and policies related land use and planning within the particular jurisdiction. Some jurisdictions have adopted specific plans or master plans, which address smaller, more specific areas within a jurisdiction. These more localized plans provide for focused guidance for developing a specific area and contain development standards tailored to the area, as well as systematic implementation of the general plan.

Local Municipal Codes. Municipal codes provide comprehensive libraries of the local laws, regulations, and ordinances governing each jurisdiction. In addition, each municipal code contains a zoning code/ordinance to guide development within the jurisdiction's planning area. Since 1971, State law has required the city or county zoning code to be consistent with the jurisdiction's general plan.

4.11.5 Thresholds of Significance

The following thresholds of significance are based on Appendix G of the *State CEQA Guidelines*. Based on these thresholds, implementation of the proposed project would have a significant adverse impact with respect to land use and planning if it would:

Threshold 4.11.1: Physically divide an established community; or

Threshold 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.

4.11.6 Project Impacts

Threshold 4.11.1: Would the project physically divide an established community?

Significant and Unavoidable Impact. The physical division of an established community typically refers to the construction of a physical feature (such as a limited-access highway or railroad tracks) or removal of access (such as a local road or bridge) that would impair mobility within, or between, existing communities. For instance, construction of a limited-access highway through an existing community could limit or prevent pedestrians, bicyclists, and motorists from traveling between the divided community on either side.

Construction. As described in Section 4.17, Transportation, both transportation improvement and land use development projects facilitated by the proposed project could require partial lane closures or full roadway closures. Both could impede access and circulation within existing communities. Detours would temporarily increase travel distance and make parts of communities less accessible.

Further, as described in Section 4.14, Population and Housing, some future transportation improvement and land use development projects facilitated by the proposed project would

require temporary construction easements (TCEs) or off-site staging areas. TCEs may include personnel/equipment staging areas or access easements. These areas are typically fenced off and would not allow public access. Depending on their location, staging and access areas could create additional physical barriers within established communities. Land temporarily used for construction is generally restored to pre-construction conditions prior to being returned to the affected property owner. Therefore, potential impacts with respect to community division would not be permanent.

Operation. Future transportation improvement projects facilitated by the proposed project would generally aim to enhance circulation and accessibility within the Fresno COG Region. Despite this, future projects may acquire permanent right-of-way (ROW) that could result in community division. Each project would be designed to utilize existing ROW to the extent feasible. However, projects increasing roadway capacity or adding new features would likely require outward expansion of the roadway (and associated ROW acquisition). New corridor alignments could pass through existing communities and divide residents.

However, transportation improvements included in the proposed 2026 RTP/SCS include new pedestrian crossings, traffic signals, and bicycle lanes within communities, which would increase transportation options for community members and provide new access within and between communities. Further, pursuant to **Project-Specific Mitigation Measure (PMM) LU-1**, each member agency would identify community facilities and, to the extent feasible, design new transportation facilities in a manner that protects access to these facilities (including pedestrian and bicyclist access). In addition, during the design phase, new pedestrian and bicycle routes that provide easy connections to community facilities would be considered to maintain (or improve) community connectivity. Such facilities are key to forming a sense of community; therefore, future transportation improvement projects would maintain access where possible and feasible.

Scenario C (Enhanced Transit and Smart Growth) emphasizes sustainable urban growth focused on existing urban centers and established areas, and higher-density growth with mixed-use development. Future projects in urban centers would be more constrained than in rural areas and have more potential for community division. Infill development associated with the proposed project could divide communities. For example, a taller or wider structure, or a secure structure surrounded by fencing, could create a barrier between two portions of a neighborhood. However, a site's general plan and zoning designations typically govern the type, scale, massing, height, and architectural features of each new structure. Further, urban areas contain established developable lot sizes and future developments would be required to adhere to setbacks and other requirements. Given the existing density and street layout of urban centers, it is unlikely that a stand-alone development project would create a barrier large enough to divide an established community.

Future projects subject to discretionary approval by the appropriate lead agency are required to comply with the requirements of CEQA, including an environmental review, as applicable, to determine whether a project would physically divide an established community. Each subsequent CEQA document would identify appropriate project-specific mitigation measures in addition to applicable regulatory requirements.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, this analysis represents a general characterization of reasonably foreseeable impacts that could occur under implementation of the proposed project. Through adherence to **PMM LU-1,** project impacts associated with the physical division of an established community would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with the physical division of an established community are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.11.2: Would the project 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?

Significant and Unavoidable Impact. The proposed 2026 RTP/SCS is connected with other planning documents and planning agencies throughout the Fresno COG Region. As described in Section 2.0, Introduction, the Fresno COG itself does not have any land use authority. Instead, this power is held by the Fresno COG member agencies (which include the County of Fresno and the 15 incorporated cities within the Fresno COG Region) that make up the Fresno COG Policy Board. The Fresno COG works in partnership with its member agencies, Caltrans, and other agencies with land use authority to plan the future transportation system, taking into consideration future growth estimates and potential development and land use patterns outlined in each of the adopted or draft general plans prepared by the local governments. As such, the proposed RTP/SCS has been prepared collaboratively with input from the member agencies in order to establish consistency with each agency's land use and planning documents.

The primary use of the RTP is a regional long-range plan for transportation projects in the region. It also serves as a comprehensive, coordinated transportation plan for all governmental jurisdictions in the Fresno COG Region. The proposed 2026 RTP has been prepared in a manner consistent with the CTC's *2024 Regional Transportation Plan Guidelines for Metropolitan Planning Organizations*.[13] In addition, in accordance with SB 375, the Fresno COG has included an SCS element as part of its RTP updates, with the purpose of identifying policies and strategies to reduce per capita passenger vehicle-generated GHG emissions.

[13] California Transportation Commission (CTC). 2024. *2024 Regional Transportation Plan Guidelines for Metropolitan Planning Organizations.* January 26. Website: https://catc.ca.gov/-/media/ctc-media/documents/programs/transportation-planning/adopted-2024-rtp-guidelines-for-mpos.pdf (accessed March 4, 2026).

As described in Section 4.14, Population and Housing, the Fresno COG prepared the Fresno County 2023 to 2060 Growth Projections[14] using information from the California Department of Finance (DOF), the 2020 Census, outreach to jurisdictions within the Fresno COG Region, and other recent statistics. These projections identify future growth trends in the Fresno COG Region that member agencies would be responsible for accommodating through planned development patterns.

The purpose of the SCS is to demonstrate how future growth and development could be allocated to planned growth areas consistent with the general plans of the member agencies. As growth and development occurs, the member agencies will review development proposals and determine whether they are consistent with their plans, programs, and policies prior to considering their approval. This may include community plans, regional plans, and specific plans, depending on the location of each proposed project. Future projects subject to discretionary approval by the appropriate lead agency are required to comply with the requirements of CEQA, including an environmental review, as applicable, to determine if a project would result in a conflict with an adopted land use plan. Each subsequent CEQA document would identify project-specific mitigation measures, if necessary.

Five SCS scenarios were developed during preparation of the SCS through an open and engaging public process, each prioritizing a slightly different pattern of land use and transportation facility growth. As participants in the Fresno COG Policy Board, each member agency was able to provide input on the preferred project scenario. The Fresno COG Policy Board ultimately selected Scenario C, Enhanced Transit and Smart Growth, as the preferred project scenario. This scenario combines efficient mobility with smart, sustainable urban growth focused on existing centers and established areas. Strategies and priorities identified under this scenario include focus on transit system upgrades/improvements; moderate investment in road maintenance and operation; supporting higher-density growth with mixed-use development; additional growth in urban centers and established areas; and considering preservation of resource land.

The long-term strategies contained in the preferred scenario are supported by the financially constrained project list provided in the RTP/SCS, which identifies transportation improvement programs for which funding has been identified or is reasonably expected to be available within the RTP's planning horizon. As shown on Figure 3-12 in Chapter 3.0, Project Description, Scenario C would involve the highest investment costs in the project categories of Transit, Streets and Roads – Maintenance, and Streets and Roads – Capacity. The need for many projects in the financially constrained project list were identified by the appropriate member agency, meaning the transportation improvement projects facilitated by the proposed project would be consistent with planning efforts at the regional and local levels. Similarly, the overall strategies presented in Scenario C (alternatives to single-passenger vehicles, mixed-use development, etc.) are widely recognized as effective strategies to reduce vehicle miles traveled (VMT) and GHG emissions and promote sustainable development. As such, these strategies are typically already included in each jurisdiction's general plan policy list and would therefore be consistent with such plans.

Future land use developments facilitated by the growth strategies identified in the proposed SCS would still be required to demonstrate consistency with each site's applicable general plan and

[14] Fresno Council of Governments (COG). 2024. *Fresno County 2023-2060 Growth Projections.* October 17.

zoning designations at the time each development is proposed. Future land use developments that would conflict with the relevant jurisdiction's general plan land use or zoning designation for the project site would generally require a general plan amendment, zoning code amendment, or related action. Such actions are typically subject to discretionary approval by an approving body (e.g., a local city council or the Fresno County Board of Supervisors) at the time the body considers action on the project as a whole. Therefore, any potential conflicts with the relevant general plan or zoning code would be resolved through the amendment process, and all environmental impacts associated with this process would be evaluated and mitigated to the extent feasible in the related CEQA document.

It should be noted that there is no required update cycle for city and County general plans, with the exception of the housing element, which must be updated every 8 years. By contrast, the Fresno COG is required to update its RTP/SCS every 4 years in accordance with the federal and State planning mandates described in Chapter 2.0, Introduction. Therefore, member-agency general plan updates do not necessarily correspond with RTP/SCS updates, meaning updates in one document may not be reflected in the other until its next planned update. Further, while jurisdictions typically design their planning documents for consistency with the current RTP/SCS in effect, SB 375 does not technically require this consistency from jurisdictions. In recognition of this collaborative effort, pursuant to **Fresno COG Mitigation Measure (FMM) LU-1**, the Fresno COG would ensure the timely exchange of information (e.g., GIS shapefiles, demographic information, policy updates) that may be useful for member jurisdictions to assist with their planning document updates and funding programs in a timely manner when requested. Despite a collaborative effort to align regional and local planning efforts, the SCS ultimately does not supersede local planning documents, and the Fresno COG has no land use authority. Therefore, although it is anticipated that any potential land use conflicts would be resolved in the next update of each jurisdiction's general plan, it is possible that the proposed project could result in a conflict with an adopted land use document.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, this analysis represents a general characterization of reasonably foreseeable impacts that could occur under implementation of the proposed project. Through inter-agency coordination and exchange of information pursuant to **FMM LU-1,** project impacts associated with conflicts with land use plans, policies, or regulations would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with conflicts with land use plans, policies, or regulations are considered **significant and unavoidable** for the purposes of this analysis.

4.11.7 Level of Significance Prior to Mitigation

Prior to mitigation, the proposed project would have potentially significant impacts related to land use and planning.

4.11.8 Mitigation Measures

4.11.8.1 Fresno COG Measures

The following mitigation measure would be applied on a regional scale by the Fresno COG to reduce potentially significant impacts related to land use and planning to the extent feasible:

FMM LU-1 The COG shall facilitate the exchange of information (e.g., geographic information system [GIS] shapefiles, demographic information, policy updates) that may be useful for member jurisdictions' reference for their planning documents and funding programs in timely updates.

4.11.8.2 Project-Specific Measures

The following mitigation measure is required for each future transportation improvement and land use development project to reduce potentially significant impacts related to land use and planning to the extent feasible:

PMM LU-1 Implementing agencies shall consider mitigation measures to reduce project impacts that may conflict with an applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, as applicable and feasible.

During project design, each implementing agency shall protect access to existing community facilities and minimize existing and proposed barriers to pedestrians and bicyclists. Community facilities shall be identified and public access considered. New or expanded pedestrian and bicycle routes connecting to community facilities shall be considered to improve community connectivity.

4.11.9 Level of Significance After Mitigation

While implementation of **FMM LU-1** and **PMM LU-1** would assist the Fresno COG and lead agencies of future transportation improvement and land use development projects in reducing impacts related to land use and planning to the extent feasible, the analysis presented in this section is general in nature, and given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future transportation improvement and land use development projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. As appropriate and feasible, the Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified. Nevertheless, impacts related to land use and planning are considered **significant and unavoidable** for the purposes of this analysis.

4.11.10 Cumulative Impacts

As defined in Section 15130 of the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for land use and planning. The cumulative impact area for land use and planning is the Fresno COG Region, including all member agencies and their respective SOIs.

Future transportation improvement and land use development projects facilitated by the proposed project could be under construction at the same time as other projects in the Fresno COG Region. In the event that multiple cumulative construction easements, road closures, and/or detours occur simultaneously, this overlap could further physically divide an established community and impede access within the community.

Similarly, in the event that land use developments facilitated by the proposed project are developed adjacent to separate projects in a manner that results in a block of development with limited means of public access (such as fenced-off properties), cumulative impacts could result in a new permanent barrier that divides an established community. However, because the proposed project would encourage growth within urban centers with compact blocks and frequent intersections, it is anticipated that community access would be maintained. Further, transportation improvement projects facilitated by the proposed project would include new pedestrian crossings, traffic signals, and bicycle lanes that enhance community connectivity and access within the Fresno COG Region, which may reduce cumulative impacts from multiple developments.

As previously stated, land use authority in the Fresno COG Region belongs to Fresno COG member agencies. As such, while implementation of the proposed project would facilitate future transportation improvement and land use development projects, it is possible that member agencies would approve cumulative projects that do not align with the goals and policies set forth in the proposed 2026 RTP/SCS. However, cumulative projects in the Fresno COG Region would be reviewed for consistency with adopted land use plans and policies by the appropriate lead agency. For this reason, cumulative projects are anticipated to be consistent with applicable general plan and zoning requirements or would be subject to allowable exceptions. Further, each discretionary project would be subject to CEQA, mitigation requirements, and design review, as applicable.

As stated under Section 4.11.9, impacts of the proposed project on land use and planning are considered significant and unavoidable given the programmatic nature of the proposed project, the scale of the Fresno COG Region, and the inability of the Fresno COG to enforce project-specific mitigation or make land use approvals. Because the proposed project would result in significant adverse environmental impacts, its impacts would represent an incremental contribution to the environmental impacts in the cumulative impact study area, ultimately leading to a cumulatively considerable impact related to land use and planning.

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4.12 MINERAL RESOURCES

This section of the Draft Program Environmental Impact Report (PEIR) discusses the existing setting of mineral resources within the Fresno Council of Governments (COG) Region and in the surrounding area and provides an analysis of the potential impacts to mineral resources anticipated with implementation of the proposed 2026 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (proposed project).

4.12.1 Scoping Process

Potential impacts related to mineral resources were not identified during the public scoping meeting held for the proposed project on May 28, 2025.

The Fresno COG received no comment letters in response to the Notice of Preparation (NOP) issued for the proposed project between May 13 and June 12, 2025, concerning the proposed project's potential impacts related to mineral resources.

4.12.2 Methodology

Impacts on mineral resources were assessed based on thresholds of significance from Appendix G of the *State California Environmental Quality Act (CEQA) Guidelines*. This analysis considered the potential for future transportation improvement and land use development projects to impact the extraction of mineral resources that may be present in the Fresno COG Region and generate increased demand for such mineral resources in a manner that would contribute to depletion of the resource or have an adverse physical effect on the environment. Information on mineral resources was compiled from published literature, maps, and aerial photographs. Geologic units and structural features were obtained from maps published by the California Department of Conservation (DOC), including the California Geological Survey (CGS).

Subsequent project-specific CEQA documents may be required to further analyze the conditions related to mineral resources at each individual project site, further analyze the transportation improvements or new development facilitated by the proposed project to determine the magnitude of potential impacts, and identify appropriate project-specific mitigation measures.

4.12.2.1 Key Concepts

Mineral Resource Zones. Based on guidelines adopted by the CGS, areas known as Mineral Resource Zones (MRZs) are classified according to the presence or absence of significant deposits, as defined below. The MRZ designations require that a lead agency's land use decisions involving designated areas be made in accordance with its mineral resource management policies and that it consider the importance of the mineral resource to the region or the State as a whole, not just to the lead agency's jurisdiction. The following MRZ classifications indicate the potential for a specific area to contain significant mineral resources:

- **MRZ-1:** An MRZ where no significant mineral deposits are present or likely to be present.
- **MRZ-2:** An MRZ where significant mineral deposits are present, or likely to be present, and development should be controlled.

- **MRZ-3:** An MRZ where the significance of mineral deposits cannot be determined from the available data.
- **MRZ-4:** An MRZ where there is insufficient data to assign any other MRZ designation.
- **SZ Areas:** Areas containing unique or rare occurrences of rocks, minerals, or fossils that are of outstanding scientific significance.
- **IRA Areas:** County or State Division of Mines and Geology Identified Areas where adequate production and information indicates that significant minerals are present.

Of the four categories, lands classified as MRZ-2 are the most important or significant with respect to mineral resource value. MRZ-2 areas are designated by the State of California Mining and Geology Board (SMGB) as being "regionally significant." Such areas are underlain by demonstrated mineral resources or are located where geologic data indicate that significant measured or indicated resources are present.

Aggregate Resources. Natural materials, including crushed stone, sand, and gravel, that are primarily extracted for use in construction and infrastructure maintenance.[1]

Alluvial Materials. Materials deposited by rivers, usually consisting of silt, sand, clay, gravel, and organic matter.[2]

Geomorphic Province. Naturally defined geologic regions that display a distinct landscape or landform. Each region displays unique, defining features based on geology, faults, topographic relief and climate. Eleven are currently recognized in California, as follows:[3]

- Colorado Desert
- Mojave Desert
- Peninsular Ranges
- Transverse Ranges
- Coast Ranges
- Great Valley
- Sierra Nevada
- Basin and Range
- Klamath Mountains
- Cascade Range
- Modoc Plateau

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1 Langer, William, and David Lindsey. 2002. *Geologic Information for Aggregate Resource Planning.* Website: https://pubs.usgs.gov/publication/70217738 (accessed March 11, 2026).

2 Britannica. n.d. Alluvial Deposit. Website: https://www.britannica.com/science/alluvial-deposit (accessed March 11, 2026).

3 California Geological Survey (CGS). Note 36: California Geomorphic Provinces. Website: https://www.coastal.ca.gov/coastalvoices/resources/California_Geomorphic_Provinces.pdf (accessed March 11, 2026).

4.12.3 Existing Environmental Setting

The San Joaquin River Resource Area, located in the northern portion of the Fresno COG Region, is part of the alluvial materials from the San Joaquin River. The Kings River Resource Area is an alluvial fan that underlies the region. As shown on Figure 4.12-1, the CGS identifies land along the San Joaquin River and Kings River as MRZ-2, meaning mineral resources are present and available in these areas. While both areas contain MRZ-2 deposits, MRZ-1 deposits are also identified in the San Joaquin River Resource Area. MRZ-1 deposits are also identified in the central portion of the Fresno COG Region. All remaining areas of the Fresno COG Region surveyed by the CGS were classified as MRZ-3.

4.12.3.1 Known Mineral Resources

As described in Section 4.7, Geology and Soils, the Fresno COG Region is located in the Coast Ranges, Great Valley, and Sierra Nevada geomorphic provinces.[4] The Coast Ranges Province is characterized by northwest-trending mountain ranges and valleys composed of Mesozoic and Cenozoic rock layers. The eastern Coast Ranges Province is characterized by strike-ridges and valleys in the Upper Mesozoic strata. The Great Valley Province is an alluvial plain characterized by two distinct sediment layers, with the upper layer originating from the recent Holocene Epoch to the Oligocene Epoch (37 to 24 million years ago) and the lower layer originating from the Pliocene Epoch (5.3 to 1.6 million years ago) to the Eocene Epoch (58 to 37 million years ago). The Sierra Nevada Province is characterized by high, rugged slopes on its eastern side and gentler slopes on its western side. While most of the granitic rocks of this Province are Mesozoic Era (approximately 248 to 65 million years ago), these granitic rocks are partially capped by volcanic material dating to the Tertiary Period of the Cenozoic Era (between 65 and 1.6 million years ago).

According to the *Fresno County General Plan Background Report*,[5] the Fresno COG Region possesses an abundance of mineral resources, including granite, marble, oil, coal, silver, copper, mercury, and asbestos.[6] Over time, the region's demand for aggregate resources has outgrown its supply, resulting in an unmet aggregate demand of 251 million tons.[7] The two primary target aggregate resource areas in the Fresno COG Region are the San Joaquin River Resource Area and the Kings River Resource Area, consistent with each site's MRZ-2 classification.

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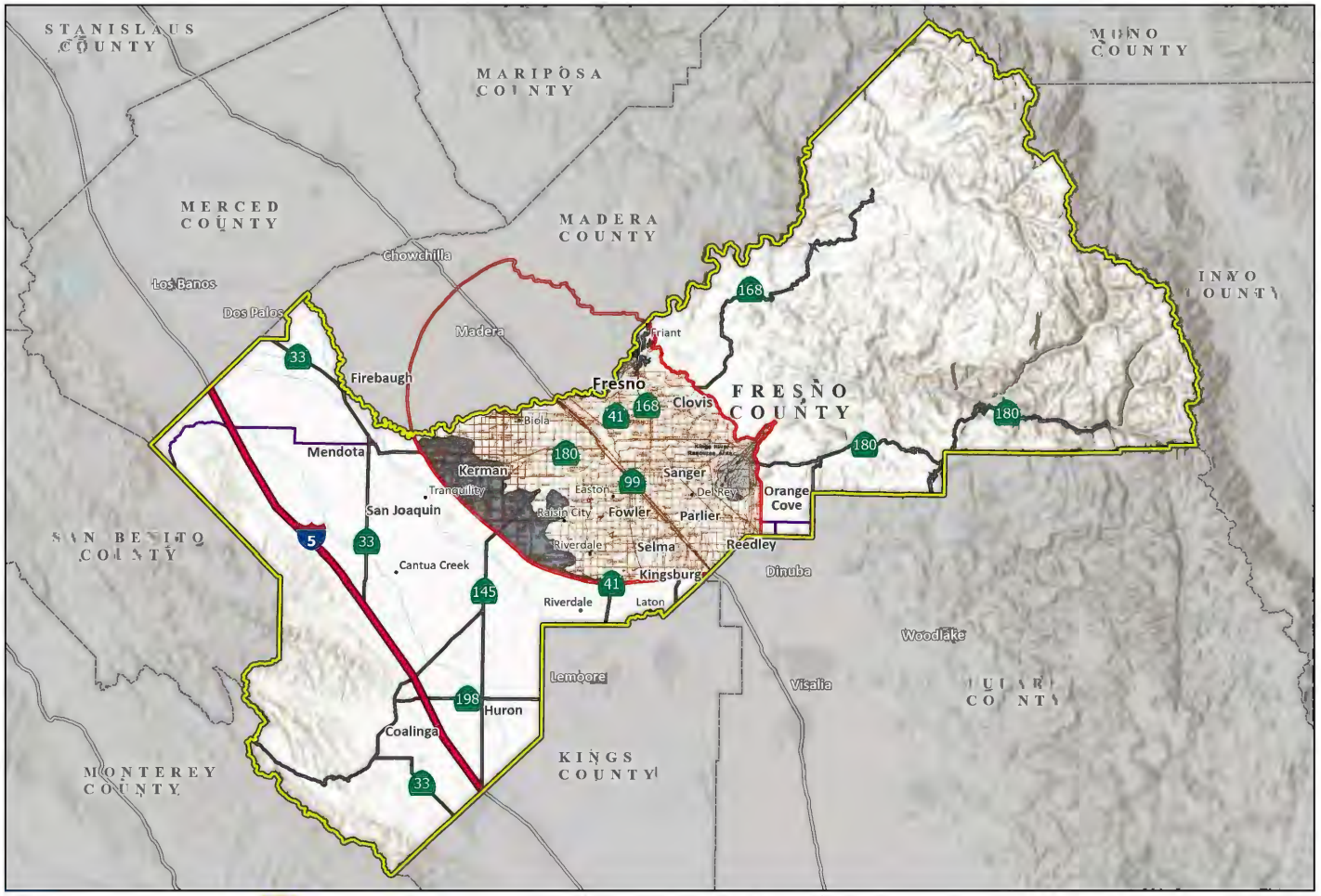
4 County of Fresno. 2023. *General Plan Review and Zoning Ordinance Update Program Environmental Impact Report, Public Review Draft.* April. Page 4.7-1. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/environmental-impact-reports/1_draft-program-environmen.pdf (accessed December 5, 2025).

5 County of Fresno. 2023. *Fresno County General Plan Background Report. General Plan Review and Revision.* April.

6 County of Fresno. 2024. *General Plan Background Report.* February. Page 7-105.

7 Ibid. Page 7-108.

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STANISLAUS COUNTY
MARIPOSA COUNTY
MONO COUNTY
MERCED COUNTY
MADERA COUNTY
INYO COUNTY
FRESNO COUNTY
SAN BENITO COUNTY
MONTEREY COUNTY
KINGS COUNTY
TULARE COUNTY
Chowchilla
Los Banos
Dos Palos
Madera
Friant
Firebaugh
Fresno
Clovis
Biola
Mendota
Kerman
Tranquility
Easton
Sanger
Del Rey
Orange Cove
San Joaquin
Raisin City
Fowler
Parlier
Riverdale
Selma
Reedley
Cantua Creek
Kingsburg
Dinuba
Laton
Woodlake
Lemoore
Visalia
Huron
Coalinga
33
5
41
99
145
168
180
198
LSA
Fresno COG Region
MLC Report: OFR 99-02
Mineral Resource Zones
MRZ-1
MRZ-2
MRZ-3
0 9 18
Miles
SOURCE: Esri, USGS (2024), CDOC (2025), Cole and Fuller (1986)
I:\2025\20252196\GIS\Pro\Fresno COG RTP EIR\Fresno COG EIR for 2026 RTP SCS.aprx (3/18/2026)
Note: No other mineral resource zone studies have been conducted within the Fresno COG Region. The absence of a study does not necessarily mean the absence of mineral resources.
FIGURE 4.12-1
Regional Transportation Plan/Sustainable Communities Strategy
Fresno COG Region Mineral Resource Zones

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4.12.3.2 Mining Operations

According to the United States Geological Survey (USGS), there are 26 former and current mining operations within the Fresno COG Region. Of these, 9 are currently active, 2 are newly permitted, 1 is idle, 3 are closed with no intent to resume, and 11 are reclaimed. Refer to Table 4.12.A, below, for a detailed list of the region's mining operations, and refer to Figure 4.12-2 for their respective locations within the Fresno COG Region.

Table 4.12.A: Mining Operations within the Fresno COG Region

Mine Name	Primary Product	Status
Mont La Salle Material Site	Sand and Gravel	Reclaimed
Sagardia Material Site	Sand and Gravel	Reclaimed
Academy Quarry	Dimension Stone	Active
Al's Concrete	Sand and Gravel	Closed; No Intent to Resume
Coalinga Pit #1	Sand and Gravel	Active
Sierra Pacific Materials	Sand and Gravel	Active
Coalinga Pit #2	Sand and Gravel	Idle
Sanger	Sand and Gravel	Active
Tulare Valley Rock/Zapato	Sand and Gravel	Reclaimed
Rockfield Plant	Sand and Gravel	Active
Rockfield Roullard	Sand and Gravel	Reclaimed
Maiorino Farms	Sand and Gravel	Reclaimed
Santa Fe Aggregate Sanger Plant	Sand and Gravel	Closed; No Intent to Resume
Tivy Valley Granite	Decomposed Granite	Active
Gale Sand Products	Sand and Gravel	Active
Kings River	Sand and Gravel	Reclaimed
Panoche	Sand and Gravel	Reclaimed
Westside Cooperative Gin / #1	Clay	Reclaimed
Westside Cooperative Gin	Clay	Reclaimed
Fresno (River Rock)	Sand and Gravel	Closed; No Intent to Resume
Bruckner Gravel Pit	Rock	Reclaimed
Bass Avenue Material Site	Sand and Gravel	Active
Kings River Aggregates	Sand and Gravel	Active
Carmelita Mine	Stone	Newly Permitted
Riverbend Sand and Gravel, LLC	Sand and Gravel	Newly Permitted
Glamis Pit	Rock	Reclaimed

Source: California Department of Conservation (DOC). 2025. Mines Online.
COG = Council of Governments

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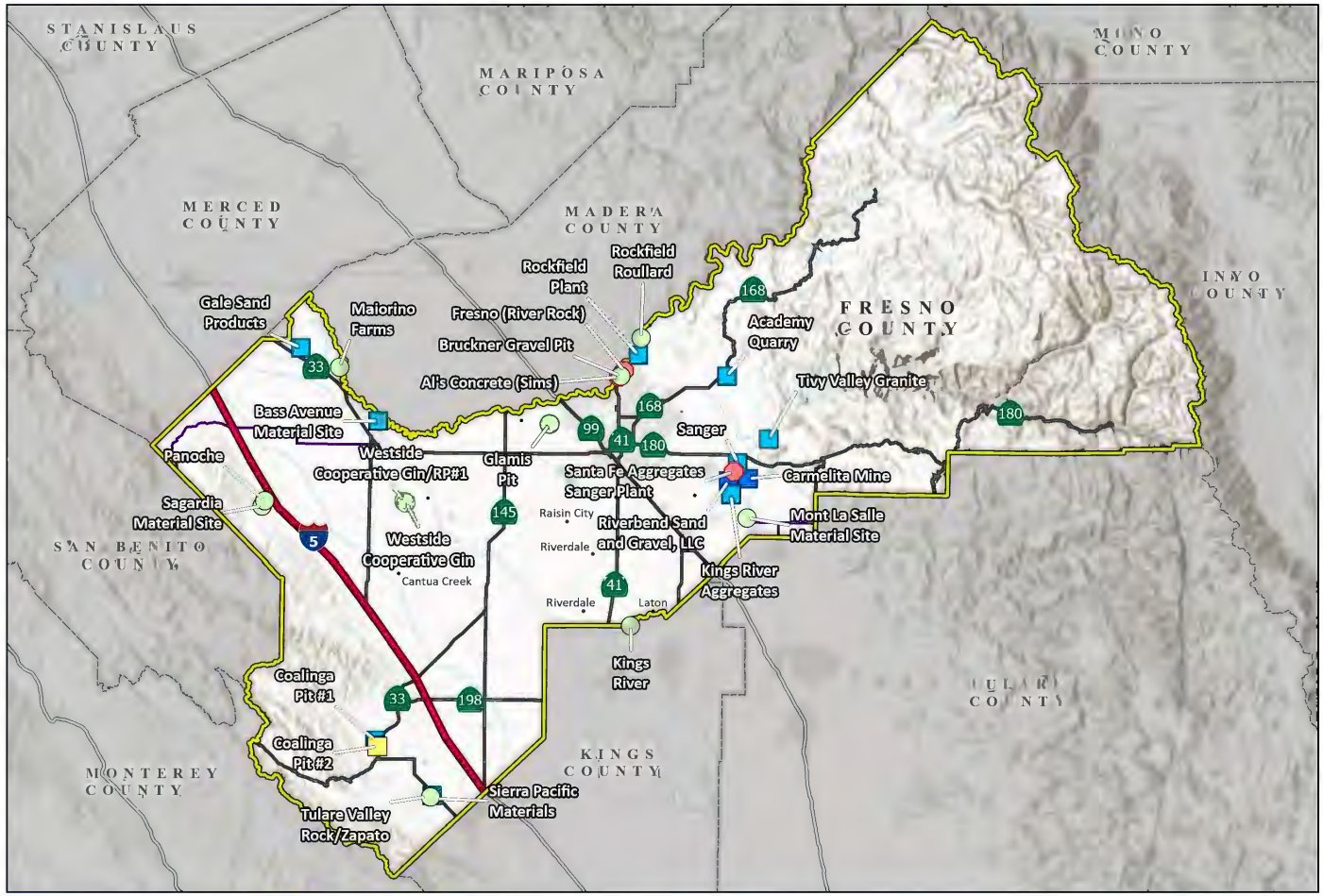


FIGURE 4.12-2

Regional Transportation Plan/Sustainable Communities Strategy
Fresno COG Region Mines and Mineral Resources

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4.12.3.3 Oil

Oil Production. The Fresno COG Region also contains abundant oil resources, particularly near the City of Coalinga in the western portion of Fresno County, which overlies the Monterey Shale Formation. According to the first USGS assessment of the Monterey Formation,[8] the Monterey Formation contains an estimated mean volume of 21 million barrels of oil. Based on more recent assessments, there are still substantial volumes of additional conventional oil resources in the Monterey Formation in shallower conventional traps. Subsequently, the Coalinga oil field is the largest oil field in the Fresno COG Region and continues to produces the majority of the region's oil and energy resources.[9] Other nearby oilfields include Raisin City, Riverdale, and Helm. Figure 4.12-3 shows the locations of oil fields in the Fresno COG Region. In addition, according to the DOC's Geologic Energy Management Division (CalGEM), the Fresno COG Region produced 5,114,001 barrels of oil and condensate in 2023, the most recent year for which data were available.[10] Table 4.12.B, below, details the top 12 oil- and gas-producing companies based on data from September 2025, showing the total oil and gas production for each company as well as the number of active wells.

Table 4.12.B: Top-Producing Oil and Gas Operators in the Fresno COG Region as of September 2025

Operator Name	Oil Produced (Barrels)	Gas Produced (MCF)	Number of Active Wells
Aera Energy LLC	1,996.843	700,868	8,636
C. Case Company	1,191	1,535	4
California Resources Production Corporation	435,206	545,849	2,311
Case's Used Equipment	58	17	2
Chevron U.S.A Inc.	1,863,052	274,787	10,379
H.T. Olsen Oil & Gas Operations	375	0	4
Holmes Western Oil Corporation	55,365	17,941	460
Petro-Lud Inc.	5,395	0	132
Reef Ridge Energy Company LLC	77	2	1
Sentinel Peak Resources California LLC	691,703	357,090	2,810
Silverbacq LLC	12	0	9
The Termo Company	19,643	28,395	71

Source: DrillingEdge. 2025. *Oil & Gas Production in Fresno County, CA.*
COG = Council of Governments
MCF = thousand cubic feet

8 United States Geological Survey (USGS). 2014. Webpage about Monterey Formation oil and gas assessment. Website: https://www.usgs.gov/news/national-news-release/usgs-estimates-21-million-barrels-oil-and-27-billion-cubic-feet-gas?utm (accessed March 2, 2026).

9 County of Fresno. 2024. General Plan Background Report. February. Page 7-119.

10 California State Oil and Gas Supervisor. *Annual Report 2023.* Page 5. Website: https://www.conservation.ca.gov/calgem/Documents/State%20Oil%20and%20Gas%20Supervisor%20Annual%20Report%202023.pdf (accessed December 5, 2025).

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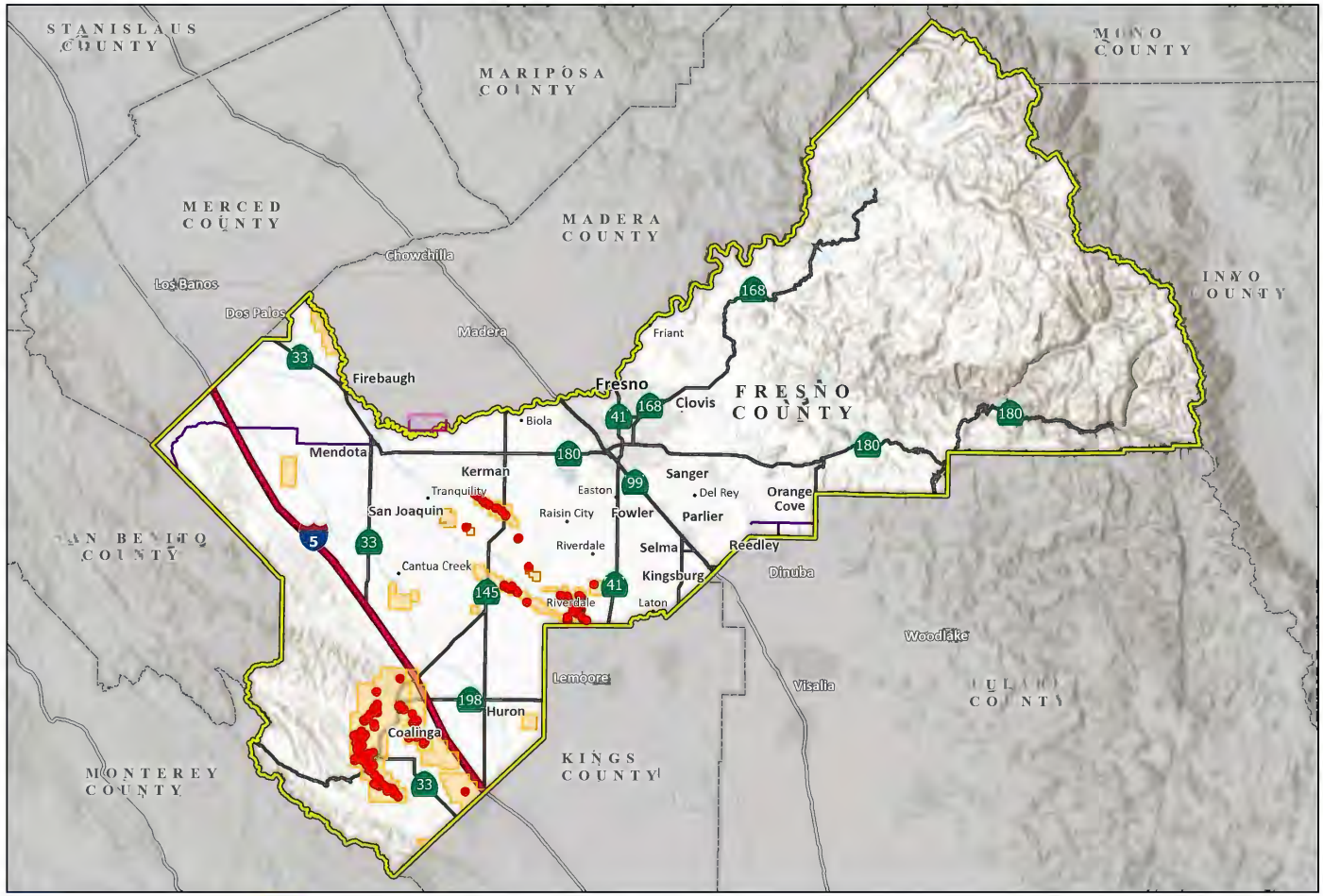


FIGURE 4.12-3

Regional Transportation Plan/Sustainable Communities Strategy
Fresno COG Region Oil and Gas Resources

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4.12.4 Regulatory Setting

Federal, State, and local regulations and programs related to mineral resources that are applicable to the proposed project are described below.

4.12.4.1 Federal Regulations

Surface Mining Control and Reclamation Act (SMCRA). The Surface Mining Control and Reclamation Act (SMCRA) of 1977 regulates surface mining activities and reclamation of closed mines. SMCRA implemented environmental standards that mining companies are required to follow and requires permit applicants to conduct reclamation efforts following the completion of mining activities. SMCRA is administered by the Department of Interior's Office of Surface Mining.

4.12.4.2 State Regulations

California Geologic Energy Management Division. CalGEM is an agency within the DOC responsible for regulating oil, gas, and geothermal energy development in California. The purpose of CalGEM is to protect public health and safety, environmental quality, and natural resources while overseeing the extraction of oil, gas, and geothermal resources. CalGEM also oversees well operations (for oil, gas, and geothermal wells), including permitting, plugging, and abandonment.

Surface Mining and Reclamation Act of 1975. The State of California has recognized that mineral resources are essential to the needs of society and the economic well-being of the State. In 1975, the State Legislature passed the Surface Mining and Reclamation Act (SMARA), Public Resources Code (PRC) Section 2710, et seq. The intent of SMARA is to promote production and conservation of mineral resources, minimize the environmental effects of mining, and ensure mined lands are reclaimed to conditions suitable for alternative uses. Reclaiming land for other uses once mining operations are completed is important for the general health, safety, and welfare of the community. Under SMARA, permits are required for all mining activities commencing operation on or after January 1, 1976. In addition, all new and existing mining operations are required to file a reclamation plan with the appropriate jurisdiction to address how the land would be brought back to a productive status once mining operations cease.

SMARA also requires every lead agency within which a mineral resource's economic value has been classified by the State Geologist or has been designated as having regional economic significance by the SMGB, to establish Mineral Resource Management Policies (MRMPs) for the mineral resources in its General Plan.

Under current SMARA statutes (PRC Section 2763), prior to permitting a use that would threaten the potential to extract minerals in an area designated by the SMGB as having mineral resources of regional or statewide significance, the lead agency must prepare "a statement specifying its reasons for permitting the proposed use." In it, the lead agency must consider its MRMPs, balance "the mineral values against alternative land uses, [and] consider the importance of the minerals to their market region as a whole and not just their importance to the city area." This process is designed to ensure that decision makers weigh the economic and environmental value of mineral resources before deciding on land uses that could impact extraction and availability of those resources.

4.12.4.3 Regional Regulations

There are no regional regulations that apply to the proposed project with respect to mineral resources.

4.12.4.4 Local Regulations

Local General Plans. The Fresno COG Region contains Fresno County and 15 incorporated cities, each with an individual general plan prepared pursuant to California Government Code Section 65300. Each general plan contains goals and policies related to mineral resources within the particular jurisdiction. Although general plan element titles may vary, this information is typically found within the general plan conservation element, or equivalent.

4.12.5 Thresholds of Significance

The following thresholds of significance are based on Appendix G of the *State CEQA Guidelines*. Based on these thresholds, implementation of the proposed project would have a significant adverse impact with respect to mineral resources if it would:

Threshold 4.12.1: Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; or

Threshold 4.12.2: Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

4.12.6 Project Impacts

The following discussion describes the potential impacts related to mineral resources that could result from implementation of the proposed project.

Threshold 4.12.1: Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

Significant and Unavoidable Impact.

Non-Fuel Mineral Resources. The Fresno COG Region possesses an abundance of mineral resources; however, aggregate resources and chromium are the primary minerals currently extracted.[11] Given the rapid rates of extraction, the Fresno COG Region does not have sufficient permitted supply to meet the demand for aggregate resources. The CGS estimated the 50-year demand for aggregate resources at 556 million tons of aggregate; however, only 305 million tons were permitted for extraction. This leaves 251 million tons of unmet demand for aggregate.[12] The two primary areas for aggregate resources in the region are the San Joaquin River Resource Area, extending generally from just southwest of the Friant Dam to Herndon, and the Kings River Resource Area, extending to the east and northeast of Sanger. These areas represent approximately 4,271 acres along the San Joaquin River and 16,380 acres on the Kings River alluvial fan and are designated MRZ-2 by the CGS. This designation

[11] County of Fresno. 2023. *Fresno County General Plan Background Report.* April.

[12] United States Geological Survey (USGS). 2018. *Fresno, California [database] Mineral Resources Data System Edition.* Website: http://mrdata.usgs.gov/mrds/find-mrds.php (accessed March 26, 2026).

indicates significant mineral deposits are present or likely to be present. Portions of the San Joaquin River Resource Area are also classified as MRZ-1, which indicates no significant mineral deposits are present or likely to be present. The remainder of the region is classified as MRZ-3, where the significance of mineral deposits cannot be determined from available data. Resource recovery sites where mineral resources are extracted for use are typically located in MRZ-2 or MRZ-3 areas.

Future transportation and land use development projects associated with implementation of the proposed project would likely require the use of aggregate or other mineral resources that may be extracted from existing or future deposits, some of which may be located within or adjacent to river habitats or other environmentally sensitive areas. Such development could reduce the availability of designated mineral resources by making certain deposits inaccessible for future extraction. Given that the Fresno COG Region does not have a sufficient supply of aggregate to meet the current demand, it is likely that the future projects would further the strain on the region's aggregate supply.

Each individual project would be required to comply with local general plans, specific plans, and other land use policies that provide mechanisms to protect mineral resource zones designated under SMARA. In addition, projects would implement **Project-Specific Mitigation Measure (PMM) MIN-1**, which requires the efficient use of mineral and aggregate resources, maintaining access to recoverable deposits, recycling and reusing construction materials, designing infrastructure to preserve access to adjacent mineral resources, and preserving portions of MRZ-2 areas for future extraction. These efforts would reduce consumption, thereby minimizing impacts to locally important mineral resource sites.

Fuel Resources. Both oil and natural gas production are prevalent in the Fresno COG Region. Oil production occurs primarily in the Coalinga area in western Fresno County. Natural gas and natural gas liquids are found in the same area as oil in the region as they are associated with oil fields.

Future transportation and land use development projects associated with implementation of the proposed project could occur in areas underlain by oil or natural gas resources. Such development could restrict or prevent access to petroleum resources. Although the majority of future projects facilitated by the proposed project would be focused around existing development and transportation corridors, the addition of wells and piping for the extraction of oil and/or natural gas would be incompatible with land use zoning and general plan policies for developed areas. Despite this conflict, economically viable petroleum reservoirs typically extend over large areas and would not necessarily be limited by new local developments.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. With adherence of applicable local and State policies and the requirements set forth in **PMM MIN-1**, project impacts associated with the loss of availability of a known mineral resource of regional or statewide value would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below a level of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of

mitigation deemed applicable and feasible ultimately belongs to the California Department of Transportation (Caltrans), local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts associated with conflicts with existing zoning for agricultural use or a Williamson Act contract are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.12.2: Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

Significant and Unavoidable Impact.

Non-Fuel Resources. Local jurisdictions have general plan policies to manage mineral resources and are required under SMARA to consider mineral resource recovery areas and significant mineral deposits identified by CGS. As stated under Threshold 4.12.1, future transportation and land use development projects associated with implementation of the proposed project would likely require the use of aggregate and other mineral resources. These materials may be extracted from existing or future deposits, some of which are located within or adjacent to riverine habitats or other environmentally sensitive areas, such as the San Joaquin River Resource Area and the Kings River Resource Area, which are the two primary sources of aggregate in the Fresno COG Region. These areas are also designated MRZ-2 by the CGS. The County's General Plan[13] also identifies aggregate as one of the region's most significant extractive resources; therefore, this resource is considered a locally important resource. Growth and development facilitated by the proposed project could occur near MRZ-2-designated lands, active or planned mineral resource recovery sites, or locally important aggregate resource areas identified in the County's General Plan. This development could create land use conflicts by limiting access to, or otherwise interfering with, the recovery of aggregate resources along the San Joaquin and Kings rivers.

Accordingly, each individual project would be required to comply with local general plans, specific plans, and other land use policies that provide mechanisms to protect MRZs designated under SMARA. Projects would also implement **PMM MIN-1**, which requires the efficient use of mineral and aggregate resources, maintaining access to recoverable deposits, recycling and reusing construction materials, designing infrastructure to preserve access to adjacent mineral resources, and preserving portions of MRZ-2 areas for future extraction, thereby minimizing impacts to locally important mineral resource sites to the extent feasible.

Fuel Resources. As stated under Threshold 4.12.1, both oil and natural gas production are prevalent in the Fresno COG Region. According to the County's General Plan,[14] aside from aggregate, petroleum is also one of the region's most significant extractive resources and would therefore be considered a locally important resource within the Fresno COG Region. Future transportation and land use development projects associated with implementation of the proposed project could occur in areas underlain by oil resources. Such development could restrict or prevent access to petroleum resources. Although the majority of future projects facilitated by the proposed project would be focused around

13 County of Fresno. 2024. *Fresno County General Plan*. February.

14 Ibid.

existing development and transportation corridors, the addition of wells and piping for the extraction of oil and/or natural gas would be incompatible with land use zoning and general plan policies for developed areas. In addition, anticipated growth and development facilitated by the proposed project could also occur adjacent to the Coalinga area in western Fresno County, where most oil production occurs in the Fresno COG Region. This growth could result in conflicts between existing or future oil production.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. With adherence of applicable local and state policies and the requirements set forth in **PMM MIN-1**, project impacts associated with the loss of availability of a locally important mineral resource recovery site would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts associated with the loss of availability of a locally important mineral resource recovery site are considered **significant and unavoidable** for the purposes of this analysis.

4.12.7 Level of Significance Prior to Mitigation

Prior to mitigation, the proposed project would have potentially significant impacts related to mineral resources.

4.12.8 Mitigation Measures

4.12.8.1 Fresno COG Measures

No regional mitigation measures are proposed for the Fresno COG pertaining to mineral resources. However, as appropriate and feasible, the Fresno COG will encourage the implementation of the project-specific mitigation strategy listed below.

4.12.8.2 Project-Specific Measures

The following mitigation measure would be applied to future transportation improvement and land development projects to reduce potentially significant impacts related to mineral resources to the extent feasible:

PMM MIN-1 Implementing agencies shall consider mitigation measures to reduce the loss of availability of a known mineral resource, as applicable and feasible:

- During construction, the Construction Contractor shall recycle and reuse building materials resulting from demolition, particularly aggregate and asphalt materials, to the maximum extent practicable.

- During construction, the Construction Contractor shall identify and use recycled building materials, particularly aggregate materials, from other construction sites within a reasonable hauling distance of the project, where feasible.

- During project design, the implementing agency shall evaluate the use of buffer zones or screening to reduce potential conflicts with adjacent or nearby mineral resource extraction areas.

- During project planning and design, the implementing agency shall evaluate and select project sites and design features (e.g., buffers) to avoid or minimize impacts on known mineral resources and mineral resource recovery sites. To the extent feasible, projects shall be sited to maintain portions of Mineral Resource Zone 2 (MRZ-2) in open space or other general plan land use designations and zoning that allow for mineral resource extraction.

4.12.9 Level of Significance After Mitigation

Implementation of **PMM MIN-1** would assist the Fresno COG and lead agencies of future transportation improvement projects and land use developments in reducing impacts related to mineral resources to the extent feasible. However, the analysis presented in this section is general in nature, and given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future transportation improvement projects and land use developments, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. As appropriate and feasible, the Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified. Nevertheless, impacts related to mineral resources are considered **significant and unavoidable** for the purposes of this analysis.

4.12.10 Cumulative Impacts

As defined in Section 15130 of the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for mineral resources.

The geographic area considered for cumulative impacts to mineral resources is the Fresno COG Region. A significant cumulative impact on mineral resources would occur if the proposed project would result in incremental effects when combined with the effects on mineral resources resulting from other projects in the region. As stated above, future transportation and land use development projects associated with the proposed project would cause loss of availability of known mineral resources. Future projects facilitated by the proposed project could encroach into MRZs and locally important resource recovery sites.

Additionally, the Fresno COG Region does not have a sufficient supply of aggregate to meet the current demand. Future projects, including all reasonably foreseeable cumulative developments within the

region, would likely exacerbate the strain on the region's aggregate supply. Under the proposed project, future developments would be required to comply with local general plans, specific plans, and other land use policies that provide mechanisms to protect MRZs designated under SMARA. Projects would also implement **PMM MIN-1**, which requires the efficient use of mineral and aggregate resources, maintaining access to recoverable deposits, recycling and reusing construction materials, designing infrastructure to preserve access to adjacent mineral resources, and preserving portions of MRZ-2 areas for future extraction, thereby minimizing impacts to locally important mineral resource sites to the extent feasible.

As stated above under Section 4.12.6, impacts of the proposed project related to mineral resources are considered significant and unavoidable given the programmatic nature of the proposed project, the scale of the Fresno COG Region, and the inability of the Fresno COG to enforce project-specific mitigation or make land use approvals. Because the proposed project would result in significant adverse environmental impacts with respect to mineral resources, these impacts would represent an incremental contribution to the environmental impacts of other cumulative or related projects, including other regional-scale plans, ultimately leading to a **cumulatively considerable impact** to mineral resources in the cumulative impact area.

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4.13 NOISE

This section of the Draft Program Environmental Impact Report (PEIR) discusses the existing noise environment within the Fresno Council of Governments (COG) Region and provides an analysis of the potential impacts of noise impacts resulting from implementation of the proposed 2026 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (proposed project). This section also discusses the fundamentals of sound and vibration; describes the existing noise and vibration settings/conditions; examines federal, State, and local noise guidelines, policies, and standards; evaluates potential noise impacts associated with the proposed project; and provides mitigation to reduce noise impacts.

4.13.1 Scoping Process

Potential impacts related to noise were not identified during the public scoping meeting held for the proposed project on May 28, 2025.

The Fresno COG received no comment letters in response to the Notice of Preparation (NOP) issued for the proposed project between May 13 and June 12, 2025, concerning the proposed project's potential impacts related to noise.

4.13.2 Methodology

Noise and vibration impacts were assessed based on thresholds of significance from Appendix G of the *State California Environmental Quality Act* (CEQA) *Guidelines*. This section analyzes the potential noise and vibration impacts of future transportation and land use development projects facilitated by the proposed project to the extent feasible. Since noise is a highly localized impact, specific and detailed analyses are most appropriate at the individual improvement project and new development project levels rather than the programmatic level that characterizes this PEIR.

Subsequent project-specific CEQA documents may be required to further analyze the transportation improvements or new development facilitated by the proposed project to determine the magnitude of noise and vibration impacts, and to identify appropriate project-specific mitigation measures.

4.13.2.1 Key Concepts

Characteristics of Sound. Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, and sleep.

To the human ear, sound has two significant characteristics: pitch and loudness. Pitch is generally an annoyance, while loudness can affect the ability to hear. Pitch is the number of complete vibrations, or cycles per second, of a wave, resulting in the tone's range from high to low. Loudness is the strength of a sound, describes a noisy or quiet environment, and is measured by the amplitude of the sound wave. Loudness is determined by the intensity of the sound waves combined with the reception characteristics of the human ear. Sound intensity is the average rate of sound energy transmitted through a unit of area perpendicular to the direction in which the sound waves are traveling. This characteristic of sound can be precisely measured with instruments. The analysis of

the project considers the Fresno COG Region's noise environment in terms of sound intensity and its potential effects on nearby sensitive land uses.

Measurement of Sound. Sound intensity is measured through the A-weighted scale to correct for the relative frequency response of the human ear. That is, an A-weighted noise level de-emphasizes low and very high frequencies of sound similar to the human ear's de-emphasis of these frequencies. Decibels (dB), unlike the linear scale (e.g., inches or pounds), is a scale based on powers of 10.

For example, 10 dB is 10 times more intense than 0 dB, 20 dB is 100 times more intense than 0 dB, and 30 dB is 1,000 times more intense than 0 dB. Thirty decibels (30 dB) represents 1,000 times as much acoustic energy as 0 dB. The decibel scale increases as the square of the change, representing the sound pressure energy. A sound as soft as human breathing is about 10 times greater than 0 dB. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. A 10 dB increase in sound level is perceived by the human ear as only a doubling of the loudness of the sound. Ambient sounds generally range from 30 dB (very quiet) to 100 dB (very loud).

Sound levels are generated from a source, and their decibel level decreases as the distance from that source increases. Sound dissipates exponentially with distance from the noise source. For a single-point source, sound levels decrease approximately 6 dB for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by stationary equipment. If noise is produced by a line source (e.g., highway traffic or railroad operations), the sound decreases 3 dB for each doubling of distance in a hard site environment. Similarly, line sources with intervening absorptive vegetation or line sources that are located at a great distance to the receptor would decrease 4.5 dB for each doubling of distance.

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. The equivalent continuous sound level (L_{eq}) is the total sound energy of time-varying noise over a sample period. However, the predominant rating scales for human communities in the State of California are the L_{eq} and Community Noise Equivalent Level (CNEL), or the day-night average noise level (L_{dn}) based on A-weighted decibels (dBA). CNEL is the time-varying noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours), and a 10 dBA weighting factor applied to noises occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale but without the adjustment for events occurring during the relaxation hours. CNEL and L_{dn} are within 1 dBA of each other and are normally interchangeable.

Other noise rating scales of importance, when assessing the annoyance factor, include the maximum instantaneous noise level (L_{max}), which is the highest exponential time-averaged sound level that occurs during a stated time period. The noise environments discussed in this analysis are specified in terms of L_{max} for short-term noise impacts. L_{max} reflects peak operating conditions and addresses the annoying aspects of intermittent noise. Another noise scale often used together with L_{max} in noise ordinances for enforcement purposes is noise standards in terms of percentile noise levels. For example, the L_{10} noise level represents the noise level exceeded 10 percent of the time during a

stated period. The L_{50} noise level represents the median noise level; half the time the noise level exceeds this level and half the time it is less. The L_{90} noise level represents the noise level exceeded 90 percent of the time and is considered the background noise level during a monitoring period. For a relatively constant noise source, L_{eq} and L_{50} are approximately the same.

Noise can be described in three categories. The first is audible noise, which refers to increases in noise levels noticeable to humans. Audible increases in noise levels generally refer to a change of 3 dB or greater since this level has been found to be barely perceptible in exterior environments. The second category, potentially audible, refers to a change in the noise level between 1 dB and 3 dB. This range of noise levels has been found to be noticeable only in laboratory environments. The last category is changes in noise levels of less than 1 dB, which are inaudible to the human ear. Only audible changes in existing ambient or background noise levels are considered potentially significant.

Physiological Effects of Noise. Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA.[1] Exposure to high noise levels affects the entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions and thereby affecting blood pressure and functions of the heart and the nervous system. In comparison, extended periods of noise exposure above 90 dBA would result in permanent cell damage. When the noise level reaches 120 dBA, a tickling sensation occurs in the human ear, even with short-term exposure. This level of noise is called the threshold of feeling. As the sound reaches 140 dBA, the tickling sensation is replaced by the feeling of pain in the ear. This is called the threshold of pain. A sound level of 160 to 165 dBA will potentially result in dizziness or loss of equilibrium. The ambient or background noise problem is widespread and generally more concentrated in urban areas than in outlying, less-developed areas. Table 4.13.A lists definitions of acoustical terms, and Table 4.13.B provides common sound levels and their noise sources.

Characteristics of Groundborne Vibration. Vibration refers to groundborne noise and perceptible motion. Groundborne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors. The motion may be discernible outdoors, but without the effects associated with the shaking of a building, there is less adverse reaction. Vibration energy propagates from a source through intervening soil and rock layers to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure. Building vibration may be perceived by occupants as the motion of building surfaces, the rattling of items on shelves or wall hangings, or a low-frequency rumbling noise. The rumbling noise is caused by the vibration of walls, floors, and ceilings radiating sound waves. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by 10 dB or less, which is an order of magnitude below the damage threshold for normal buildings.

[1] National Institute for Occupational Safety and Health. 1998. *Criteria for a recommended standard: Occupational noise exposure* (Revised criteria 1998). United States Department of Health and Human Services, Centers for Disease Control and Prevention. Website: https://stacks.cdc.gov/view/cdc/6376 (accessed March 2026).

Table 4.13.A: Definitions of Acoustical Terms

Term	Definition
Decibel, dB	A unit of noise level that denotes the ratio between two quantities that are proportional to power; the number of decibels is 10 times the logarithm (to the base 10) of this ratio.
Frequency, Hz	Of a function periodic in time, the number of times that the quantity repeats itself in 1 second (i.e., number of cycles per second).
A-Weighted Sound Level, dBA	The sound level obtained by use of A-weighting. The A-weighting filter de-emphasizes the very low- and very high-frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. (All sound levels in this report are A-weighted unless reported otherwise.)
L_2, L_8, L_{50}, L_{90}	The fast A-weighted noise levels that are equaled or exceeded by a fluctuating sound level 2 percent, 8 percent, 50 percent, and 90 percent of a stated time period.
Equivalent Continuous Noise Level, L_{eq}	The level of a steady sound that, in a stated time period and at a stated location, has the same A-weighted sound energy as the time-varying sound.
Community Noise Equivalent Level, CNEL	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 5 dB to sound levels occurring in the evening from 7:00 p.m. to 10:00 p.m. and after the addition of 10 dB to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
Day/Night Noise Level, L_{dn}	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 10 dB to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
L_{max}, L_{min}	The maximum and minimum A-weighted sound levels measured on a sound level meter during a designated time interval using fast-time averaging.
Ambient Noise Level	The all-encompassing noise associated with a given environment at a specified time; usually a composite of sound from many sources from many directions, near and far; no particular sound is dominant.
Intrusive	The noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends on its amplitude, duration, frequency, time of occurrence, and tonal or informational content, as well as the prevailing ambient noise level.

Source: Harris, Cyril M. 1991. *Handbook of Acoustical Measurements and Noise Control.*

Table 4.13.B: Common Sound Levels and Their Noise Sources

Noise Source	A-Weighted Sound Level in Decibels	Noise Environments	Subjective Evaluations
Near Jet Engine	140	Deafening	128 times as loud
Civil Defense Siren	130	Threshold of Pain	64 times as loud
Hard Rock Band	120	Threshold of Feeling	32 times as loud
Accelerating Motorcycle a Few Feet Away	110	Very Loud	16 times as loud
Pile Driver; Noisy Urban Street/Heavy City Traffic	100	Very Loud	8 times as loud
Ambulance Siren; Food Blender	95	Very Loud	—
Garbage Disposal	90	Very Loud	4 times as loud
Freight Cars; Living Room Music	85	Loud	—
Pneumatic Drill; Vacuum Cleaner	80	Loud	2 times as loud
Busy Restaurant	75	Moderately Loud	—
Near-Freeway Auto Traffic	70	Moderately Loud	Reference Level
Average Office	60	Quiet	½ as loud
Suburban Street	55	Quiet	—
Light Traffic; Soft Radio Music in Apartment	50	Quiet	¼ as loud
Large Transformer	45	Quiet	—
Average Residence without Stereo Playing	40	Faint	⅛ as loud
Soft Whisper	30	Faint	—
Rustling Leaves	20	Very Faint	—
Human Breathing	10	Very Faint	Threshold of Hearing
—	0	Very Faint	—

Source: Compiled by LSA. 2004.

Typical sources of ground-borne vibration are construction activities (e.g., blasting, pile driving, and operating heavy-duty earthmoving equipment), steel-wheeled trains, and occasional traffic on rough roads. Problems with both ground-borne vibration and noise from these sources are usually localized to areas within approximately 100 feet from the vibration source, although there are examples of ground-borne vibration causing interference out to distances greater than 200 feet.[2] When roadways are smooth, vibration from traffic, even heavy trucks, is rarely perceptible. It is assumed for most projects that the roadway surface will be smooth enough that ground-borne vibration from street traffic will not exceed the impact criteria; however, both construction of projects and freight train operations could result in ground-borne vibration that may be perceptible and annoying.

Ground-borne noise is not likely to be a problem because noise arriving via the normal airborne path will usually be greater than ground-borne noise. Ground-borne vibration has the potential to disturb people and damage buildings. Although it is very rare for train-induced ground-borne vibration to cause even cosmetic building damage, it is not uncommon for construction processes (e.g., blasting and pile driving) to cause vibration of sufficient amplitudes to damage nearby buildings.[3] Ground-borne vibration is usually measured in terms of vibration velocity, either the root-mean-square (RMS) velocity or peak particle velocity (PPV). The RMS velocity is best for characterizing human response to building vibration, and PPV is used to characterize potential for damage. Decibel notation acts to compress the range of numbers required to describe vibration.

4.13.3 Existing Environmental Setting

4.13.3.1 Existing Noise Environment

Roadway traffic from highways is the most pervasive source of noise throughout the Fresno COG Region. Other expressways and arterials within the Fresno COG Region also have substantial local influences on noise levels. The most intense traffic noise sources tend to be those with heavy truck traffic and/or high proportions of nighttime traffic. Besides roadway noise, railroads, airports, and fixed sources of noise also affect localities throughout the Fresno COG Region.

Ground Transportation. Traffic is the main source of transportation noise in the Fresno COG Region. Traffic noise exposure is mainly a function of the number of vehicles on a given roadway per day, the speed of those vehicles, the percentage of medium and heavy trucks in the traffic volume, and the receiver's proximity to the roadway. Noise levels would be typically highest along major arterials, highways, and freeways within the Fresno COG Region. Noise levels between 150 to 175 feet from such roadways in the Fresno COG Region typically average around 75 dBA. Interstate (I-)5 and State Route (SR-)99 are major routes that generally run in a north-south direction. SR-33, SR-41, SR-43, SR-63, SR-145, and SR-245 also provide north-south access, while SR-168, SR-180, SR-198, and SR-201 generally run in an east-west direction. In addition, many city and County roads are used for commuting, agricultural, recreational, and scenic purposes.[4]

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2 Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment Manual* (FTA Manual). FTA Report 0123. Office of Planning and Environment. September.

3 Ibid.

4 County of Fresno. 2023. *Program Environmental Impact Report Public Review Draft. Fresno County General Plan Review and Zoning Ordinance Update*. April.

Rail Noise. The Fresno COG Region is affected by noise generated by freight and passenger railroad operations along the San Joaquin Amtrak route, Union Pacific Railroad (UPRR) railroad lines, BNSF Railway (BNSF) railroad lines, San Joaquin Valley Railroad lines, and Tulare Valley Railroad lines.[5] While these operations may generate significant noise levels in the immediate vicinity of the railroad tracks during train passage, these operations are intermittent and the tracks are widely dispersed throughout the region, with the majority of the tracks located within rural areas away from sensitive receptors. For these reasons, the contribution of railroad noise to the overall ambient noise environment in the region is relatively small.

The two mainline rail operators in the Fresno COG Region are UPRR and BNSF. Numerous freight train operations per day occur on the UPRR and BNSF lines that extend from their respective yards in the City of Fresno to points north and south of the region. There are approximately 14 daily train movements along the UPRR line in the Fresno COG Region and approximately 42 daily train movements along the BNSF line, including a total of 14 daily passenger rail operations.[6] High noise impacts can be expected within approximately 100 feet of the mainline railroad tracks, moderate impacts from 100 to 700 feet, and low impacts at distances greater than about 700 feet. However, the above-noted impacts may be lesser or greater depending on site-specific factors such as soundwalls, grade crossings, and topographic shielding. Less than significant noise impacts can be expected adjacent to the several branch lines in the Fresno COG Region.

Additionally, future implementation of high-speed rail (HSR) service in the Fresno COG Region is anticipated. The California HSR Authority is responsible for planning, designing, building, and operation of the first HSR system in the nation. California HSR will pass through the Fresno COG Region and connect the major cities of the State, which would create a new source of transportation noise. By 2029, plans call for a system that will run from San Francisco to Los Angeles in under 3 hours at speeds of over 200 miles per hour. The system is planned to eventually extend to Sacramento and San Diego, totaling 800 miles with up to 24 stations.

Aviation. The Fresno COG Region has nine public use airports, with the Fresno Yosemite International Airport being the primary passenger airport facility in the region. In addition to Fresno Yosemite International Airport, the other airports in the region are Fresno Chandler Downtown Airport, Coalinga Airport, Firebaugh Municipal Airport, Mendota Municipal Airport, Reedley Municipal Airport, Harris Ranch Airport, Selma Aerodrome, and Sierra Sky Park Airport. The Fresno COG Region also has 26 private and military airports. In addition to the numerous daily aircraft operations that start and end at these airports daily, overflights of the area by aircraft not utilizing the regional airports frequently occur. All of these operations contribute to the overall ambient noise environment in the County. The intensity of aircraft noise exposure depends on one's proximity to the aircraft flight path, the type, speed, and altitude of aircraft, and atmospheric conditions. The farther away the noise source is, the more weather affects how sound travels.

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5 County of Fresno. 2023. *Program Environmental Impact Report Public Review Draft. Fresno County General Plan Review and Zoning Ordinance Update*. April.

6 Fresno Council of Governments (COG). 2022. *Draft Program Environmental Impact Report for the Fresno COG 2022 RTP/SCS*. April.

Airport noise contours have been established for all public airport facilities in the Fresno COG Region and are consistent with the Federal Aviation Administration (FAA) Integrated Noise Model. Airport noise contour maps show noise levels generated by airport traffic at varying distances to nearby land uses. Noise contours for existing and future conditions at each of the airports are contained in various plans or studies, including: airport master plans, airport land use compatibility plans, comprehensive airport land use plans, airspace plans, and airport layout plans. Each of these plans or studies includes implementation goals, objectives, and policies and/or recommendations to lessen noise impacts.

Land Use Development Noise Sources. There are a wide variety of industrial and other non-transportation noise sources in the County, including heavy industrial or manufacturing operations, power plants, food packaging and processing facilities, lumber mills, aggregate mining and processing plants, racetracks, shooting ranges, amphitheaters, and car washes. Noise generated by these sources varies substantially but can provide a greater contribution to the local ambient noise environment than traffic depending on the nature of the noise source. Although non-transportation noise sources can define the ambient noise environment within a given distance to the noise source, the regional ambient noise environment is, nonetheless, defined primarily by traffic.

4.13.4 Regulatory Setting

Federal, State, and local regulations and programs related to noise that are applicable to the proposed project are described below.

4.13.4.1 Federal Regulations

United States Noise Control Act. In 1972, Congress enacted the United States Noise Control Act. This act authorized the United States Environmental Protection Agency (EPA) to publish descriptive data on the effects of noise and establish levels of sound "requisite to protect the public welfare with an adequate margin of safety." These levels are separated into health (hearing loss levels) and welfare (annoyance levels), as shown in Table 4.13.C. The EPA cautions that these identified levels are not standards because they do not take into account the cost or feasibility of the levels.

Table 4.13.C: Summary of EPA Noise Levels

Effect	Level	Area
Hearing loss	$L_{eq}(24) \leq 70$ dB	All areas
Outdoor activity interference and annoyance	$L_{dn} \leq 55$ dB	Outdoors in residential areas and farms and other outdoor areas where people spend widely varying amounts of time and other places in which quiet is a basis for use
	$L_{eq}(24) \leq 55$ dB	Outdoor areas where people spend limited amounts of time, such as school yards, playgrounds, etc.
Indoor activity interference and annoyance	$L_{eq} \leq 45$ dB	Indoor residential areas
	$L_{eq}(24) \leq 45$ dB	Other indoor areas with human activities such as schools, etc.

Source: EPA. 1974. *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety.* March.
dB = decibels
EPA = United States Environmental Protection Agency
L_{eq} = equivalent continuous sound level
$L_{eq}(24)$ = equivalent continuous sound level (duration of 24 hours)

For protection against hearing loss, 96 percent of a population would be protected if sound levels were less than or equal to an $L_{eq}(24)$ of 70 dBA. The "(24)" signifies an L_{eq} duration of 24 hours. The EPA activity and interference guidelines are designed to ensure reliable speech communication at about 5 feet in the outdoor environment. For outdoor and indoor environments, interference with activity and annoyance should not occur if levels are below 55 dBA and 45 dBA, respectively.

Table 4.13.D summarizes the noise effects associated with an outdoor L_{dn} of 55 dBA. At 55 dBA L_{dn}, 95 percent sentence clarity (intelligibility) may be expected at 11 feet, with no community reaction (i.e., no complaints or actions from the community). However, 1 percent of the population may complain about noise at this level, and 17 percent may indicate annoyance.

Table 4.13.D: Summary of Human Effects in Areas Exposed to 55 dBA CNEL

Type of Effect	Magnitude of Effect
Speech – Indoors	100 percent sentence intelligibility (average) with a 5 dB margin of safety
Speech – Outdoors	100 percent sentence intelligibility (average) at 0.35 meter (1.14 feet) 99 percent sentence intelligibility (average) at 1.0 meter (3.28 feet) 95 percent sentence intelligibility (average) at 3.5 meters (11.5 feet)
Average Community Reaction	None evident; 7 dB below level of significant complaints and threats of legal action and at least 16 dB below "vigorous action"
Complaints	1 percent dependent on attitude and other non-level-related factors
Annoyance	17 percent dependent on attitude and other non-level-related factors
Attitude Towards Area	Noise essentially the least important of various factors

Source: EPA. 1974. *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety.* March.
CNEL = Community Noise Equivalent Level
dB = decibels
dBA = A-weighted decibels
EPA = United States Environmental Protection Agency

Federal Transit Administration. The construction noise and vibration criteria included in the Federal Transit Administration's (FTA) Transit Noise and Vibration Impact Assessment Manual (FTA Manual)[7] are generally used to evaluate potential noise and vibration impacts for jurisdictions that have not yet adopted specific standards. Table 4.13.E shows the FTA's Detailed Assessment Daytime Construction Noise Criteria. The criteria for environmental impact from ground-borne vibration are based on the maximum levels for a single event and the RMS vibration level. Table 4.13.F provides the criteria for assessing the potential for interference or annoyance from vibration levels in a building, while Table 4.13.G lists the potential vibration building damage criteria associated with construction activities.

[7] Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment Manual.* FTA Report No. 0123. September. Website: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf (accessed March 2026).

Table 4.13.E: Detailed Assessment Daytime Construction Noise Criteria

Land Use	Daytime 8-hour L_{eq} (dBA)
Residential	80
Commercial	85
Industrial	90

Source: Federal Transit Administration. 2018. *Transit Noise and Vibration Impact Assessment Manual*.
dBA = A-weighted decibels
L_{eq} = equivalent continuous sound level

Table 4.13.F: Interpretation of Vibration Criteria for Detailed Analysis

Land Use	Max L_v (VdB)[1]	Description of Use
Workshop	90	Vibration that is distinctly felt. Appropriate for workshops and similar areas not as sensitive to vibration.
Office	84	Vibration that can be felt. Appropriate for office and similar areas not as sensitive to vibration.
Residential Day	78	Vibration that is barely felt. Adequate for computer equipment and low-power optical microscopes (up to 20X).
Residential Night and Operating Rooms	72	Vibration is not felt, but groundborne noise may be audible inside quiet rooms. Suitable for medium-power optical microscopes (100X) and other equipment of low sensitivity.

Source: Federal Transit Administration. 2018. *Transit Noise and Vibration Impact Assessment Manual*.
[1] As measured in 1/3-octave bands of frequency over the frequency range 8 to 80 hertz.
Hz = hertz VdB = vibration velocity decibels
L_V = velocity in decibels

Table 4.13.G: Construction Vibration Damage Criteria

Building Category	PPV (in/sec)
Reinforced concrete, steel, or timber (no plaster)	0.50
Engineered concrete and masonry (no plaster)	0.30
Non-engineered timber and masonry buildings	0.20
Buildings extremely susceptible to vibration damage	0.12

Source: Federal Transit Administration. 2018. *Transit Noise and Vibration Impact Assessment Manual*.
in/sec = inch/inches per second PPV = peak particle velocity

Federal Highway Administration Noise Abatement Criteria. The Federal Highway Administration (FHWA) has established noise abatement criteria (NAC) that must be considered for the design of federal or federally funded highway projects, which are codified in 23 Code of Federal Regulations (CFR) 772, "Procedures for Abatement of Highway Traffic Noise and Construction Noise." The absolute noise levels where abatement must be considered are provided in Table 4.13.H, below. 23 CFR 772 does not specifically define what constitutes a substantial increase or the term approach; rather, it leaves interpretation of these terms to the states. In California, a substantial noise increase is considered to occur when the project's predicted worst-hour design-year noise level exceeds the existing worst-hour noise level by 12 dBA or more. Typically, before adoption of a final environmental

document, the California Department of Transportation (Caltrans) identifies noise abatement measures that are feasible and reasonable as well as noise impacts for which no apparent solution is available.

Federal Aviation Administration Noise Standards. FAA has established noise standards for each aircraft type based on weight, model, and number of engines (14 CFR 36). Under 14 CFR 150, local airport authorities are encouraged to create noise exposure maps to show land uses incompatible with high airport-related noise levels.

Table 4.13.H: Noise Abatement Criteria Hourly A-Weighted Sound Level in Decibels (dBA)

Activity Category	$L_{eq}(h)$	$L_{10}(h)$[1]	Description of Activity Category
A	57 (Exterior)	60 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B[2]	67 (Exterior)	70 (Exterior)	Residential.
C[2]	67 (Exterior)	70 (Exterior)	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52 (Interior)	55 (Interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E[2]	72 (Exterior)	75 (Exterior)	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A–D or F.
F	--	--	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	--	--	Undeveloped lands that are not permitted.

Source: Federal Highway Administration. Title 23, Part 772 of the Code of Federal Regulations.
Note: Either $L_{eq}(h)$ or $L_{10}(h)$ (but not both) may be used on a project.
[1] The $L_{eq}(h)$ and $L_{10}(h)$ Activity Criteria values are for impact determination only and are not design standards for noise abatement measures.
[2] Includes undeveloped lands permitted for this activity category.
dBA = A-weighted decibels
L_{10} = the sound level that is exceeded 10 percent of the time (the 90th percentile) for the period under consideration.
$L_{10}(h)$ = the hourly value of L_{10}.
L_{eq} = equivalent continuous sound level
$L_{eq}(h)$ = hourly equivalent continuous sound level

4.13.4.2 State Regulations

State of California Green Building Standards Code. The State of California's Green Building Standards Code (CALGreen) contains mandatory measures for non-residential building construction in Section 5.507 on Environmental Comfort. These noise standards are applied to new construction in California for controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when non-residential structures are developed in

areas where the exterior noise levels exceed 65 dBA CNEL or L_{dn}, such as within a noise contour of an airport, freeway, railroad, or other noise source. If the development falls within an airport or freeway 65 dBA CNEL or L_{dn} noise contour, buildings shall be constructed to provide an interior noise level environment attributable to exterior sources that does not exceed an hourly equivalent level of 50 dBA L_{eq} in occupied areas during any hour of operation.

State of California Noise Insulation Standard. The State of California's noise insulation standards are codified in the California Code of Regulations (CCR), Title 24, Building Standards Administrative Code, Part 2, and the California Building Code. These noise standards are applied to new construction in California for the purpose of controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when noise-sensitive structures, such as residential buildings, schools, or hospitals, are developed near major transportation noise sources, and where such noise sources create an exterior noise level of 60 dBA CNEL or higher. Acoustical studies that accompany building plans for noise-sensitive land uses must demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable noise levels. For new residential buildings, schools, and hospitals, the acceptable interior noise limit for new construction is 45 dBA CNEL.

California Health and Safety Code, Division 28, Noise Control Act. The California Noise Control Act states that excessive noise is a serious hazard to public health and welfare and that it is the policy of the State to provide an environment for all Californians that is free from noise that jeopardizes their health or welfare. The goal is to minimize the number of people that would be exposed to excessive noise but not create an environment completely free from any noise.

California Department of Transportation Standards. Vibration standards included in the 2020 Caltrans *Transportation and Construction Vibration Guidance Manual*[8] (Caltrans Manual) are used in this analysis for groundborne vibration impacts on human annoyance and building damage. The criteria for environmental impact from groundborne vibration are based on the maximum levels for a single event and the RMS vibration level. Table 4.13.I provides the criteria for assessing the potential for interference or annoyance from vibration levels in a building, whereas Table 4.13.J lists the potential vibration building damage criteria associated with construction activities, as suggested in the Caltrans Manual.

State of California Airport Noise Standards. The State of California has established Airport Noise Standards (21 CCR), which identify a noise exposure level of 65 dB CNEL as the boundary for noise impacts in the vicinity of airports. Local airport authorities are required to ensure that all land uses within this noise impact boundary are compatible with aircraft noise or have received a variance from the Caltrans Division of Aeronautics.

[8] California Department of Transportation (Caltrans). 2020. *Transportation and Construction Guidance Manual.* April. Website: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf (accessed March 2026).

Table 4.13.I: Interpretation of Vibration Criteria for Detailed Analysis

Human Response	Vibration Level (RMS in/sec)
Barely perceptible	0.01
Distinctly perceptible	0.04
Strongly perceptible	0.10
Severe	0.40

Source: California Department of Transportation. 2020. *Transportation and Construction Vibration Guidance Manual*.
in/sec = inch/inches per second RMS = root-mean-square

Table 4.13.J: Construction Vibration Damage Criteria

Structure/Condition	PPV (in/sec)
Extremely fragile historic buildings, ruins, ancient monuments	0.08
Fragile buildings	0.10
Historic and some old buildings	0.25
Older residential structures	0.30
New residential structures	0.50
Modern industrial/commercial buildings	0.50

Source: California Department of Transportation. 2020. *Transportation and Construction Vibration Guidance Manual*. Table 19
in/sec = inch/inches per second PPV = peak particle velocity

4.13.4.3 Regional Regulations

County of Fresno Code of Ordinances. Chapter 8.40, Noise Control, of the County Code of Ordinances establishes the County's noise regulations "to protect persons from excessive levels of noise within or near a residence, school, church, hospital or public library and to warn persons of the hazards of excessive noise in places of public entertainment."

Table 4.13.K, below, shows the Fresno COG Region's exterior and interior noise level limits for noise from one property to an affected single- or multiple-family residence, school, hospital, church, or public library in either the incorporated or unincorporated area.

Section 8.40.060 of the County Code of Ordinances limits construction activities to not take place between the hours of 9:00 p.m. and 6:00 a.m. on any day except Saturday or Sunday, or between 5:00 p.m. and 7:00 a.m. on Saturday or Sunday. Construction during the allowable hours is exempt from the noise level limits specified in Chapter 8.40.

Table 4.13.K: Fresno COG Region—Noise Standards

Category	Cumulative Number of Minutes in Any 1-Hour Time Period	Noise Level Standards, dBA	
		Daytime (7:00 a.m. to 10:00 p.m.)	Nighttime (10:00 p.m. to 7:00 a.m.)
Exterior Noise Standards			
1	30	50	45
2	15	55	50
3	5	60	55
4	1	65	60
5	0	70	65
Interior Noise Standards			
1	5	45	35
2	1	50	40
3	0	55	45

Source: County of Fresno. n.d. Fresno County, California – Code of Ordinances. Sections 8.40.040 (Exterior Noise Standards) and 8.40.050 (Interior noise standards).
Note: In the event the measured ambient noise level exceeds the applicable noise level standard in any category above, the applicable standard shall be adjusted so as to equal the ambient noise level. Each of the noise level standards specified above shall be reduced by 5 dBA for simple-tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. If the intruding noise source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient noise level can be measured, the noise level measured while the source is in operation shall be compared directly to the noise level standards.
COG = Council of Governments dBA = A-weighted decibels

4.13.4.4 Local Regulations

Local General Plans. The Fresno COG Region contains Fresno County and 15 incorporated cities, each with an individual general plan prepared pursuant to California Government Code Section 65300. Each general plan contains goals and policies related to noise within the particular jurisdiction. Although general plan element titles may vary, this information is typically found within the general plan safety element, or equivalent.

Local Municipal Codes. As with the County, cities within the Fresno COG Region have established noise ordinances within their respective municipal codes. Each noise ordinance typically contains exterior and interior noise standards as well as allowable hours for noise-generating activities such as construction.

Airport Plans and Studies. Pursuant to 14 CFR 150, each airport within the Fresno COG Region has prepared noise contours to delineate applicable airport noise impact boundaries. These contours, as well as other policies and strategies for noise reduction, can be found in each airport's Airport Master Plan/Land Use Compatibility Plan, or equivalent.

4.13.5 Thresholds of Significance

The following thresholds of significance are based on Appendix G of the *State CEQA Guidelines*. Based on these thresholds, implementation of the proposed project would have a significant adverse impact with respect to noise if it would:

Threshold 4.13.1: Result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards

established in the local general plan or noise ordinance, or applicable standards of other agencies;

Threshold 4.13.2: Result in the generation of excessive groundborne vibration or groundborne noise levels; or

Threshold 4.13.3: 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, expose people residing or working in the project area to excessive noise levels.

4.13.6 Project Impacts

The following discussion describes the potential impacts resulting from implementation of the proposed project with regard to noise.

Threshold 4.13.1: Would the project result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Significant and Unavoidable Impact. Implementation of the proposed project would facilitate future transportation improvements and land use developments that could result in a substantial increase in temporary or permanent ambient noise levels in excess of standards established in the applicable local general plan, noise ordinance, or other relevant agency standard. Future projects contemplated under the proposed project include improvements across all transportation modes, including motor vehicles, transit (commuter and local), rail (commuter and interregional), goods movement (rail freight and trucking), bicycle and pedestrian facilities, aviation systems, and transportation systems management (TSM) programs. Additionally, as growth and development occur under the proposed project, member agencies would review development proposals for consistency with applicable plans, policies, and regulations.

Construction. The construction of future transportation improvements and land use development projects could cause short-term noise impacts. Construction-related noise would be associated with demolition, clearing, site preparation, grading, building, paving, and other construction-related activities. Construction impacts would be temporary and localized in nature. As detailed in Section 2.13.3, Environmental Setting, noise levels, including construction-related noise, dissipate rapidly from the source. Therefore, sensitive land uses closest to construction would be of greatest concern when evaluating construction noise.

Construction could require the use of heavy-duty equipment (e.g., bulldozers, backhoes) that generates noise at levels substantially higher than existing conditions. Construction-related noise impacts would depend on the type of equipment, the extent of construction, proximity to existing sensitive land uses, and applicable noise standards. Construction activities could affect individual receptors for short periods of time as elevated noise levels would only occur temporarily in the location where the construction occurs. Some future projects may require

nighttime construction. Such activity could result in greater disturbance to nearby receptors since residents are generally more susceptible to noise disturbance at night.

Table 4.13.L, below, summarizes typical construction noise levels for various pieces of construction equipment. However, noise effects from construction activities depend on several factors, including the types of surrounding land uses, the duration and type of construction activities, the distance between source and receptor, existing ambient noise levels, and the presence or absence of barriers between source and receptor.

Table 4.13.L: Typical Maximum Construction Equipment Noise Levels (L_{max})

Type of Equipment	Acoustical Use Factor[1]	Maximum Sound Levels for Analysis (dBA L_{max} at 50 ft)
Backhoe	40	80
Compactor (ground)	20	80
Compressor (air)	40	80
Concrete Mixer Truck	40	85
Concrete Saw	20	90
Crane	16	85
Dozer	40	85
Dump Truck	40	84
Excavator	40	85
Flatbed Truck	40	84
Forklift	20	85
Front-End Loader	40	80
Grader	40	85
Impact Pile Driver	20	95
Jackhammer	20	85
Paver	50	85
Pickup Truck	40	55
Pneumatic Tools	50	85
Pump	50	77
Rock Drill	20	85
Roller	20	85
Scraper	40	85
Tractor	40	84
Welder	40	73

Source: Federal Highway Administration. 2006. *Highway Construction Noise Handbook*.
Note: The noise levels reported in this table are rounded to the nearest whole number.
[1] Usage factor is the percentage of time during a construction noise operation that a piece of construction equipment is operating at full power.
[2] Maximum noise levels were developed based on Spec 721.560 from the CA/T program to be consistent with the City of Boston, Massachusetts, Noise Code for the "Big Dig" project.
CA/T = Central Artery/Tunnel
FHWA = Federal Highway Administration
ft = foot/feet
L_{max} = maximum instantaneous noise level

Due to the regional scale of the proposed project and the programmatic nature of this analysis, specific construction details, including the location, timing, and type/number of equipment for individual transportation and land use development projects, are not available. As described in Chapter 3.0, Project Description, the Fresno COG selected Scenario C (Enhanced Transit and Smart Growth) as the preferred project scenario. One focal point of this scenario is sustainable

urban growth, focusing on existing urban centers and established areas, and supporting higher-density growth through mixed-use development. Under this approach, new land use development would be prioritized within urban centers via infill, mixed-use development, and other strategies, which would help shift growth away from agricultural and rural areas of the Fresno COG Region. Concentrating growth in higher-density areas could result in construction activities occurring primarily in areas with existing noise-sensitive receptors, such as residences, schools, parks, and other receptors, resulting in conflicts with applicable local general plans, noise ordinances, or other relevant agency standards.

As shown above in Table 4.13.L, noise levels associated with individual pieces of construction equipment could range between 73 and 95 dBA L_{max} at a distance of 50 feet. The initial site preparation and grading phase of projects typically generate the highest noise levels because the noisiest construction equipment is earthmoving equipment. This equipment includes excavating machinery such as backfillers, bulldozers, draglines, and front loaders. Earthmoving and compacting equipment includes compactors, scrapers, and graders. Construction activities generating the highest noise levels would typically involve the simultaneous operation of a grader, bulldozer, and water truck, generating approximately 85, 85, and 55 dBA L_{max}, respectively, at a distance of 50 feet. Assuming that each piece of construction equipment operates at some distance from the other equipment, the worst-case combined noise level during this phase of construction would be 88 dBA L_{max} at a distance of 50 feet from the active construction area. Based on a usage factor of 40 percent, the worst-case combined noise level during this phase of construction would be 84 dBA L_{eq} at a distance of 50 feet from the active construction area. Proposed projects may require the use of pile drivers, which generate noise levels of approximately 95 dBA L_{max} at 50 feet. If pile driving occurs simultaneously with the nosiest phase of construction with a usage factor of 20 percent, the worst-case combined noise level could reach up to 96 dBA L_{max} (89 dBA L_{eq}) at a distance of 50 feet. Although noise generated by project construction activities would be higher than the ambient noise levels and may result in a temporary increase in the ambient noise levels, construction noise would stop once project construction is completed. In addition, depending on the distance from sensitive land uses to project construction activities, construction noise would have the potential to exceed construction noise standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Accordingly, implementation of **Project-Specific Mitigation Measure (PMM) NOI-1**, which includes noise-reduction measures to minimize construction noise levels, would require that the construction contractor: limit project construction activities to the permitted hours established by the applicable local jurisdiction regulations in the general plan noise element or noise ordinance; erect a 10-foot-high temporary construction barrier between project construction activities and noise-sensitive land uses; implement pile-driving alternatives to minimize construction noise impacts, including, but not limited to, pre-drilling and cast-in-drilled-hole (CIDH) methods; and post the construction schedule, noise complaint procedures, and project contact information in a publicly accessible location for reference in the event of a noise disturbance. As such, implementation of **PMM NOI-1**, would reduce potential impacts associated with construction-related noise to the extent feasible.

As described in Chapter 3.0, Project Description, the design of each transportation improvement project and land use development facilitated by the proposed project is currently unknown. Therefore, this analysis represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. With implementation of project-level measures to address potential construction noise impacts, consistent with **PMM NOI-1**, and adherence to standards established in the local general plan or noise ordinance, or applicable standards of other agencies, noise impacts related to implementation of the proposed project would be reduced to the extent feasible. Given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. As such, potential impacts associated with construction-related noise are considered **significant and unavoidable** for the purposes of this analysis.

Traffic Noise. Transportation projects would have the potential to increase traffic noise from new or expanded transportation facilities. Land development under the proposed project would have the potential to increase traffic noise generated from new trips. There would be increases in traffic volumes on some roadways in the region and decreases on others, depending on the land use development relative to the local roadway system.

As stated, in Section 4.13.3, Existing Environmental Setting, noise levels are typically highest along major arterials, highways, and freeways within the Fresno COG Region, at approximately 75 dBA. I-5 and SR-99 are major routes that generally run in a north-south direction. SR-33, SR-41, SR-43, SR-63, SR-145, and SR-245 also provide north-south access, while SR-168, SR-180, SR-198, and SR-201 generally run in an east-west direction.[9] Traffic noise would increase from transportation and land development under the proposed project. This could result in a substantial increase in ambient noise levels exceeding standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Traffic noise impacts from the proposed project would depend on several factors, such as the type of project and adjacent land use. Traffic noise levels would fluctuate depending on traffic volume, vehicle speed, vehicle mix, location, and distance from the roadway to sensitive receptors, as well as the presence of intervening objects. A doubling of traffic generally corresponds to a 3 dBA increase in noise level, which is barely perceptible to the human ear in an outdoor environment. Most major transportation facilities do not have the capacity to double traffic volumes. As a result, a 3 dBA noise increase is generally not expected under the proposed project. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans,

[9] County of Fresno. 2023. *Program Environmental Impact Report Public Review Draft. Fresno County General Plan Review and Zoning Ordinance Update*. April.

local jurisdictions, and other responsible agencies with jurisdiction over each project site. As such, potential impacts associated with noise are considered **significant and unavoidable** for the purposes of this analysis

Stationary Noise. Implementation of the proposed project would result in new transportation projects and mixture of new development and redevelopment throughout the Fresno COG Region. While the exact magnitude of increased noise is unknown, it is foreseeable that noise associated with new transportation projects and land developments could introduce noise levels that exceed standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Stationary noise sources from transportation projects could include transit or bus stations, maintenance yards or shops, power substations, and parking facilities. Stationary noise sources from land development such as residential, commercial, and industrial uses include heating, ventilation, and air conditioning (HVAC) equipment; swimming pool equipment; generators; drive-thru menu board speakerphones; truck loading docks; parking activities; and car wash operations. These long-term stationary noise sources could exceed standards established in the local general plan or noise ordinance, or applicable standards of other agencies if noise-sensitive land uses are located nearby.

Implementation of **PMM NOI-2** would require preparation of a project-level noise study by a qualified acoustical consultant in accordance with the applicable guidelines, procedures, and requirements. This study would determine whether project noise levels would result in a substantial permanent increase in ambient noise levels exceeding standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Pursuant to **PMM NOI-2**, the lead agency shall prepare a project-level noise study during project design to assess potential stationary noise impacts from transportation and land development projects. The study would recommend avoidance, minimization, and/or mitigation measures, including, but are not limited to: locating stationary noise sources on the site to be shielded by structures (buildings, enclosures, or soundwalls) or using equipment that has a quieter rating. Accordingly, implementation of **PMM NOI-2** would reduce stationary noise impacts associated with operations of the proposed project to the extent feasible.

As described in Chapter 3.0, Project Description, the design of each transportation improvement project and land use development facilitated by the proposed project is currently unknown. Therefore, this analysis represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. With implementation of **PMM NOI-2** and adherence to applicable local noise standards, noise impacts would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. As such, potential impacts associated with noise are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.13.2: Would the project result in the generation of excessive groundborne vibration or groundborne noise levels?

Significant and Unavoidable Impact.

Construction. Construction impacts would be temporary and localized in nature. Future transportation or land development projects could result in temporary vibration impacts from grading, paving, clearing, landscaping, staging, excavation, earthmoving, and other related construction activities. These types of construction activities typically require the use of heavy-duty construction equipment such as backhoes, jackhammers, and vehicles that generate vibration in the immediate vicinity of the source. Construction activities may result in varying degrees of temporary ground vibration, depending on the specific construction equipment used and activities involved.

The effects of vibration generated by construction activities depend on several factors, including the duration and type of construction activities and the distance between source and receptor. Table 4.13.M summarizes vibration levels at a distance of 25 feet for each type of standard construction equipment.

Table 4.13.M: Vibration Source Amplitudes for Construction Equipment

Equipment	Reference PPV (in/sec) at 25 feet	Approximate VdB at 25 feet
Pile Driver (Impact), Typical	0.644	104
Pile Driver (Sonic), Typical	0.170	93
Vibratory Roller	0.210	94
Hoe Ram	0.089	87
Large Bulldozer	0.089	87
Caisson Drilling	0.089	87
Loaded Trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Source: Federal Transit Administration. 2018. *Transit Noise and Vibration Impact Assessment Manual, Table 7-4*.
in/sec = inches per second PPV = peak particle velocity VdB = vibration velocity decibels

Depending on the distance from structures surrounding the project site to the construction equipment, construction activities would have the potential to result in excessive vibration levels in terms of building structure damage and/or annoyance based on construction vibration standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Implementation of **PMM NOI-3** would restrict heavy construction (e.g., pile driving, blasting, large bulldozers, and loaded trucks) or require the use of light construction equipment (e.g., pre-drilling, CIDH, small bulldozers and trucks) at a distance from off-site structures. **PMM NOI-3** would also require that loaded trucks be routed away from residential streets or select streets with the fewest homes. Accordingly, implementation of **PMM-NOI-3** would reduce construction vibration levels to avoid potential damage and minimize annoyance to the extent feasible.

Operation. Land uses generate different amounts of vibration and groundborne noise. For example, industrial uses generate substantially more groundborne vibration and groundborne noise than residential and commercial uses. Industrial land uses often operate machinery and other vibration-generating equipment. However, the amount of vibration produced is not anticipated to be excessive, as workplace vibration is typically addressed from an occupational health and safety perspective. As with noise, vibration dissipates with distance from the source; thus, surrounding off-site land uses would not likely be affected. Normal operation of residential, commercial, and mixed-use buildings would not be expected to generate excessive groundborne vibration or groundborne noise.

New development associated with the proposed project would occur in accordance with adopted land use plans and zoning ordinances, which typically prohibit vibration-intensive land uses (e.g., industrial) within incompatible (e.g., residential) zones. For these reasons, the groundborne vibration and groundborne noise impacts related to the land use pattern from implementation of the proposed project are not anticipated to exceed applicable thresholds for building damage or annoyance.

Transportation infrastructure projects generate varying levels of groundborne vibration and groundborne noise. Traffic, especially heavy truck traffic, can be a source of groundborne vibration and groundborne noise. However, such vibration is rarely high enough to cause building damage or result in annoyance. Rubber tires and suspension systems of on-road vehicles reduce vibration. Rail operations, including freight and light-rail trains, can also be a source of vibration. The proposed project would increase transit-related vibration as transit lines are expanded and service frequency is increased. However, vibration levels would vary greatly, depending on the type of transit facility and proximity to existing sensitive land uses. Existing development could be exposed to increased vibration occurring adjacent to new or expanded rail lines, such as those used by the UPRR line, which has approximately 14 daily train movements, and the BNSF line, which has approximately 42 daily train movements, including a total of 14 daily passenger rail operations.[10] The FTA provides recommended vibration levels for various land use types based on the frequency of exposure from vibration events, such as the number of trains passing by a sensitive land use. The FTA-recommended level for which human disturbance would occur in response to frequent vibration events is 72 vibration velocity decibels (VdB).[11] Based on the Generalized Ground Surface Vibration Curves graph shown in the FTA guidance, developments within 200 feet of a railroad could be exposed to vibration levels that exceed the recommended threshold for human disturbance of 72 VdB for frequent vibration events.[12] The degree of increased vibration exposure would depend on the type (diesel or electric powered), frequency of rail pass-by events, and existing soil conditions. Expanding or building new transit lines in unserved areas would result in a new vibration source that could result in excessive vibration levels that exceed FTA vibration standards.

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10 Fresno Council of Governments (COG). 2022. *Draft Program Environmental Impact Report for the Fresno COG 2022 RTP/SC*S. April.

11 Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment Manual*. September.

12 Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment Manual.* Figure 6-4, Generalized Ground Surface Vibration Curves. September.

The specific attributes of projects under each proposed project scenario are currently unknown. As such, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. With implementation of project-level measures to address potential vibration impacts, consistent with **PMM NOI-4**, and adherence to applicable vibration standards, vibration impacts from operations of the proposed project would be reduced to the extent feasible. Given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. As such, potential vibration impacts are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.13.3: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the Project area to excessive noise levels?

Significant and Unavoidable Impact. Public airports typically service entire regions, whereas smaller private airports or airstrips tend to serve local users. However, like other noise sources, noise from airports and aircraft flight events has the greatest effect on nearby land uses. There are nine public-use airports in the Fresno COG Region that serve commercial and general aviation users, including the following:

- Coalinga Municipal Airport (C80)
- Firebaugh Airport (F34)
- Fresno Chandler Executive Airport (FCH)
- Fresno Yosemite International Airport (FAT)
- Harris Ranch Airport (308)
- Reedley Municipal Airport (032)
- Selma Airport (0Q4)
- Sierra Sky Park Airport (E79)
- William Robert Johnston Municipal Airport (M90)

The majority of public airports in the region are located in or near urbanized areas, where the proposed project anticipates land use development. All of these airports and airfields have an active ALUCP or equivalent to discourage incompatible land uses in the vicinity of the airport. The FAA Part 150 program encourages airports to prepare noise exposure maps showing land uses incompatible with high noise levels, which are often incorporated into the ALUCP. For example, the Fresno Yosemite International Airport ALUCP includes surrounding land uses within the 60 to 75 dBA CNEL contour for airport operations. Noise contours in this ALUCP indicate that existing development is already located within the 65 and 70 dBA CNEL contours.

According to the Fresno COG ALUCP, standard residential land uses are considered conditionally compatible in areas exposed to 60 to 64 dBA CNEL if: (1) an avigation easement is required as a condition of development approval or building permit issuance, and (2) sound insulation is provided to reduce interior noise levels by at least 25 dB. Within the 65 to 70 dBA CNEL range, residential dwellings are incompatible and generally not allowable, although exceptions for infill development may be permitted per ALUCP policy. Within the 75 CNEL contour, all residential, public/institutional,

and commercial uses are incompatible and not allowable, while industrial and agricultural uses are considered compatible.

Accordingly, future development under the proposed project could occur in areas exposed to 65 to 70 dBA CNEL, exceeding the recommended airport noise threshold of 65 dBA CNEL for residential land uses. In addition to exterior noise, increases in interior noise levels near airports have the potential to cause sleep disturbance at nearby sensitive land uses. Local land use compatibility standards contained in city and county general plans typically dictate whether site-specific review is required for sensitive land uses in areas potentially affected by aircraft noise. Given the regional scale of the proposed project, forecasted land use patterns could result in exposure to exterior and interior noise levels from existing airports or airstrips that exceed applicable thresholds.

Transportation projects completed under the proposed project would not involve the introduction of residential or employment uses in the project area. Therefore, no receptors would be exposed to excessive noise levels generated by nearby aircraft as a result of future transportation projects.

As described in Chapter 3.0, Project Description, the design of each transportation improvement project and land use development facilitated by the proposed project is currently unknown. Therefore, this analysis represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. With implementation of the Fresno COG ALUCP's guidelines and noise compatibility criteria, impacts related to excessive noise levels from airports would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. As such, potential impacts associated with aircraft noise are considered **significant and unavoidable** for the purposes of this analysis.

4.13.7 Mitigation Measures

4.13.7.1 Fresno COG Measures

No regional mitigation measures are proposed for the Fresno COG pertaining to noise and vibration. However, as appropriate and feasible, the Fresno COG will encourage the implementation of the project-specific mitigation strategies listed below.

4.13.7.2 Project-Specific Measures

The following mitigation measures would be applied to future transportation improvement and land use development projects to reduce potentially significant impacts related to noise to the extent feasible:

PMM NOI-1 Implementing agencies shall consider mitigation measures to reduce construction noise impacts to levels at or below those established in the General Plan Noise

Ordinance or other applicable standards (such as the Federal Transit Administration [FTA] construction noise criteria), as applicable and feasible:

- The Construction Contractor shall limit project construction activities to the permitted hours of construction in accordance with local jurisdiction regulations in the applicable general plan noise element or noise ordinance.
- The Construction Contractor shall erect a minimum 10-foot-high temporary construction barrier between project construction activities and noise-sensitive land uses when construction noise is predicted to exceed local or project-specific noise thresholds or during high-noise activities. The barrier shall be continuous with no gaps or holes and may be constructed of any material with a minimum Sound Transmission Class (STC) rating of 28.
- To the extent feasible, the Construction Contractor shall schedule heavy construction activities generating high noise levels, such as the use of bulldozers, scrapers, graders, and pile driving, to the least noise-sensitive hour of the day.
- To the extent feasible, the Construction Contractor shall implement pile driving alternatives to minimize construction noise impacts. These include, but are not limited to, pre-drilling and cast-in-drill-hole (CIDH).
- The Construction Contractor shall stage all stationary construction equipment as far from noise-sensitive receptors as feasible.
- To the extent feasible, construction-related traffic shall be routed away from streets with noise-sensitive land uses, including residences, or to streets with the fewest noise-sensitive land uses.
- The Construction Contractor shall ensure that all construction equipment is properly maintained per manufacturers' specifications and fitted with the best available noise suppression devices (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds, whenever feasible). All intake and exhaust ports on power equipment shall be muffled or shielded.
- To the extent feasible, the Construction Contractor shall use hydraulically or electrically powered tools (e.g., jack hammers, pavement breakers, and rock drills).
- The Construction Contractor shall post the construction schedule, noise complaint procedures, and project contact information in a publicly accessible location for reference in the event of a noise disturbance.

PMM NOI-2 Implementing agencies shall consider mitigation measures to reduce potential stationary noise impacts, as applicable and feasible:

- During project design of individual RTP/SCS projects, the implementing agency shall require the project sponsor to retain a qualified acoustical consultant to prepare a project-level noise study to assess potential stationary noise impacts from transportation and land development projects. The study shall be prepared in accordance with the applicable guidelines, procedures, and requirements. It shall determine whether project noise levels would result in a substantial permanent increase in ambient noise levels exceeding standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Further, the study shall recommend avoidance, minimization, and/or mitigation measures to reduce noise levels to the extent feasible. Noise reduction measures may include, but are not limited to:
    - Locating stationary noise sources on the site to be shielded by structures (e.g., buildings, enclosures, or soundwalls); and
    - Using equipment with lower noise emission ratings.

PMM NOI-3 Implementing agencies shall consider mitigation measures to reduce to reduce excessive groundborne vibration or groundborne noise levels during construction, as applicable and feasible:

- Heavy construction (e.g., pile driving, blasting, large bulldozers, and loaded trucks) shall be restricted or the use of light construction equipment (e.g., pre-drilling, CIDH, small bulldozers and trucks) shall be required at a distance from off-site building structures that avoids potential damage and minimizes annoyance to the extent feasible.
- Loaded trucks shall be routed away from residential streets or select streets with the fewest homes to the extent feasible.

PMM NOI-4 Implementing agencies shall consider mitigation measures to reduce operational vibration levels, as applicable and feasible:

The implementing agency shall ensure implementation of applicable mitigation procedures provided in Table 4.13.N of this Program Environmental Impact Report (PEIR) to reduce operational vibration levels. Mitigation may occur at the source, along the propagation path, or at the receiver. If the mitigation procedures listed in Table 4.13.N are not feasible at certain properties, the implementing agency shall attempt to negotiate a vibration easement with affected property owners or, where feasible, consider relocation of sensitive receptors outside the area subject to significant vibration impacts.

Table 4.13.N: Potential Vibration Mitigation Procedures and Descriptions

Mitigation Procedure	Location of Mitigation	Description
Maintenance	Source	Rail condition monitoring systems with rail grinding on a regular basis. Wheel truing to re-contour the wheel, provide a smooth running surface, and remove wheel flats. Reconditioning vehicles. Installing wheel condition monitoring systems.
Location and Design of Special Trackwork	Source	Careful review of crossover and turnout locations during the preliminary engineering stage. When feasible, relocate special trackwork to a less vibration-sensitive area. Installation of spring frogs eliminates gaps at crossovers and helps reduce vibration levels.
Vehicle Suspension	Source	Rail vehicle should have a low unsprung weight, soft primary suspension, minimum metal-on-metal contact between moving parts of the truck, and smooth wheels that are perfectly round.
Special Track Support Systems	Source	Floating slabs, resiliently supported ties, high-resilience fasteners, resilient sub-roadbed materials, and ballast mats all help reduce vibration levels from the track support system.
Building Modifications	Receiver	For existing buildings, if vibration-sensitive equipment is affected by train vibration, the floor upon which the vibration-sensitive equipment is located could be stiffened and isolated from the remainder of the building. For new buildings, the building foundation should be supported by elastomer pads that are similar to bridge-bearing pads.
Trenches	Along Vibration Propagation Path	A trench can be an effective vibration barrier if it changes the propagation characteristics of the soil. It can be open or solid. Open trenches can be filled with Styrofoam. Solid barriers can be constructed with sheet piling. Rows of drilled shafts can be filled with either concrete or a mixture of soil and lime, or concrete poured into a trench.
Operational Changes	Source	Reduce vehicle speed. Adjust nighttime schedules to minimize train movements during sensitive hours. Operating restrictions require continuous monitoring and may not be practical.
Buffer Zones	Receiver	Negotiate a vibration easement from the affected property owners or expand the rail right-of-way.

Source: Federal Railroad Administration. 2012. *High-Speed Ground Transportation Noise and Vibration Assessment.*

4.13.8 Level of Significance After Mitigation

While implementation of **PMMs NOI-1** through **NOI-4** would assist the Fresno COG and lead agencies of future transportation improvement projects and land use developments in reducing impacts related to noise and vibration to the extent feasible, the analysis presented in this section is general in nature, and given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future transportation improvement projects and land use developments, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. As appropriate and feasible, the Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified. Nevertheless, impacts related to noise and vibration are considered significant and unavoidable for the purposes of this analysis.

4.13.9 Cumulative Impacts

As defined in Section 15130 of the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for noise.

The cumulative impact analysis area for noise and vibration consists of the Fresno COG Region. Buildout of the future projects contemplated under the project, along with construction of related projects in the region, would introduce construction activities to the Fresno COG Region that could potentially result in a substantial temporary increase in ambient noise levels. Construction activities would typically occur intermittently and vary depending on the nature or phase of construction, although noise ranges are usually similar across all construction phases. Depending on the equipment required, noise levels associated with construction activities typically range from 73 to 95 dBA L_{max} at 50 feet. Future construction activities would most likely occur at different locations throughout the Fresno COG Region and the surrounding vicinity. Although scheduling of some construction activities would likely overlap, development facilitated by the proposed project would occur over a number of years. This distribution of individual projects would reduce the potential for compounding of construction noise. Additionally, future developments would undergo environmental review under CEQA to evaluate project-specific construction noise impacts and identify any required mitigation. Each individual project contemplated under the proposed project would be required to comply with standards established in the local general plan or noise ordinance, or applicable standards of other agencies, including the FTA construction noise standards. Additionally, although implementation of **PMM NOI-1** would assist the Fresno COG and lead agencies of future transportation improvement projects and land use developments in reducing construction noise impacts to the extent feasible, cumulative impacts related to noise generated from future project construction associated with the proposed project would result in **significant cumulative impacts.**

As discussed above, future project-related construction activities could generate ground-borne vibration on site above the significance criteria. Ground-borne vibration generated from cumulative projects in the Fresno COG Region would be required to undergo environmental review under CEQA to determine project-specific impacts and any required mitigation measures on a project-by-project basis. Additionally, each individual project contemplated under the proposed project would be required to determine whether project construction activities would have the potential to result in excessive vibration levels in terms of building structure damage and/or annoyance based on construction vibration standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Although implementation of **PMM NOI-3** would assist the Fresno COG and lead agencies of future transportation improvement projects and land use developments in reducing vibration impacts to the extent feasible, cumulative vibration levels generated from future project construction associated with the proposed project would result in significant cumulative impacts.

Project-related cumulative noise impacts would occur if the proposed project's contribution to cumulative noise increases results in a substantial noise increase in comparison to existing conditions. As discussed above, the proposed project could facilitate a substantial noise increase greater than 3 dBA due to traffic noise. Traffic noise generated from cumulative development

projects would be required to implement any required mitigation measures on a project-by-project basis, as applicable, pursuant to CEQA provisions.

Although cumulative development could occur in proximity to future development facilitated by implementation of the proposed project, each project would require separate discretionary approval and CEQA analysis, which would address potential noise impacts and identify necessary attenuation measures, where appropriate. Any new on-site HVAC units and associated equipment associated with future project sites would be acoustically engineered with appropriate procurement specifications, sound enclosures, and parapet walls to minimize noise, all in accordance with local noise standards, to ensure that such equipment's noise impacts would be reduced to the extent feasible. Other stationary sources for residential, office, and commercial uses include truck deliveries and parking lot activity, and any other sources of stationary noise at a project site would also be subject to the standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Additionally, as noise dissipates as it travels away from its source, noise impacts from stationary sources would be limited to each of the respective sites and their vicinities; however, given to the scale of the proposed project, the proposed project and any cumulative development in the Fresno COG Region Specific Plan Area could result in a significant cumulative impact.

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4.14 POPULATION AND HOUSING

This section of the Draft Program Environmental Impact Report (PEIR) describes existing population and housing conditions within the Fresno Council of Governments (COG) Region and evaluates potential impacts associated with the implementation of the proposed 2026 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (proposed project). Specifically, this section assesses whether the proposed project would induce substantial population growth, displace existing housing or residents, or otherwise affect the availability of housing within the Fresno COG Region. The analysis also considers consistency with applicable federal, State, and local plans, policies, and growth management strategies related to population and housing.

4.14.1 Scoping Process

Potential impacts related to population and housing were not identified during the public scoping meeting held for the proposed project on May 28, 2025.

The Fresno COG received no comment letters in response to the Notice of Preparation (NOP) issued for the proposed project between May 13 and June 12, 2025, concerning the proposed project's potential impacts related to population and housing.

4.14.2 Methodology

Regional demographic information, in conjunction with data from the United States Census Bureau, the California Department of Finance (DOF), and the Fresno COG Fresno County 2023 to 2060 Growth Projections, were used to describe the existing and projected future population, employment, and housing characteristics in the Fresno COG Region. Demographic and socioeconomic data from these sources are relatively consistent; however, since each uses different methods of data collection and analysis, data do not always have the same results and may not represent the same data year. Accordingly, the population, housing, and employment numbers used in this analysis vary somewhat, depending on the source. Despite these differences, the data used represent the best available data sources and provide a meaningful description of the population and housing characteristics of the Fresno COG Region.

Population and housing data from United States Census Bureau, DOF, and Fresno COG were used to evaluate potential impacts related to unplanned growth and displacement of people or housing that could result from implementation of the proposed project to the extent feasible. Specifically, this section analyzes the potential for future transportation and land use development projects facilitated by the proposed project to affect population or housing. It should be noted that the evaluation of impacts presented in this section is based on general descriptions of projects and subsequent project-specific Environmental Impact Reports (EIRs) will be required to further analyze the transportation improvements or new developments facilitated by the proposed project to determine the magnitude of population and housing impacts, as well as to identify appropriate project-specific mitigation measures.

4.14.2.1 Key Concepts

The definitions below are derived from the United States Census Bureau Glossary.[1]

- **Population:** All people, children and adults, living in a given geographic area.

- **Housing Unit:** A house, an apartment, a mobile home or trailer, a group of rooms, or a single room occupied as separate living quarters, or if vacant, intended for occupancy as separate living quarters. Separate living quarters are those in which the occupants live separately from any other individuals in the building and which have direct access from outside the building or through a common hall. For vacant units, the criteria of separateness and direct access are applied to the intended occupants whenever possible.

- **Household:** A household includes all the people who occupy a housing unit (such as a house or apartment) as their usual place of residence. A household includes the related family members and all the unrelated people, if any, such as lodgers, foster children, wards, or employees who share the housing unit. A person living alone in a housing unit, or a group of unrelated people sharing a housing unit such as partners or roomers, is also counted as a household. The count of households excludes group quarters. There are two major categories of households, "family" and "nonfamily."

- **Employment:** Paid employment consists of full- and part-time employees, including salaried officers and executives of corporations, who were on the payroll in the pay period including March 12. Included are employees on sick leave, holidays, and vacations; not included are proprietors and partners of unincorporated businesses.

- **Unemployed:** All civilians 16 years old and over are classified as unemployed if they (1) were neither "at work" nor "with a job but not at work" during the reference week; (2) were actively looking for work during the last 4 weeks; and (3) were available to accept a job. Also included as unemployed are civilians who did not work at all during the reference week, were waiting to be called back to a job from which they had been laid off, and were available for work except for temporary illness.

- **Race:** The data on race were derived from answers to the question on race. The United States Census Bureau collects race data in accordance with guidelines provided by the United States Office of Management and Budget (OMB), and these data are based on self-identification. The racial categories included in the census questionnaire generally reflect a social definition of race recognized in this country and are not an attempt to define race biologically, anthropologically, or genetically. In addition, it is recognized that the categories of the race question include race and national origin or sociocultural groups. OMB requires that race data be collected for a minimum of five groups: White, Black or African American, American Indian or Alaska Native,

[1] United States Census Bureau. Glossary. Website: https://www.census.gov/glossary/ (accessed March 11, 2026).

Asian, and Native Hawaiian or Other Pacific Islander. OMB permits the Census Bureau to also use a sixth category—Some Other Race. Respondents may report more than one race.

- **Ethnicity:** The United States Census Bureau adheres to OMB's definition of ethnicity. There are two minimum categories for ethnicity: Hispanic or Latino and Not Hispanic or Latino. OMB considers race and Hispanic origin to be two separate and distinct concepts. Hispanics and Latinos may be of any race.

- **Household Income:** Household income refers to the sum of the income of all people 15 years and older living in the household. A household includes related family members and all the unrelated people, if any, such as lodgers, foster children, wards, or employees who share the housing unit. A person living alone in a housing unit, or a group of unrelated people sharing a housing unit, is also counted as a household.

- **Poverty:** Following OMB's Directive 14, the Census Bureau uses a set of money income thresholds that vary by family size and composition to determine who is in poverty. If the total income for a family or unrelated individual falls below the relevant poverty threshold, then the family (and every individual in it) or unrelated individual is considered in poverty.

- **Jobs-to-Housing Ratio:** Pursuant to Government Code Section 65890.1, State land use patterns that balance the location of employment-generating uses with residential uses should be encouraged so that employment-related commuting is minimized. Jobs/housing balance is a regional concept that encourages the designation and zoning of sufficient vacant land for residential uses with appropriate standards to ensure that adequate housing is available to serve the needs derived from the local employment base. The jobs-to-housing ratio can be used as the general measure of balance between a community's employment opportunities and the housing needs of its residents. Theoretically, a jurisdiction's jobs-to-housing ratio (employed residents to housing units) would be 1:1 if the number of employed residents were equivalent to the number of households. However, assuming a simple ratio of one job to one household is inappropriate in modern economies that have many households with more than one person in the workforce.

4.14.3 Existing Environmental Setting

The Fresno COG updates its growth forecasts for housing, population, and employment on a regular basis to assist with transportation and air quality planning efforts, particularly for updating the RTP/SCS. The 2022 RTP/SCS was based on the Fresno County 2019 to 2050 Growth Projections, while the proposed 2026 RTP/SCS is based on the Fresno County 2023 to 2060 Growth Projections.[2] The Fresno COG prepared these growth projections using information from the DOF, the 2020 Census, outreach to jurisdictions within the Fresno COG Region, and other recent statistics.

4.14.3.1 Overall Changes in Growth Projection Patterns

As described in the Fresno County 2022 to 2060 Growth Projections, the latest data from the California DOF indicates that overall growth in the State will be slower than previously projected. In Fresno County, the projected overall population is now anticipated to be 7 percent lower in 2035 and

[2] Fresno Council of Governments (COG). 2024. Fresno County 2023–2060 Growth Projections. October 17.

9 percent lower in 2050 than projected in the Fresno County 2019 to 2050 Growth Projections. This would translate to a 53 percent lower growth rate from 2020 to 2035 and a 45 percent lower growth rate from 2020 to 2050. This downward population projection adjustment is primarily attributed to the 2020 decennial Census results used as a new benchmark, the impact of COVID-19, declining fertility, and an aging population.

4.14.3.2 Population

As described in Section 3.0, Project Description, the Fresno COG Region encompasses approximately 5,963 square miles of land in the central San Joaquin Valley. As of January 1, 2025, the estimated population of Fresno County is approximately 1,037,053 individuals.[3] This represents approximately 2.6 percent of the State's total estimated population of 39,529,101.[4]

The Fresno COG Region's population and population growth are mostly concentrated in the County's cities. In particular, the City of Fresno accounts for a considerable portion of the County's population growth, either through annexations or new development.[5] As of January 1, 2025, approximately 54 percent[6] of the Fresno COG Region's population resides in Fresno and approximately 13 percent[7] resides in Clovis, the County's second-largest city.

Refer to Table 4.14.A, below, for a breakdown of the Fresno COG Region's existing and projected population, including projected growth rates, based on jurisdiction Sphere of Influence (SOI).

[3] California Department of Finance (DOF). 2025. *Report E-1 & E-1H: Population and Housing Estimates for Cities, Counties, and the State, January 1, 2024 and 2025.* May 1. Website: https://dof.ca.gov/Forecasting/Demographics/estimates-e1/ (accessed January 12, 2025).

[4] (1,037,053 ÷ 39,529,101) × 100 = approximately 2.6 percent.

[5] County of Fresno. 2023. *General Plan Review and Zoning Ordinance Update Program Environmental Impact Report, Public Review Draft.* April. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/environmental-impact-reports/1_draft-program-environmen.pdf (accessed January 12, 2025).

[6] (557,032 ÷ 1,037,053) × 100 = approximately 53.7 percent.

[7] (129,191 ÷ 1,037,053) × 100 = approximately 12.5 percent.

Table 4.14.A: Total Population Projections by Jurisdiction SOI (2022–2060)

Jurisdiction SOI	2022	2025	2030	2035	2040	2045	2050	2055	2060	2022–2060 Change	2022–2060 Annual Growth Rate
Clovis	126,960	129,050	136,500	142,490	148,310	153,300	156,650	158,000	157,380	30,420	0.6%
Coalinga	17,290	17,300	17,530	17,770	17,990	18,190	18,320	18,370	18,350	1,050	0.2%
Firebaugh	8,420	8,410	8,670	8,830	8,990	9,120	9,210	9,250	9,230	810	0.2%
Fowler	7,310	7,660	8,240	8,910	9,550	10,110	10,480	10,630	10,560	3,250	1.0%
Fresno	592,280	595,370	605,800	617,840	629,520	639,540	646,260	648,980	647,730	55,450	0.2%
Huron	6,170	6,230	6,260	6,390	6,520	6,630	6,710	6,740	6,720	560	0.2%
Kerman	16,830	17,360	18,510	19,650	20,750	21,700	22,340	22,600	22,480	5,650	0.8%
Kingsburg	12,750	13,210	13,750	14,550	15,340	16,010	16,460	16,650	16,560	3,810	0.7%
Mendota	12,500	12,530	13,070	13,400	13,710	13,980	14,170	14,240	14,210	1,710	0.3%
Orange Cove	9,590	9,600	9,670	9,780	9,890	9,990	10,050	10,070	10,060	470	0.1%
Parlier	15,030	15,040	15,060	15,200	15,340	15,450	15,530	15,560	15,550	520	0.1%
Reedley	25,290	25,830	25,900	26,740	27,550	28,250	28,710	28,900	28,820	3,520	0.3%
Sanger	27,040	27,040	27,540	27,940	28,330	28,670	28,900	28,990	28,940	1,910	0.2%
San Joaquin	3,670	3,610	3,640	3,670	3,700	3,720	3,740	3,750	3,740	80	<0.1%
Selma	26,540	26,650	28,250	29,150	30,030	30,790	31,290	31,490	31,400	4,860	0.4%
Unincorporated	102,880	103,050	103,280	104,290	105,280	106,120	106,680	106,910	106,800	3,920	0.1%
Total Fresno COG Region	**1,010,550**	**1,017,950**	**1,041,670**	**1,066,610**	**1,090,820**	**1,111,570**	**1,125,490**	**1,131,120**	**1,128,530**	**117,980**	**0.3%**

Source: Fresno COG and Applied Development Economics, Inc. 2024. *Fresno County 2023-2060 Growth Projections.* October 17. Table 2.
COG = Council of Governments
SOI = Sphere of Influence

As shown in Table 4.14.A, above, each jurisdiction within the Fresno COG Region is projected to experience a positive population growth rate between 2022 and 2060. The cities anticipated to experience the highest growth rates are Fowler (1 percent) and Kerman (0.8 percent). In general, the Fresno COG Region's incorporated cities are anticipated to experience more growth than unincorporated portions of the Fresno COG Region.

4.14.3.3 Housing

A household is defined by the DOF and the United States Census Bureau as a group of people who occupy a housing unit.[8] A household differs from a dwelling unit because the number of dwelling units includes both occupied and vacant dwelling units.

As described in Section 4.11, Land Use and Planning, of this Draft PEIR, residential land uses within the Fresno COG Region consist of a variety of household types, including rural residential, detached single-family, multi-family (duplexes, apartments, etc.), planned unit developments, condominiums, and mobile homes. Additionally, a portion of the Fresno COG Region's residents reside in group quarters, which include correctional facilities, dormitories, and nursing homes. Table 4.14.B, below, provides a breakdown of the Fresno COG Region's existing and projected households, including projected growth rates, based on jurisdiction.

As shown in Table 4.14.B, each jurisdiction within the Fresno COG Region is projected to experience a positive growth in households between 2022 and 2060. The City of Fresno (20,934 households) and the City of Clovis (11,607 households) are projected to experience the largest growth in number of households within the Fresno COG Region.

[8] United States Census Bureau. Subject Definitions. Website: https://www.census.gov/programs-surveys/cps/technical-documentation/subject-definitions.html#household (accessed December 11, 2025).

Table 4.14.B: Total Household Projections by Jurisdiction (2022–2060)

Jurisdiction	2022	2025	2030	2035	2040	2045	2050	2055	2060	2022–2060 Change
Clovis*	45,318	46,841	49,705	51,888	53,645	55,264	56,470	57,149	56,924	11,607
Coalinga*	4,304	4,372	4,517	4,660	4,760	4,812	4,859	4,890	4,883	579
Firebaugh*	2,238	2,280	2,358	2,401	2,427	2,455	2,479	2,497	2,492	255
Fowler*	2,271	2,421	2,614	2,825	3,009	3,173	3,289	3,348	3,326	1,055
Fresno*	195,577	197,366	203,870	207,914	210,426	213,059	215,297	216,928	216,511	20,934
Huron*	1,588	1,635	1,647	1,682	1,705	1,728	1,747	1,761	1,757	169
Kerman*	4,705	4,947	5,293	5,619	5,896	6,145	6,325	6,420	6,386	1,681
Kingsburg*	4,441	4,692	4,899	5,187	5,430	5,650	5,809	5,893	5,863	1,422
Mendota*	2,851	2,909	3,045	3,121	3,173	3,225	3,267	3,295	3,288	437
Orange Cove*	2,439	2,480	2,506	2,535	2,546	2,562	2,578	2,593	2,590	151
Parlier*	3,768	3,825	3,844	3,879	3,888	3,904	3,924	3,945	3,941	173
Reedley*	7,244	7,506	7,549	7,793	7,976	8,150	8,285	8,368	8,343	1,099
Sanger*	7,815	7,962	8,133	8,252	8,312	8,382	8,448	8,503	8,491	676
San Joaquin*	902	913	922	929	930	934	938	943	942	39
Selma*	7,614	7,809	8,303	8,569	8,768	8,958	9,104	9,195	9,167	1,553
Unincorporated	33,951	33,938	33,992	34,324	34,414	34,573	34,756	34,947	34,913	962
Total Fresno COG Region	**327,027**	**331,896**	**343,198**	**351,580**	**357,305**	**362,973**	**367,576**	**370,674**	**369,819**	**42,792**

Source: Fresno COG and Applied Development Economics, Inc. 2024. *Fresno County 2023-2060 Growth Projections.* October 17. Table 4.
*Includes Sphere of Influence
COG = Council of Governments

Housing Characteristics. Housing characteristics include type (single-family, multi-family, etc.) and size (number of occupants). As previously described, in addition to the Fresno COG Region residents living in traditional households, a portion of the region's population is housed in group quarters. Specifically, as of 2022, there were 991,830 individuals living in traditional households, with 18,720 individuals living in group quarters. Table 4.14.C, below, provides a detailed breakdown of the projected household types and sizes within the Fresno COG Region.

Table 4.14.C: Household Type and Size Projections (2022–2060)

Year	Total Fresno COG Region Population	Household Population	Group Quarter Population	Number of Households	Average Household Size
2022	1,010,550	991,830	18,710	327,030	3.03
2025	1,017,950	999,150	18,800	331,990	3.01
2030	1,041,670	1,022,250	19,420	343,200	2.98
2035	1,066,610	1,047,050	19,560	351,590	2.98
2040	1,090,820	1,071,120	19,700	357,300	2.99
2045	1,111,570	1,091,630	19,940	362,970	3.00
2050	1,125,490	1,105,380	20,110	367,580	3.00
2055	1,131,120	1,110,930	20,190	370,670	2.99
2060	1,128,530	1,108,390	20,140	369,820	2.99
2022–2060 Change	117,980	116,560	1,420	42,790	-0.04
2022–2060 Annual Growth Rate	0.3%	0.3%	0.2%	0.3%	-

Source: Fresno COG and Applied Development Economics, Inc. 2024. *Fresno County 2023–2060 Growth Projections.* October 17. Table 3.
COG = Council of Governments

As shown in Table 4.14.C, the growth rate for residents living in households is similar to, but slightly larger than, the growth rate for residents living in group quarters within the Fresno COG Region. In addition, the average household size is anticipated to decrease slightly, by approximately 0.04 percent within the Fresno COG Region between 2022 and 2060.

Future Housing Demand. Based on a variety of factors, including the population and household growth projections presented above, the Fresno COG has calculated the projected long-term demand for new residential units within the Fresno COG Region. Table 4.14.D, below, presents the projected demand for both single-family and multi-family housing units in the Fresno COG Region from 2022 to 2060.

Table 4.14.D: Projected Market Demand for New Housing Units by Type, 2022–2060

Jurisdiction	New Unit Demand 2022–2060	Single-Family Housing Units	Multi-Family Housing Units
Clovis*	12,700	10,740	1,960
Coalinga*	930	480	450
Firebaugh*	570	400	170
Fowler*	1,180	920	270
Fresno*	37,600	24,070	13,530
Huron*	620	240	390
Kerman*	2,620	2,330	290
Kingsburg*	1,630	1,200	440
Mendota*	1,350	1,190	160
Orange Cove*	580	330	240
Parlier*	650	500	150
Reedley*	1,990	1,250	740
Sanger*	1,620	1,140	480
San Joaquin*	220	210	10
Selma*	2,360	2,240	120
Unincorporated	2,850	2,690	160
Fresno COG Region	69,470	49,900	19,560

Source: *Fresno Council of Governments; COG and Applied Development Economics, Inc. 2024. Fresno County 2023–2060 Growth Projections*. October 17. Table 5.
*Includes Sphere of Influence
COG = Council of Governments

As shown in Table 4.14.D, the majority (72 percent) of new housing demand is anticipated to be single-family units, while the remaining 28 percent would be multi-family units within the Fresno COG Region. The cities with the highest projected demand for new housing units are Fresno (13,530 units) and Clovis (1,960 units).

4.14.3.4 Employment

The Fresno COG growth forecasts predict a steady increase in employment opportunities within the Fresno COG Region and all cities within the region between 2022 and 2060, as shown below in Table 4.14.E. The city projected to experience the lowest increase is San Joaquin, in which 40 new employment opportunities would be created between 2022 and 2060. The city projected to experience the greatest increase is Fresno, in which 36,660 new employment opportunities would be created between 2022 and 2060. However, these growth amounts are generally proportional to the overall employment within each city. Each city's share of the region's overall employment is projected to remain generally the same, with several exceptions. The shares of employment of the cities of Fresno and San Joaquin would decrease slightly from 62.7 percent to 61.8 percent and from 0.2 percent to 0.1 percent, respectively. Conversely, the City of Kerman's share would increase slightly from 1.0 to 1.1, the City of Selma's share would increase slightly from 2.2 percent to 2.7 percent, and the unincorporated region's share would increase from 14.2 percent to 14.6 percent.

These projections are used as a reference point for discussing employment growth as it relates to overall project-related growth throughout this section.

Table 4.14.E: Total Employment Projections by Jurisdiction (2022–2060)

Jurisdiction	2022	2025	2030	2035	2040	2045	2050	2055	2060	2022 Share	2060 Share
Clovis*	40,550	41,260	43,220	44,860	46,580	48,130	49,430	50,390	51,050	9.8%	9.8%
Coalinga*	5,010	5,020	5,100	5170	5,250	5,320	5,380	5,420	5,460	1.2%	1.2%
Firebaugh*	2,230	2,160	2,320	2,450	2,590	2,720	2,840	2,950	3,050	0.5%	0.5%
Fowler*	3,990	4,190	4,390	4,680	5,000	5,290	5,590	5,810	6,010	1.0%	1.0%
Fresno*	260,210	260,420	265,950	271,760	277,970	283,670	288,820	293,150	296,870	62.7%	61.8%
Huron*	1,080	1,140	1,170	1,230	1,280	1,340	1,390	1,430	1,460	0.3%	0.3%
Kerman*	4,320	4,560	4,860	5,160	5,470	5,760	5,990	6,170	6,280	1.0%	1.1%
Kingsburg*	5,240	5,320	5,580	5,880	6,210	6,500	6,760	6,970	7,140	1.3%	1.3%
Mendota*	1,830	1,820	1,960	2,060	2,160	2,250	2,330	2,390	2,430	0.4%	0.4%
Orange Cove*	960	970	990	1,020	1,050	1,080	1,100	1,120	1,130	0.2%	0.2%
Parlier*	2,550	2,540	2,610	2,700	2,790	2,880	2,970	3,040	3,100	0.6%	0.6%
Reedley*	8,120	8,400	8,520	8,800	9,100	9,370	9,610	9,800	9,940	2.0%	2.0%
Sanger*	9,800	9,720	10,050	10,340	10,660	10,960	11,240	11,480	11,700	2.4%	2.3%
San Joaquin*	650	630	640	640	660	670	680	690	690	0.2%	0.1%
Selma*	9,280	11,510	12,490	11,320	11,670	12,000	12,290	12,520	12,710	2.2%	2.7%
Unincorporated	58,920	61,480	62,890	64,580	66,360	68,910	69,910	71,450	72,900	14.2%	14.6%
Total Fresno COG Region	**414,750**	**421,140**	**432,740**	**442,600**	**454,800**	**466,150**	**476,330**	**484,780**	**491,920**	**100.0%**	**100.0%**

Source: Fresno COG and Applied Development Economics, Inc. 2024. Fresno County 2023-2060 Growth Projections. October 17. Table 11.
*Includes Sphere of Influence
COG = Council of Governments

4.14.3.5 Jobs/Housing Balance

The American Planning Association (APA) is an authoritative resource for community-planning best practices, including recommendations for assessing jobs-to-housing ratios. The APA recognizes that an ideal jobs-to-housing ratio will vary from jurisdiction to jurisdiction. In general, the recommended target for an appropriate jobs-to-housing ratio is 1.5, with a recommended range of 1.3 to 1.7.[9]

Based on the Fresno COG Region's 2023–2060 Growth Projections[10] prepared by the Fresno COG, the region had a 1.3 jobs-to-housing ratio[11] in 2022 and is projected to have a 1.3 jobs-to-housing ratio[12] by 2026. Using the recommended APA ratio for comparison purposes, the jobs-to-housing ratio within the region can be considered within the acceptable range recommended by the APA. However, the ratio is slightly below the APA's recommended target of 1.5, indicating that the region has slightly more housing available than jobs, a metric projected to stay consistent between 2022 and 2060.

4.14.4 Regulatory Setting

This section includes applicable federal, State, regional, and local policies and regulations.

4.14.4.1 Federal Regulations

Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act). Compliance with the Uniform Act (42 United States Code [USC] 61) is required by any public agency when federal funds are to be used to acquire property for the construction of a project. The Federal Highway Administration (FHWA) Office of Real Estate Services provides guidance and assistance to federal government agencies pertaining to the Uniform Act. The Uniform Act requires that, within a reasonable period of time prior to displacement, comparable replacement housing be made available or provided for each displaced person. All relocation services and benefits are administered without regard to race, color, national origin, or sex in compliance with Title VI of the Civil Rights Act of 1964 (42 USC 2000d et seq.).

Federal Planning Regulations, Title 23 CFR 450.322(e). The Code of Federal Regulations (CFR), Title 23, Section 450.322(e), requires that, when preparing the RTP, the relevant local Metropolitan Planning Organization (MPO) validate data utilized in preparing other RTPs and utilize the latest available forecasts and assumptions for population, land use, travel, employment, and other metrics.

4.14.4.2 State Regulations

Senate Bill 330. Senate Bill (SB) 330 includes restrictions on implementing new development policies, standards, or conditions that may restrict housing developments, including any initiatives or referenda voted into law by the general populace. Under this law, among other things, cities and

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9 Weitz, Jerry. 2003. *Planning Advisory Service Report No. 516: Jobs-Housing Balance.* American Planning Association.

10 Fresno Council of Governments (COG). 2024. *Fresno County 2023–2060 Growth Projections.* October 17.

11 (414,750 ÷ 327,027) × 100 = approximately 1.3

12 (491,920 ÷ 369,819) × 100 = approximately 1.3

counties are restricted from implementing any new development policies, standards, or conditions that have any of the following effects:

- A change to the general plan land use designation, specific plan land use designation, or zoning that results in a "less intensive use." Less intensive use means, for example: (1) reductions in height, density, or floor area ratio; (2) new or increased open space or lot size requirements; (3) new or increased setback requirements, minimum footage requirements, or maximum lot coverage limitations; or (4) anything that would lessen the intensity of housing.

- A reduction of the intensity of land use within an existing general plan land use designation, specific plan land use designation, or zoning below what was allowed under the applicable land use designation and zoning ordinance in effect as of January 1, 2018.

California Housing Element Requirements (Government Code §§ 65580 to 65589). State law recognizes the vital role local governments play in the supply and affordability of housing. Local governments are required to adopt a comprehensive, long-term general plan for the development of the jurisdiction, including a housing element meeting the existing and projected housing needs. To that end, the California Government Code requires that housing elements achieve legislative goals to:

- Identify adequate sites to facilitate and encourage the development, maintenance, and improvement of housing for households of all economic levels, including for persons with disabilities.

- Remove, as legally feasible and appropriate, governmental constraints to the production, maintenance, and improvement of housing for persons of all incomes, including those with disabilities.

- Assist in the development of adequate housing to meet the needs of low- and moderate-income households.

- Conserve and improve the condition of housing and neighborhoods, including existing affordable housing, and promote housing opportunities for all persons regardless of race, religion, sex, marital status, ancestry, national origin, color, familial status, or disability.

- Preserve for lower-income households the publicly assisted multi-family housing developments in each community.

State of California housing element laws (California Government Code §§ 65580 to 65589) require that each city and county identify and analyze existing and projected housing needs within its jurisdiction and prepare goals, policies, and programs to further the development, improvement, and preservation of housing for all economic segments of the community, commensurate with local housing needs. The housing elements of each city or county are required to be updated every 8 years.

California Relocation Assistance Act. State relocation laws are codified in California Government Code Chapter 16, Section 7260, et seq. This legislation establishes a uniform policy for the fair and equitable treatment of persons displaced as a direct result of programs or projects undertaken by a

public entity in order to avoid the suffering of disproportionate injuries as a result of programs and projects designed for the benefit of the public as a whole. Like the federal Uniform Act, the State law requires that, within a reasonable period of time prior to displacement, comparable replacement housing be made available or provided for each displaced person.

Residential Development Streamlining. In response to an identified statewide housing shortage in California, a string of State legislation has been passed to expedite housing production. The intent of these laws is to remove regulatory and financial barriers to the development of housing that meets certain criteria by allowing for streamlining of the environmental review process, as discussed in greater detail below:

- **Assembly Bill (AB)** 2011 allows housing to be built by right (i.e., ministerially) in infill areas currently zoned for office, retail, and parking uses. The bill contains affordability requirements for eligibility and mandates that developers meet a range of responsible wage and training standards for construction contractors.

- **SB 6** allows residential development on sites currently designated and zoned for office, retail, or parking uses, similar to AB 2011. In order to qualify, projects must be either all housing or a mixed-use development with at least 50 percent of the development committed to housing. Other requirements include that the project site must be located within an urbanized area or urban cluster with less than one-third of the site (or its immediate neighbors) dedicated to industrial uses. Similar to AB 2011, SB 6 requires developers to meet a range of responsible wage and training standards for construction contractors.

- **SB 9** allows homeowners in most parts of California to divide their property into two lots and allows two homes to be built on each of those lots, thereby legalizing fourplexes in areas that previously only allowed one home. SB 9 also contains important protections against the displacement of existing tenants.

- **SB 375** provides several California Environmental Quality Act (CEQA) reform provisions, including streamlined review and analysis of residential or mixed-use projects consistent with the SCS; modified review and analysis, through an expedited Sustainable Communities Environmental Assessment (SCEA), for Transit Priority Projects (TPPs) that are consistent with the SCS; and a complete CEQA exemption for TPPs that are consistent with the SCS and meet a specific list of other requirements. In each of these cases, this MTP/SCS EIR will serve as a first-tier environmental document under CEQA.

- **AB 130** introduces a new CEQA exemption for qualifying infill housing developments that meet local zoning and planning standards, are not located on hazardous or environmentally sensitive sites, and meet other specific criteria. The bill includes limitations that preserve protections for historic structures, tribal cultural resources, and hazardous materials assessment.

- **SB 131** limits constrains CEQA review for projects that narrowly fail to qualify for a CEQA exemption (including AB 130, as discussed above). Under SB 131, if a housing project would qualify for a CEQA exemption “but for a single condition” of that exemption, CEQA review for the housing project is limited to only the environmental effects caused by that condition. Further, if

the CEQA document is an EIR, discussions of alternatives to the project or of the growth-inducing impacts of the project are not required.

Caltrans Right-of-Way Manual. The *Caltrans Right-of-Way Manual* was prepared by the California Department of Transportation (Caltrans) Division of Right-of-Way and Land Surveys to establish uniform Caltrans procedures for right-of-way (ROW) functions. While not legally binding, the policies and practices contained in the *Right-of-Way Manual* serve as a guide for Caltrans and were prepared consistent with the requirements established in 23 CFR 710.201(c), which mandates that every state department "which receives funding from the highway trust fund shall maintain a manual describing its right-of-way organization, policies, and procedures."

4.14.4.3 Regional Regulations

Regional Housing Needs Assessment. State law (Government Code Section 65580 et seq.) requires cities and counties to plan for their fair share of projected housing construction needs in their region. Housing unit construction goals are set by the State Department of Housing and Community Development (HCD) and allocated to cities through regional planning agencies such as the Fresno COG. This is called the Regional Housing Needs Assessment (RHNA). Future housing need refers to the proportion of the region's future housing needs allocated to a community. Each jurisdiction's future housing need is calculated in terms of four factors: (1) the number of units needed to accommodate forecast global household growth; (2) the number of units needed to replace demolition due to attrition in the housing stock (i.e., fire damage, obsolescence, redevelopment, and conversion to non-housing uses); (3) maintenance of an ideal vacancy rate for a well-functioning housing market; and (4) an adjustment to avoid an overconcentration of lower-income households in any one jurisdiction.

The RHNA prepared by the Fresno COG defines the housing unit construction goals for the region based on HCD mandates. The Fresno COG's fair share for the planning period between 2021 and 2029 (the last adopted RHNA period) was established by HCD at 58,298 units. The RHNA target number was based on projected household growth and the resulting need for construction of additional housing units allocated over the Sixth Cycle planning period from 2021 to 2029. This 58,298-unit target was divided into the following income groups according to median family income, as shown in Table 4.14.F, below.

Table 4.14.F: Fresno Council of Governments Regional Housing Needs Allocation (2021–2029)

Income Level	Percent	Housing Unit Need
Very Low	26.7	15,592
Low	15.7	9,143
Moderate	15.5	9,047
Above Moderate	42.1	24,516
Total	**100.0**	**58,298**

Source: State of California Department of Housing and Community Development, Division of Housing Policy Development. 2021. *RE: Final Regional Housing Need Determination.* December 17.
Note: Income categories are prescribed by California Health and Safety Code Section 50093, et. seq. Percentages are derived based on Census/ American Community Survey reported household income brackets and the regional median income.

Based on the allocation from HCD provided in the breakdown above, the Fresno COG prepared a Sixth-Cycle Final RHNA Plan for the region, which was adopted by the Fresno COG's Policy Board on November 17, 2022. This plan provides the Fresno COG's breakdown of how the 58,298 required housing units would be allocated among Fresno COG's member jurisdictions (the County and 15 incorporated cities).

Fresno Multi-Jurisdictional 2023–2031 Housing Element. The housing element is required by California State law (Sections 65580 to 65589 of the Government Code) to be a component of every jurisdiction's general plan because housing needs are recognized as a statewide concern. As such, the housing element of a jurisdiction's general plan is the only element that is subject to approval by the State. Pursuant to State law, the housing element must identify the jurisdiction's housing needs, the sites that can accommodate these needs, and the policies and programs to ensure that the housing units necessary to meet these needs can be provided. The primary goal of the housing element is to provide a range of housing opportunities for all income groups.

Cities and counties typically prepare individual housing elements as component of their general plans. However, the County and 14 of the 15 incorporated cities within the Fresno COG Region (with the exception of the City of Clovis) collaborated to prepare the Fresno Multi-Jurisdictional 2023–2031 Housing Element, which was adopted by the Fresno County Board of Supervisors on August 19, 2025. This document addresses housing on a regional scale to allows for coordination among participating jurisdictions in achieving the Fresno COG's RHNA allocation for the region.

The Fresno Multi-Jurisdictional 2023-2031 Housing Element identifies the region's current housing needs; discusses the region's goals and objectives regarding housing production, rehabilitation, and conservation to meet those needs; and defines the policies and programs that participating jurisdictions will implement to achieve the stated goals and objectives. The following goals and policies related to housing contained in the Fresno Multi-Jurisdictional 2023–2031 Housing Element are relevant to the proposed project:

- **Goal 1:** Facilitate and encourage the provision of a range of housing types to meet the diverse needs of residents.
    - **Policy 1.1:** Provide adequate sites for new housing development through appropriate planned land use designations, zoning, and development standards to accommodate the regional housing needs for the 2023-2031 planning period.
    - **Policy 1.2:** Facilitate development of new housing for all economic segments of the community, including extremely low, very low-, low-, moderate-, and above moderate-income households.
    - **Policy 1.3:** Continue to direct new growth to urban areas in order to protect natural resources.
    - **Policy 1.**4: Promote balanced and orderly growth to minimize unnecessary development costs adding to the cost of housing.

- **Policy 1.5:** Encourage infill housing development on vacant, by-passed, and underutilized lots within existing developed areas where essential public infrastructure is available.
- **Policy 1.6:** Promote development of higher-density housing, mixed-use, and transit-oriented development in areas located along major transportation corridors and transit routes and served by the necessary infrastructure.
- **Policy 1.7:** Ensure the adequate provision of water, sewer, storm drainage, roads, public facilities, and other infrastructure necessary to serve new housing.
- **Policy 1.8:** Approve new housing in accordance with design standards that will ensure the safety, quality, integrity, and attractiveness of each housing unit.
- **Policy 1.9:** Encourage development around employment centers that provides the opportunity for local residents to live and work in the same community by balancing job opportunities with housing types.
- **Policy 1.10:** Encourage developers and contractors to evaluate hiring local labor, hiring from, or contributing to apprenticeship programs, increasing resources for labor compliance and providing living wages.

- **Goal 2:** Encourage and facilitate the development of affordable housing.
  - **Policy 2.1:** Support innovative public, private, and nonprofit efforts in the development of affordable housing, particularly for the special needs groups.
  - **Policy 2.2:** Continue to support the efforts of the Fresno Housing Authority in its administration of Section 8 certificates and vouchers, and the development of affordable housing throughout the County.
  - **Policy 2.3:** Encourage development of affordable housing through the use of development incentives, such as the Density Bonus Ordinance, fee waivers or deferrals, and expedited processing.
  - **Policy 2.4:** Provide technical and financial assistance, where feasible, to developers, nonprofit organizations, or other qualified private sector interests in the application and development of projects for Federal and State financing.
  - **Policy 2.5:** Pursue grant funding to subsidize the development of affordable housing for low- and very low and extremely low income households through new construction, acquisition, and/or rehabilitation.
  - **Policy 2.6:** Encourage the development of second dwelling units to provide additional affordable housing opportunities.

- **Policy 2.7:** Work to ensure that local policies and standards do not act to constrain the production of affordable housing units.
- **Policy 2.8:** Expand homeownership opportunities to lower- and moderate-income households through downpayment assistance and other homeownership programs.
- **Policy 2.9:** Encourage sweat equity programs as a means for increasing homeownership opportunities for lower-income residents.

- **Goal 3:** Improve and maintain the quality of housing and residential neighborhoods.
  - **Policy 3.1:** Preserve the character, scale, and quality of established residential neighborhoods by protecting them from the encroachment of incompatible or potentially disruptive land uses and/or activities.
  - **Policy 3.2:** Assist low income homeowners and owners of affordable rental properties in maintaining and improving residential properties through a variety of housing rehabilitation assistance programs.
  - **Policy 3.3:** Continue code enforcement efforts to work with property owners to preserve the existing housing stock.
  - **Policy 3.4:** Encourage and facilitate the improvement or replacement of unsafe, substandard dwellings that cannot be economically repaired.
  - **Policy 3.5:** Invest in public service facilities (streets, curb, gutter, drainage and utilities) to encourage increased private market investment in declining or deteriorating neighborhoods.
  - **Policy 3.6:** Preserve assisted rental housing for long-term occupancy by low- and moderate-income households.

- **Goal 4:** Provide a range of housing types and services to meet the needs of individuals and households with special needs.
  - **Policy 4.1:** Encourage public and private entity involvement early and often through the design, construction, and rehabilitation of housing that incorporates facilities and services for households with special needs.
  - **Policy 4.2:** Assist in local and regional efforts to secure funding for development and maintenance of housing designed for special needs populations such as the senior and persons with disabilities.
  - **Policy 4.3:** Support the use of available Federal, State, and local resources to provide and enhance housing opportunities for farm workers.

- **Policy 4.4:** Encourage development of affordable housing units to accommodate large households (three and four bedroom).

- **Policy 4.5:** Ensure equal access to housing by providing reasonable accommodation for individuals with disabilities.

- **Policy 4.6:** Working in partnership with the other jurisdictions and the private/non-profit sectors in Fresno County, facilitate the provision of housing and services for persons experiencing homelessness and those at-risk of becoming homeless.

- **Goal 5:** Affirmatively Furthering Fair Housing (Government Code Section (65583(C)(C)(5) & (10) by securing safe, sanitary, and affordable housing for all members of the community regardless of race, sex, or other factors.

  - **Policy 5.1:** Collaborate with state and federal agencies and local fair housing agencies to enforce fair housing laws addressing discrimination in the building, financing, selling or renting of housing based on race, religion, family status, national origin, disability, or other protected class.

  - **Policy 5.2:** Collaborate with local and regional agencies to provide multilingual fair housing education services and regional efforts to affirmatively further fair housing.

    Policy 5.3: Work with federal, state, local and private entities to identify funding, financing and assistance programs throughout the planning period.

4.14.4.4 Local Regulations

Local General Plans. The Fresno COG Region contains Fresno County and 15 incorporated cities, each with an individual general plan prepared pursuant to California Government Code Section 65300. As discussed above, the Fresno Multi-Jurisdictional 2023-2031 Housing Element serves as the General Plan Housing Element for all cities in the Fresno COG Region, with the exception of Clovis. Nevertheless, other elements of each jurisdiction's general plan may contain goals and policies related to housing within the particular jurisdiction. These goals and policies are typically woven throughout the general plan as a whole.

Local RHNA Allocations. As previously described, State law (Government Code Section 65580 et seq.) requires cities and counties to plan for their fair share of projected housing construction needs in their region. Refer to Table 4.14.G, below, for a summary of the RHNA allocations for each of the Fresno COG Region's 15 incorporated cities and the unincorporated areas for the 2021–2029 planning period.

Table 4.14.G: Fresno COG Regional Housing Needs Allocation by Jurisdiction (2021–2029)

Jurisdiction	Very Low[1]		Low		Moderate		Above Moderate		Total Units
	%	Units	%	Units	%	Units	%	Units	
Clovis	32.6	2,926	17.3	1,549	16.1	1,448	34.0	3,054	**8,977**
Coalinga	27.7	157	17.0	96	15.7	89	39.6	224	**566**
Firebaugh	23.0	102	10.4	46	14.9	66	51.7	229	**443**
Fowler	27.7	94	16.8	57	13.9	47	41.6	141	**339**
Fresno	25.6	9,440	16.0	5,884	15.3	5,638	43.1	15,904	**36,866**
Huron	14.1	45	14.1	45	17.2	55	54.5	174	**319**
Kerman	26.8	285	12.6	134	15.8	168	44.8	476	**1,063**
Kingsburg	28.1	248	18.3	161	17.0	150	36.6	323	**882**
Mendota	20.1	129	10.6	68	15.1	97	54.2	348	**642**
Orange Cove	14.1	66	10.4	49	18.3	86	57.1	268	**469**
Parlier	20.1	147	12.8	94	14.7	108	52.4	384	**733**
Reedley	27.5	403	12.5	183	14.4	211	45.5	666	**1,463**
Sanger	27.6	412	12.9	193	16.4	245	43.1	644	**1,494**
San Joaquin	19.5	39	14.0	28	18.0	36	48.5	97	**200**
Selma	26.3	393	11.1	165	15.6	233	47.0	701	**1,492**
Unincorporated County	30.0	706	16.6	391	15.7	370	37.6	883	2,350
Fresno COG Region	**26.7**	**15,592**	**15.7**	**9,143**	**15.5**	**9,047**	**42.1**	**24,516**	**58,298**

Source: Fresno COG. 2022. Sixth Cycle Regional Housing Needs Plan. November. Table 1.

[1] Extremely low-income units are included in the very low-income category, constituting 14 percent of the total allocation.

COG = Council of Governments

4.14.5 Thresholds of Significance

The following thresholds of significance are based on Appendix G of the *State CEQA Guidelines*. Based on these thresholds, implementation of the proposed project would have a significant adverse impact with respect to population and housing if it would:

Threshold 4.14.1: 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

Threshold 4.14.2: Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

4.14.6 Project Impacts

The following discussion describes the potential impacts related to population and housing that could result from implementation of the proposed project.

Threshold 4.14.1: Would the project 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)?

Significant and Unavoidable Impact. *State CEQA Guidelines* Section 15126.2[d] identifies a project as growth inducing if it fosters economic or population growth, or development of businesses or housing,

either directly or indirectly in the surrounding environment. New employees from commercial or industrial development and new population from residential development represent direct forms of growth, which have a secondary effect of expanding the size of local markets and inducing additional economic activity in the area. Under CEQA, growth inducement is not necessarily detrimental, beneficial, or of little significance to the environment. Typically, the growth-inducing potential of a project would be considered substantial if it fosters growth or a concentration of population in excess of what is assumed in pertinent master plans, land use plans, or projections made by regional planning agencies (e.g., the Fresno COG).

As described in Section 4.14.3, the discussion on demographics and growth in the proposed 2026 RTP/SCS is based in part on the *Fresno County 2023–2060 Growth Projections*.[13] This report was prepared by the Fresno COG for the specific purpose of informing the proposed 2026 RTP/SCS. These growth projections are based on data from the California Employment Development Department (EDD), the California DOF, the United States Census Bureau American Community Survey, and other forecasting tools.

As discussed in the *Fresno County 2023–2060 Growth Projections* and summarized in Table 4.14.A, the population of the Fresno COG Region is anticipated to increase to 1,128,530 individuals by 2060. Urbanization in the region is anticipated to increase significantly by the horizon year of 2049, regardless of whether the 2026 RTP/SCS is implemented. The SCS component of the proposed project shows how future growth and development could be allocated to planned growth areas, consistent with the general plans of the cities and the County. As growth and development occur, the cities and the County will review and approve development proposals and determine consistency with their plans, programs, and policies. The Fresno COG has no land use authority to control future growth development. Therefore, rather than inducing new growth, the proposed 2026 RTP/SCS identifies strategies for directing this identified future growth toward existing urban centers and established areas, as well as supporting higher-density growth with mixed-use development. These areas are generally already anticipated to experience the greatest degree of growth given their availability of infrastructure and employment opportunities. The Fresno COG's focus on transit improvements in these urban areas would further support this higher-density development. As described in Chapter 3.0, Project Description, throughout preparation of the proposed 2026 RTP/SCS, the Fresno COG worked with member agencies to plan for future housing and commercial land uses to inform the land use assumptions associated with the preferred SCS scenario (Scenario C).

The RTP component of the proposed project relies on coordination among the Fresno COG and its member agencies, Caltrans, and other agencies with land use authority to plan future transportation system improvements. Specifically, this coordination allows the Fresno COG to consider future growth estimates and potential development and land use patterns outlined in each of the adopted or draft general plans prepared by the local governments when identifying future transportation needs. Generally, high-density mixed-use development and transit-focused infrastructure (e.g., light rail and bus stops) would be expected to occur in areas with existing demand (i.e., urban areas with higher population densities).

[13] Fresno Council of Governments (COG). 2024. *Fresno County 2023–2060 Growth Projections.* October 17.

Transportation improvement projects would also improve accessibility and connectivity throughout the Fresno COG Region, which could indirectly induce growth outside of urban centers (i.e., unplanned growth). While the proposed 2026 RTP/SCS would facilitate future projects where growth is already planned in the Fresno COG Region (e.g., existing urban centers), it is possible that unplanned growth could still occur in areas not identified in local planning documents. This could induce potentially significant unplanned population growth.

It should be noted that there is no required update cycle for city and County general plans, with the exception of the housing element, which must be updated every 8 years. By contrast, the Fresno COG is required to update its RTP/SCS every 4 years in accordance with the federal and State planning mandates described in Chapter 2.0, Introduction. Therefore, member agency general plan updates do not necessarily correspond with RTP/SCS updates, meaning updates in one document may not be reflected in the other until its next planned update. This increases the risk of unplanned growth occurring, despite the direction set forth in the 2026 RTP/SCS. **Fresno COG Mitigation Measure (FMM) POP-1** would require the Fresno COG to encourage member agencies to update general, area, community, and specific plans to reflect projects included in the 2026 RTP and future land use allocations reflected in the 2026 SCS. Once these updates occur, growth identified in the proposed 2026 RTP/SCS would be consistent with member agency planning documents.

As described in Chapter 3.0, Project Description, the design of each transportation improvement project and land use development facilitated by the proposed project is currently unknown. Therefore, this analysis represents a general characterization of reasonably foreseeable impacts that could occur under implementation of the proposed project. Through inter-agency coordination and adherence to **FMM POP-1,** project impacts associated with substantial unplanned population growth would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with substantial unplanned population growth are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.14.2: Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Significant and Unavoidable Impact.

Construction. There is potential for construction of future transportation improvement projects facilitated by the proposed project to result in temporary ROW impacts affecting properties that are owned by public entities or private property owners. The permanent acquisition of land to accommodate a future transportation improvement project or land use development is discussed below under Operation. Temporary property acquisitions associated with construction of future projects would generally include personnel/equipment staging areas or access easements. As described in the *Caltrans Right-of-Way Manual,* a temporary construction easement (TCE) is not part of a permanent project footprint but rather is established when Caltrans and/or its

authorized contractor needs to enter private property in order to modify/remove buildings or other improvements.[14] In contrast, land use developments typically stage construction equipment and personnel within the project site. In some cases, land use development projects may stage on undeveloped land in the immediately surrounding area subject to an agreement with the property owner. As noted above, most land use development projects in the Fresno COG Region are expected to be focused in existing urban areas, where they could result in temporary nuisance effects (dust, noise, and parking/access issues) on existing land uses in the surrounding area.

It is possible that extended construction activities adjacent to residential communities could create long-term nuisance effects leading to neighborhood deterioration and subsequent displacement of residents. However, dust and air pollution resulting from construction activities would be minimized through the avoidance/minimization/abatement measures and regulatory standards to control excessive fugitive dust emissions and emissions from construction vehicles as discussed in Section 4.3, Air Quality. Noise resulting from construction activities would be minimized through compliance with federal, State, and local regulations, including Caltrans specifications within the ROW and applicable construction and noise standards. Further, pursuant to **Project-Specific Mitigation Measure (PMM) POP-1**, the implementing agencies would require that each individual future transportation improvement and land use development project facilitated by the proposed project to develop a construction schedule that minimizes potential neighborhood deterioration from protracted waiting periods.

Land utilized for TCEs generally consists of vacant strips of land. Therefore, it is not anticipated that TCEs would displace substantial numbers of existing people or housing or necessitate the construction of replacement housing elsewhere. Further, land temporarily used for construction is generally restored to pre-construction conditions prior to being returned to the affected property owner, resulting in no permanent impacts.

Operation. Future transportation improvement projects facilitated by the proposed project may result in permanent ROW impacts. Although each project would be designed to utilize existing ROW to the extent feasible, projects increasing the capacity of or adding new features to existing roadways would likely require outward expansion of the roadway. This expansion would encroach onto other properties, requiring permanent ROW acquisition. In some cases, this could lead to the displacement of existing people and housing.

Scenario C (Enhanced Transit and Smart Growth) emphasizes sustainable urban growth focused on existing urban centers and established areas, and higher-density growth with mixed-use development. The proposed project would result in infill development requiring the demolition of existing structures, which could include housing units, resulting in the direct displacement of people. Indirect displacement could also occur through gentrification, which occurs when the redevelopment of an area with a lower median household income results in decreased affordability of surrounding housing that “prices out” existing residents.

[14] California Department of Transportation (Caltrans). 2026. *Right-of-Way Manual.* January. Website: https://dot.ca.gov/-/media/dot-media/programs/right-of-way/documents/rw-manual/rw-manual-january-2026-a11y.pdf (accessed March 24, 2026).

Future projects subject to discretionary approval by the appropriate lead agency are required to comply with the requirements of CEQA, including an environmental review as applicable to determine if a project would displace substantial numbers of existing people or housing. Each subsequent CEQA document would identify appropriate project-specific mitigation measures in addition to applicable regulatory requirements (discussed below).

Property acquisitions that would occur under the proposed project would be subject to federal and State relocation laws, specifically the Uniform Act and California Government Code Chapter 16, Section 7260, et seq., respectively. These regulations establish uniform policies for the fair and equitable treatment of persons displaced as a direct result of programs or projects undertaken by a public entity in order to avoid the suffering of disproportionate injuries as a result of programs and projects designed for the benefit of the public as a whole.

Future projects' compliance with these regulations would require that, within a reasonable period of time prior to displacement, comparable replacement housing be made available or provided for each displaced person. Further, compliance would mean providing personal guided assistance throughout the relocation process from start to finish, including professional movers, financial assistance, and one-on-one advising. This can reduce the physical, financial, and psychological burdens on relocated individuals, therefore reducing potential impacts of relocation.

In addition to the requirements discussed above, **PMM POP-2** would require future transportation improvement projects with the potential to displace homes or businesses to evaluate alternate route alignments and transportation facilities that minimize the displacement of homes and businesses.

As described in Chapter 3.0, Project Description, the design of each transportation improvement project and land use development facilitated by the proposed project is currently unknown. Therefore, this analysis represents a general characterization of reasonably foreseeable impacts that could occur under implementation of the proposed project. Through adherence to federal and State relocation requirements and adherence to **PMMs POP-1** and **POP-2,** project impacts associated with the displacement of substantial numbers of existing people or housing would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with the displacement of substantial numbers of existing people or housing are considered **significant and unavoidable** for the purposes of this analysis.

4.14.7 Level of Significance Prior to Mitigation

Prior to mitigation, implementation of the proposed project would have potentially significant impacts related to population and housing.

4.14.8 Mitigation Measures

4.14.8.1 Fresno COG Measures

The following mitigation measure would be applied on a regional scale by the Fresno COG to reduce potentially significant impacts related to population and housing to the extent feasible:

FMM POP-1 The Fresno COG shall encourage member agencies to update general, area, community and specific plans to reflect projects included in the 2026 RTP and future land use allocations reflected in the 2026 SCS.

4.14.8.2 Project-Specific Measures

The following mitigation measures would be applied to future transportation improvement and land use development projects to reduce potentially significant impacts related to population and housing to the extent feasible:

PMM POP-1 Implementing agencies shall consider mitigation measures to reduce impacts related to the displacement of a substantial number of people, as applicable and feasible:

During construction of individual RTP/SCS projects, the implementing agency shall require the Construction Contractor to prepare a construction schedule designed to minimize potential neighborhood disruption associated with prolonged construction activity. The schedule shall be submitted to the implementing agency or designated reviewing authority for review and approval.

PMM POP-2 Implementing agencies shall consider mitigation measures to reduce impacts related to the displacement of a substantial number of people, as applicable and feasible:

Individual RTP/SCS projects with the potential to displace homes and businesses shall require implementing agencies to evaluate alternative alignments and transportation facility designs early in the design process to minimize displacement.

4.14.9 Level of Significance After Mitigation

While implementation of **FMM POP-1** and **PMMs POP-1** and **POP-2** would help reduce impacts related to population and housing to the extent feasible, the analysis presented in this section is general in nature. Given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future transportation improvement projects and land use developments, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. As appropriate and feasible, the Fresno COG will implement or encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts. Nevertheless, impacts related to population and housing are considered significant and unavoidable for the purposes of this analysis.

4.14.10 Cumulative Impacts

As defined in Section 15130 of the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for population and housing. The cumulative impact area for population and housing is the Fresno COG Region, consistent with the study region for the *Fresno County 2023–2060 Growth Projections*.[15]

The Fresno COG prepared the Fresno County 2023–2060 Growth Projections to inform the proposed 2026 RTP/SCS and provide information to member agencies regarding anticipated growth in population, housing, employment, and other demographic characteristics within each jurisdiction. These projections would be acknowledged in future iterations of agency planning documents, when updated, and would be used to analyze cumulative projects within each jurisdiction for planning consistency.

Because the proposed 2026 RTP/SCS is a regional plan, the analysis presented in this PEIR already accounts for a variety of transportation improvement projects and land use developments within the Fresno COG Region. Buildout of future transportation improvement projects and land use developments at the scale and intensity permitted under the proposed project would result in cumulatively significant population increases within the Fresno COG Region. Additionally, it is possible that other projects could be proposed within the Fresno COG Region outside of what is addressed in the RTP/SCS (e.g., rural development).

Cumulative projects subject to discretionary review would be required to conduct an analysis of potential impacts to population and housing under CEQA, including whether the potential growth in population, housing, and/or employment under each project has been accounted for in the Fresno COG's projections.

Permanent land acquisitions associated with transportation ROW or land use redevelopment, when considered in conjunction with cumulative projects, could create regional trends of displacement or gentrification. However, all projects in the cumulative impact area would be required to adhere to existing federal, State, and local requirements pertaining to property acquisition and displacement, which can reduce the physical, financial, and psychological burdens on relocated individuals, therefore reducing potential impacts of relocation.

As stated under Section 4.14.9, impacts of the proposed project on population and housing are considered significant and unavoidable given the programmatic nature of the proposed project, the scale of the Fresno COG Region, and the inability of the Fresno COG to enforce project-specific mitigation or make land use approvals. Because the proposed project would result in significant adverse environmental impacts, its impacts would represent an incremental contribution to the environmental impacts in the cumulative impact study area, ultimately leading to a cumulatively considerable impact related to population and housing.

[15] Fresno Council of Governments (COG). 2024. *Fresno County 2023–2060 Growth Projections.* October 17.

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4.15 PUBLIC SERVICES

This section of the Draft Program Environmental Impact Report (PEIR) describes existing public services within the Fresno Council of Governments (COG) Region and evaluates potential impacts associated with implementation of the proposed project. Specifically, this section addresses the availability and capacity of fire protection, police protection, schools, parks, and other public facilities; assesses whether the proposed project would increase demand on these services; and considers whether such increases would require the construction or expansion of public service facilities. The analysis also reviews consistency with applicable federal, State, and local plans and policies governing the provision of public services.

4.15.1 Scoping Process

Potential impacts related to public services were not identified during the public scoping meeting held for the proposed project on May 28, 2025.

The Fresno COG received no comment letters in response to the Notice of Preparation (NOP) issued for the proposed project between May 13 and June 12, 2025, concerning the proposed project's potential impacts related to public services.

4.15.2 Methodology

Information regarding public services was obtained from agency websites and planning documents. Information was also obtained from the County of Fresno (County) General Plan Background Report[1] and General Plan PEIR.[2]

This section analyzes the potential public service impacts of future transportation and land use development projects facilitated by the proposed project to the extent feasible. Since impacts on public service providers are generally localized, specific and detailed analyses are most appropriate at the individual improvement project and new development project levels rather than the programmatic level that characterizes this PEIR. Subsequent project-specific California Environmental Quality Act (CEQA) documents may be required to further analyze the transportation improvements or new development facilitated by the proposed project to determine the magnitude of impacts to public services and identify appropriate project-specific mitigation measures.

4.15.2.1 Key Concepts

Service Area. The service area refers to the geographic boundary served by a public service agency. For example, the service area of a city fire department may be the associated city and its Sphere of Influence (SOI). The service area in which an emergency scenario occurs is the primary basis for determining the responding agency. Interdependencies between agencies often exist within the peripheral "edges" of each agency's boundary. For example, mutual-aid agreements exist between

1 County of Fresno. 2023. *Fresno County General Plan Background Report. General Plan Review and Revision.* April.

2 County of Fresno. 2023. *Program Environmental Impact Report Public Review Draft. Fresno County General Plan Review and Zoning Ordinance Update*. April.

neighboring fire departments, which allow first responders to help each other across jurisdictional boundaries when the demand for emergency response exceeds local resources.

Service Ratio. The service ratio is the ratio of individual service employees to individuals within a service area. For example, in a jurisdiction with 5 sworn police officers serving a population of 100 residents, the service ratio would be 1 police officer to 20 residents. It is common for jurisdictions to establish target service ratios.

Response Time. The response time is generally recognized as the duration of time from which a call for emergency services is placed to the time emergency personnel (i.e., police officers, firefighters, or emergency medical services [EMS]) arrive on site. Factors such as speed of travel, staff/equipment availability, and distance from the service facility to the emergency location are critical in influencing response times. It is common for jurisdictions to establish target response times. Typically, urbanized areas such as city centers have shorter response time targets than more rural areas.

4.15.3 Existing Environmental Setting

This section describes the existing environmental setting of the Fresno COG Region pertaining to public services.

4.15.3.1 Fire Protection Services

Fire protection services within the Fresno COG Region are provided by a variety of federal, State, county, city, and local fire protection agencies. The agency responsible for wildfire response is based on the area's California Department of Forestry and Fire Protection (CAL FIRE) responsibility designation. Land within a Local Responsibility Area (LRA) includes incorporated cities, urban regions, agriculture lands, and portions of the foothills and mountains where a local government (such as a city fire department, fire protection district, county, or CAL FIRE under contract) is responsible for wildfire protection.[3] In a State Responsibility Area (SRA), CAL FIRE is the primary emergency response agency responsible for fire suppression and prevention.[4] Lastly, in a Federal Responsibility Area (FRA), the responsibility of preventing and suppressing wildfires is primarily the responsibility of a federal agency.[5]

The unincorporated areas of the Fresno COG Region are primarily served by the Fresno County Fire Protection District (FPD), which provides fire protection to the unincorporated communities of Tarpey Village, Calwa, Easton, Malaga, Del Rey, Caruthers, Tranquillity, Prather, Friant, Wonder Valley, Cantua Creek, Three Rocks, Five Points, Tivy Valley, and Sand Creek. In addition, 5 of the 15 incorporated cities

[3] California Department of Forestry and Fire Protection (CAL FIRE). 2025. Frequently Asked Questions About: 2025 Fire Hazard Severity Zones. Website: https://www.lincolnca.gov/media/gzboxnrt/2025-cal-fire-lincoln-fhsz-faqs.pdf (accessed December 9, 2025).

[4] Ibid.

[5] California Department of Forestry and Fire Protection (CAL FIRE). 2025. Fire Hazard Severity Zones. Website: https://osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones (accessed December 9, 2025).

in the County contract with the Fresno County FPD, including the cities of Fowler, Huron, Mendota, Parlier, and San Joaquin.[6]

Other specialized fire departments/districts (including volunteer fire departments) that serve the unincorporated Fresno COG Region include the following:

- Bald Mountain Fire Protection District;
- Fig Garden Fire Protection District;
- Hume Lake Volunteer Fire and Rescue Department;
- Huntington Lake Volunteer Fire Department;
- Laton Community Service District;
- Laton Volunteer Fire Department;
- Mountain Valley Volunteer Fire Department;
- North Central Fire Protection District;
- Riverdale Public Utilities District;
- Riverdale Volunteer Fire Department;
- County Service Area No. 31 (Shaver Lake Volunteer Fire); and
- County Service Area 50 (Auberry Volunteer Fire).

The following fire departments (including volunteer fire departments) have been established to serve the 10 incorporated cities not under contract with the Fresno County FPD:

- Clovis City Fire Department;
- Coalinga Fire Department
- Firebaugh Fire Department (Volunteer);
- Fresno City Fire Department;
- Kingsburg Fire Department;
- North Central Fire Protection District (serves the City of Kerman);
- Orange Cove Fire Protection District;
- Reedley City Fire Department;
- Sanger City Fire Department; and
- Selma City Fire Department.

While response time goals vary by agency, the Fresno County FPD has established a response time standard of 5 minutes in commercial and residential areas near the cities of Fresno and Clovis and 20 minutes in rural areas.[7] Response times vary between urbanized and rural portions of the region based on proximity to, and availability of, fire protection facilities.

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6 Fresno County Fire Protection District. About Us. Website: https://www.fresnocountyfire.org/about-us (accessed December 9, 2025).

7 County of Fresno. 2024. *General Plan Background Report.* February. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/planning-and-land-use/general-plan/background-report-2024.pdf (accessed December 9, 2025).

The Fresno County FPD operates 15 full-time fire stations throughout the County,[8] while city fire departments each maintain their own fire station(s).

As described in Section 4.1, Aesthetics, the eastern portion of the Fresno COG Region contains federally owned and operated parkland, including the Sierra National Forest, the Sequoia National Forest, Sequoia National Park, and Kings Canyon National Park. The National Forest Service and the National Park Service each have their own specialized fire management crews and fire stations. These crews focus on wildfire suppression, including conducting prescribed burns. Depending on the location of a fire, these crews can respond jointly with the other agencies described above.

The locations of fire stations in the Fresno COG Region are shown on Figure 4.15-1, Fresno COG Region Fire Stations.

4.15.3.2 Police Protection Services

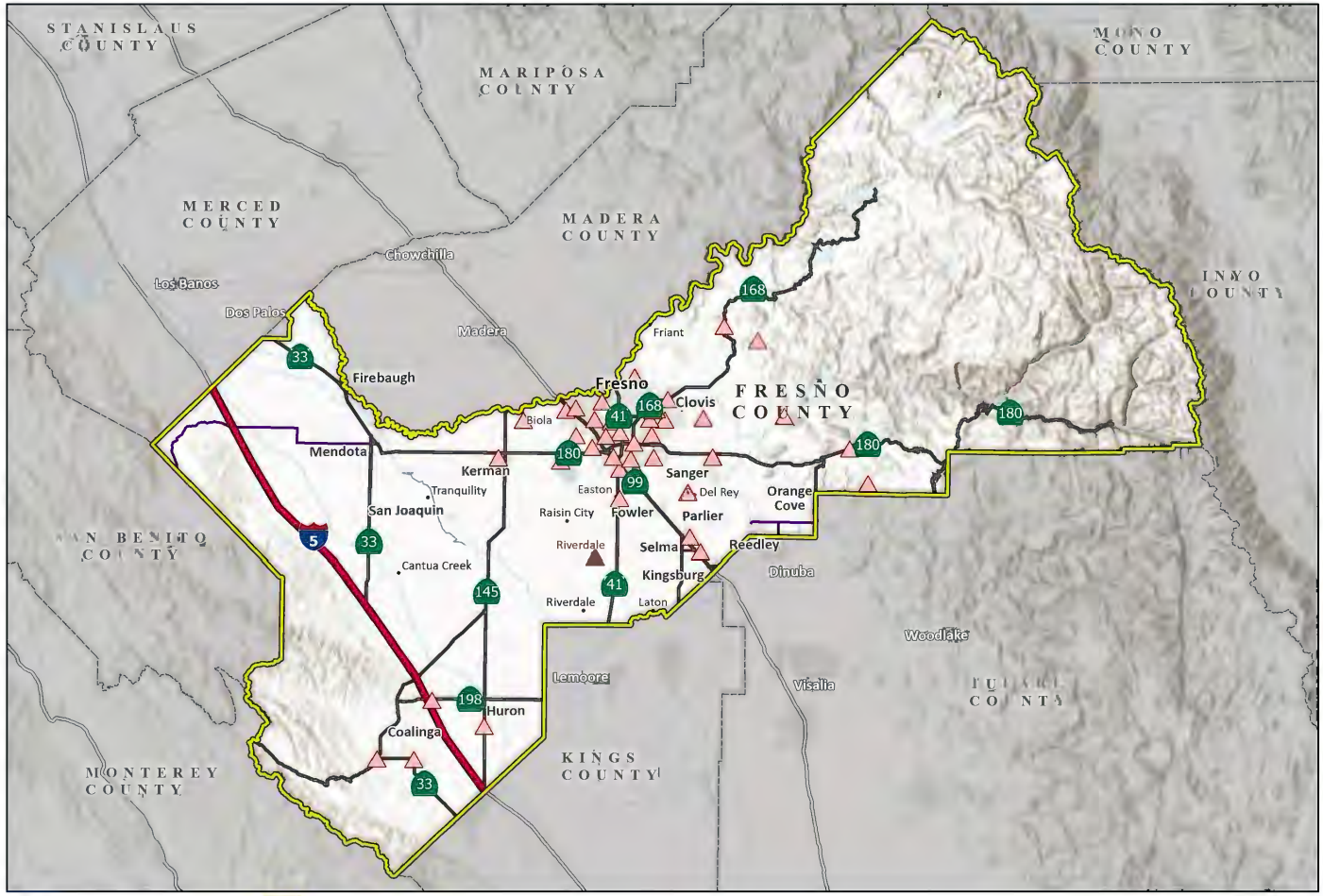
Police protection services within the unincorporated portions of the Fresno COG Region are provided by the Fresno County Sheriff's Department. The Fresno County Sheriff's Department is also the contracted law enforcement agency for the City of San Joaquin. Police protection services within the remaining 14 incorporated cities in the Fresno COG Region are provided by individual city police departments, as listed below:[9,10]

- Clovis Police Department
- Coalinga Police Department
- Firebaugh Police Department
- Fowler Police Department
- Fresno Police Department
- Huron Police Department
- Kerman Police Department
- Kingsburg Police Department
- Mendota Police Department
- Orange Cove Police Department
- Parlier Police Department
- Reedley Police Department
- Sanger Police Department
- Selma Police Department

[8] Fresno County Fire Protection District (FPD). District Operations. Website: https://www.fresnocountyfire.org/district-operations (accessed December 9, 2025).

[9] Fresno County Sheriff's Office. City Police Departments. Website: https://www.fresnosheriff.org/community/city-police-departments.html (accessed December 9, 2025).

[10] Fresno County Sheriff's Office. City vs. County Map. Website: https://experience.arcgis.com/experience/46b31128ff054cff9b6c1e203cbe7276 (accessed December 10, 2025).



LSA

FIGURE 4.15-1

Regional Transportation Plan/Sustainable Communities Strategy
Fresno COG Region Fire Stations

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The Fresno County Sheriff's Department divides the Fresno COG Region into four distinct patrol areas, each of which contains a dedicated substation and lieutenant.[11] The Fresno County Sheriff's Department also provides law enforcement dispatching services and emergency/non-emergency response services via the Fresno County Sheriff's Office Communications Center for the following six city departments listed above: Sanger Police Department, Kerman Police Department, Kingsburg Police Department, Mendota Police Department, Orange Cove Police Department, and Fowler Police Department.

In addition to the County and city departments discussed above, the California Highway Patrol (CHP) has the authority to enforce traffic laws on all highways and County/city roads. As necessary, CHP coordinates with local law enforcement departments.

The locations of police stations in the Fresno COG Region are shown in Figure 4.15-2, Fresno COG Region Police Stations.

4.15.3.3 Schools

School facilities in the Fresno COG Region include preschools, elementary schools, middle schools, secondary schools, postsecondary schools, and colleges/universities, as well as special and adult education. A total of 32 school districts exist within the Fresno COG Region, as listed in Table 4.15.A, below.[12] Of these school districts, 20 are unified school districts, 11 are elementary school districts, and 1 is a high school district.

School districts in the Fresno COG Region are also shown on Figure 4.15-3, Fresno COG Region Schools and School Districts. It should be noted that the California Department of Education does not currently provide enrollment data at the preschool level, and this data is not reflected in Table 4.15.A.

11 Fresno County Sheriff's Office. Patrol Areas. Website: https://www.fresnosheriff.org/units/enforcement/patrol-areas.html (accessed December 10, 2025).

12 California Department of Education. 2024-25 K-12 Enrollment by Age Range. Website: https://dq.cde.ca.gov/dataquest/dqcensus/EnrAgeGrdLevels.aspx?cds=10&agglevel=County&year=2024-25 (accessed December 10, 2025).

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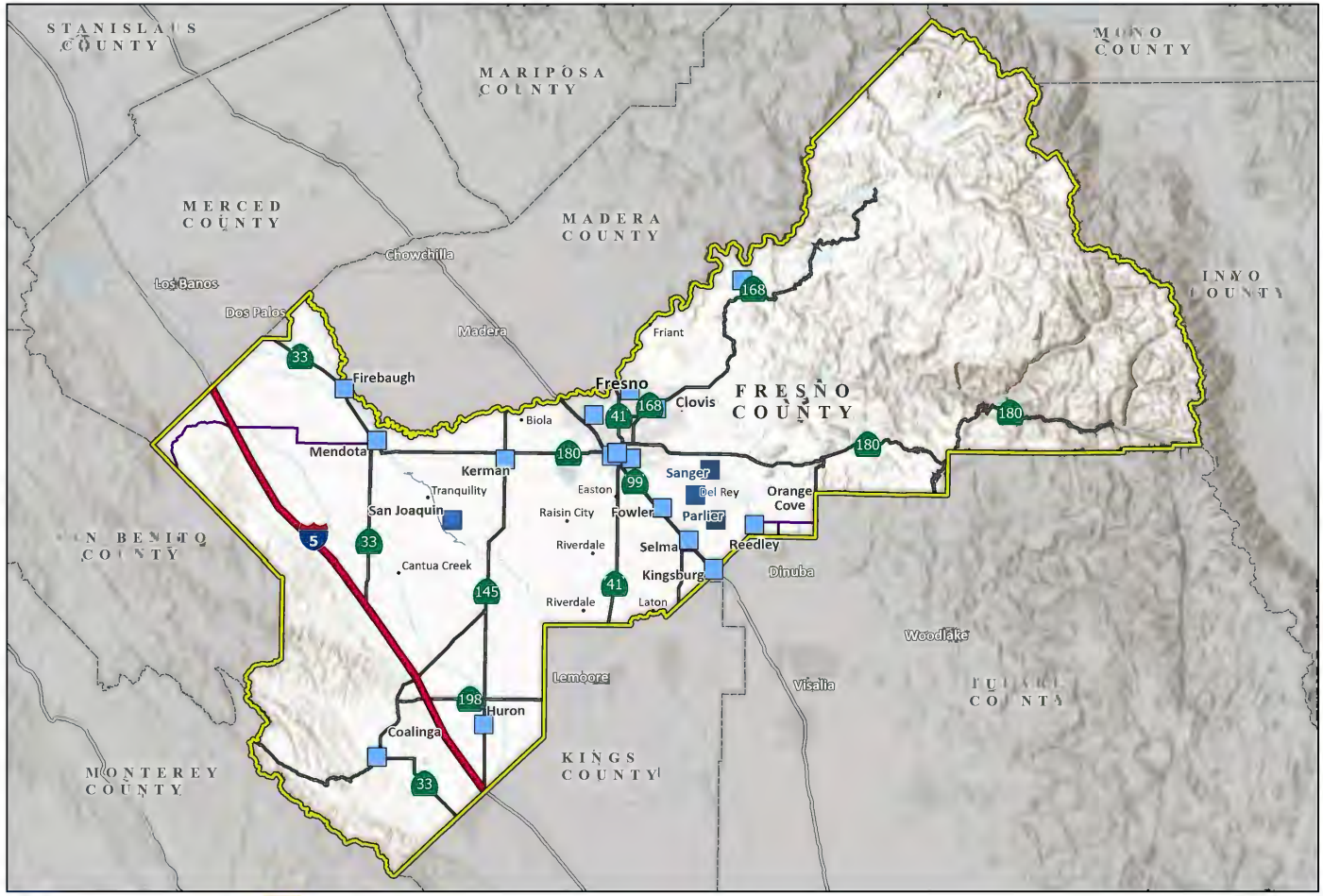


FIGURE 4.15-2

Regional Transportation Plan/Sustainable Communities Strategy
Fresno COG Region Police Stations

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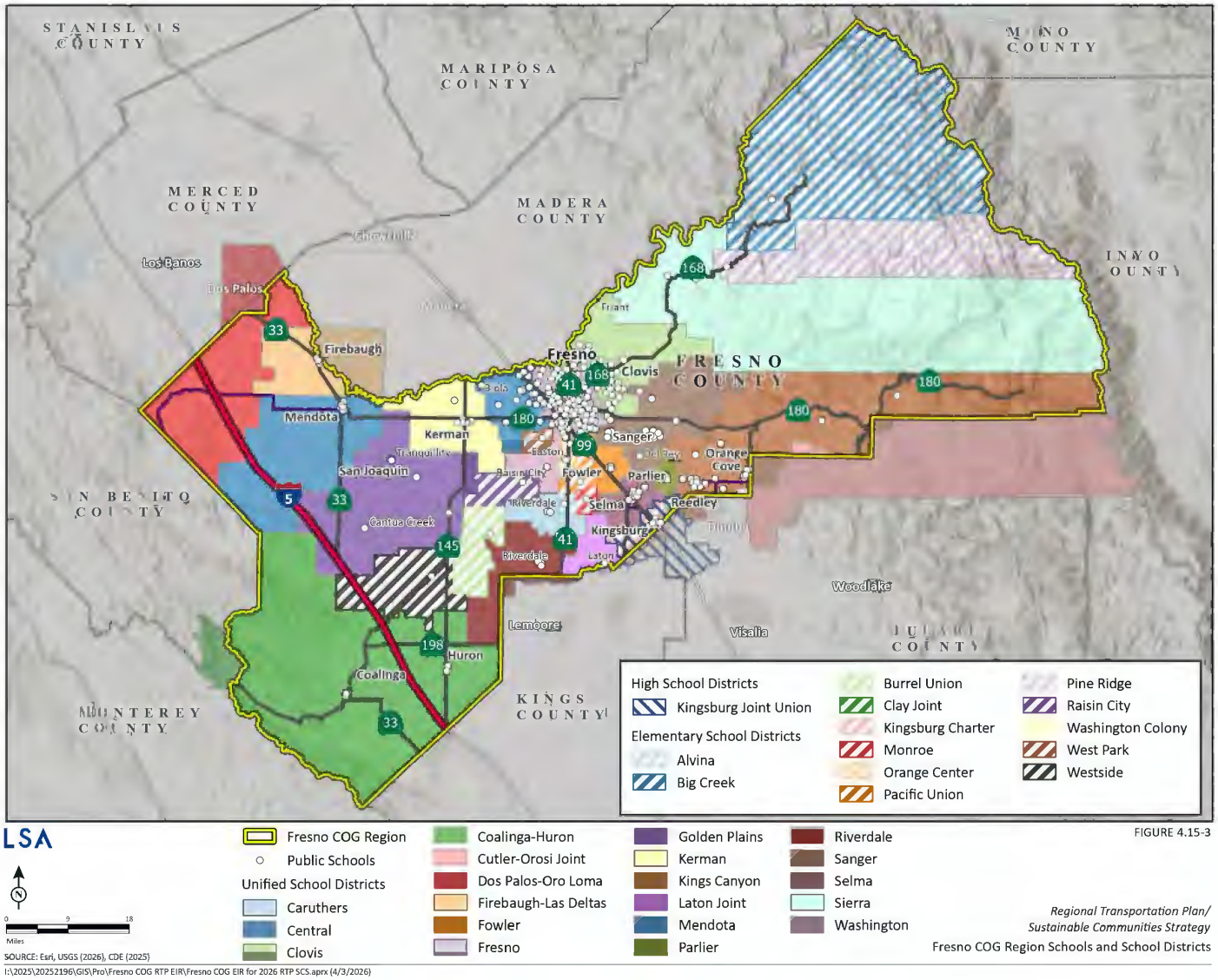


FIGURE 4.15-3

Regional Transportation Plan/ Sustainable Communities Strategy
Fresno COG Region Schools and School Districts

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Table 4.15.A: Fresno COG Region School District Student and Teacher Data

District Name	Total Enrollment (2024-2025 School Year)	Student-to-Teacher Ratio
Alvina Elementary	169	N/A
Big Creek Elementary	21	9.3
Burrel Union Elementary	94	10.4
Caruthers Unified	1,686	18.9
Central Unified	15,956	23.1
Clay Joint Elementary	246	27.3
Clovis Unified	42,835	21.7
Coalinga-Huron Unified	4,418	19.5
Firebaugh-Las Deltas Unified	2,232	20.0
Fowler Unified	2,563	21.2
Fresno County Office of Education	735	7.5
Fresno Unified	67,781	18.2
Golden Plains Unified	1,352	17.0
Kerman Unified	5,272	22.7
Kings Canyon Joint Unified	9,299	21.6
Kingsburg Elementary Charter	2,100	N/A
Kingsburg Joint Union High	1,199	19.7
Laton Joint Unified	603	14.5
Mendota Unified	3,977	22.8
Orange Center Elementary	261	18.6
Pacific Union Elementary	328	15.6
Parlier Unified	3,206	20.5
Pine Ridge Elementary	67	11.2
Raisin City Elementary	255	18.2
Riverdale Joint Unified	1,426	16.5
Sanger Unified	12,101	22.3
Selma Unified	5,911	21.0
Sierra Unified	1,251	17.5
Washington Colony Elementary	414	17.3
Washington Unified	2,339	18.7
West Park Elementary	286	13.0
Westside Elementary	135	15.0

Source: California Department of Education. 2024-25 K-12 Enrollment by Age Range; 2024-25 Student/Staff Ratios
COG = Council of Governments
FTE = Full-Time Equivalent

The Fresno County Superintendent of Schools oversees the Fresno COG Region's school districts and overall education system.[13]

As described in Section 4.14, Population and Housing, of this PEIR, the Fresno COG has prepared the Fresno County 2022–2060 Growth Projections, which provide a demographic forecast for the Fresno COG Region over the 2022 to 2060 period. This document includes projections for the number of

[13] Fresno County Superintendent of Schools. Office of the Superintendent. Website: https://www.fcoe.org/superintendent (accessed December 10, 2025).

school-age children enrolled in public schools over the 2022 to 2060 period, which has been summarized in Table 4.15.B, below.

Table 4.15.B: Fresno COG Region School District Student Enrollment Projections

Year	Total School-Age Youth (Ages 5–18)	K–12 School Enrollment Projections	Participation Rate
2022	220,496	204,154	92.59%
2025	210,190	199,521	94.92%
2030	196,569	189,999	96.66%
2035	190,295	185,207	97.33%
2040	196,001	192,689	98.31%
2045	200,145	197,717	98.79%
2050	201,629	199,182	98.79%
2055	198,102	195,699	98.79%
2060	195,354	192,984	98.79%
2022–2060 Change	-25,141	-11,170	–
2022–2060 Annual Growth Rate	-0.32%	-0.15%	–

Source: Fresno COG; and Applied Development Economics, Inc. 2024. Fresno County 2023—2060 Growth Projections. October 17. Table 8.
COG = Council of Governments

Based on the data provided in Table 4.15.B, the Fresno COG projects that K-12 public school enrollment will decrease to 192,984 by 2060, which is 11,170 fewer students than the 2022 enrollment figure of 204,154. However, the overall participation rate (i.e., the ratio of total school-age youth enrolled in school) is anticipated to increase from 92.59 percent in 2022 to 98.79 percent in 2060.

The Fresno COG Region also contains higher education opportunities through California State University, Fresno, which belongs to the 22-university California State University System,[14] as well as several community colleges and private universities.

4.15.3.4 Parks

The Fresno COG Region offers residents and visitors a wide range of parks, open space, water bodies, trails, and other recreational opportunities. The scale of parkland within the region ranges from national parks/forests, State parks, regional parks, city parks, and local/neighborhood parks.

As discussed in Section 4.1, Aesthetics, of this PEIR, the eastern portion of the region contains federally owned and operated parkland and open space, including the Sierra National Forest, Sequoia National Forest, Sequoia National Park, and Kings Canyon National Park.

[14] California State University. n.d. About the CSU. Website: https://www.calstate.edu/csu-system/about-the-csu/Pages/default.aspx (accessed December 10, 2025).

The County Resources/Parks Division is the primary agency responsible for the management of the County/regional park system, which comprises approximately 1,578 acres of parkland.[15] This acreage does not include city and local parks, which are also available for use by County residents. The County Resources/Parks Division maintains 12 regional parks/recreational facilities, two fishing access areas, and one boat launch facility, as described in further detail in Section 4.16, Recreation.[16] In addition to regional parks, residents of the region may enjoy local parks, including those owned by cities, special districts, nonprofits, and other entities. Each city typically maintains an inventory of parks within its jurisdiction and SOI.

4.15.3.5 Other Public Facilities

Libraries. The County's Public Library System provides library services to all residents in the Fresno COG Region, including those residing in incorporated cities, through a central library, regional libraries, branch libraries, neighborhood libraries, a library for the blind (Talking Book), and a mobile library (Bookmobile). Libraries within the County's Public Library System are listed in Table 4.15.C, below.[17]

15 County of Fresno. 2024. *General Plan Background Report.* February. Page 7-94. Website: file:///P:/2025/20252196%20Fresno%20RTP_SCS%20EIR/PRODUCT/References/Land%20Use/background-report-2024.pdf (accessed December 10, 2025).

16 County of Fresno. n.d. Parks. Website: https://www.fresnocountyca.gov/Departments/Public-Works-and-Planning/divisions-of-public-works-and-planning/resources-and-parks-division/parks (accessed December 10, 2025).

17 Fresno County Public Library. n.d. Branch Locations & Hours. Website: https://www.fresnolibrary.org/branch/all.html (accessed December 10, 2025).

Table 4.15.C: Fresno County Public Library System Branches

Library	Address
Auberry	33049 Auberry Road, Auberry, CA 93602
Bear Mountain	30733 East Kings Canyon, Yokuts Valley, CA 93675
Big Creek	55185 Point Road, Big Creek, CA 93605
Betty Rodriguez Regional Library	3040 North Cedar Avenue, Fresno, CA 93703
Caruthers	13382 South Henderson, Caruthers, CA 93609
Central	2420 Mariposa, Fresno, CA 93721
Clovis	1155 5th Street, Clovis, CA 93612
Easton	25 East Fantz, Easton, CA 93706
Fig Garden	3071 West Bullard, Fresno, CA 93711
Firebaugh	900 O Street, Firebaugh, CA 93622
Fowler	306 South 7th Street, Fowler, CA 93625
Gillis	629 West Dakota, Fresno, CA 93705
Heritage Center	2420 Mariposa, Fresno, CA 93721
Kerman	15081 West Kearney Plaza, Kerman, CA 93630
Kingsburg	1399 Draper, Kingsburg, CA 93631
Laton	6313 DeWoody, Laton, CA 93242
Literacy Services Center	2420 Mariposa Street, Fresno, CA 93721
Mendota	1246 Belmont Avenue, Mendota, CA 93640
Mosqueda	4670 East Butler, Fresno, CA 93702
Orange Cove	815 Park Boulevard, Orange Cove, CA 93646
Parlier	1130 East Parlier, Parlier, CA 93648
Piedra	25385 Trimmer Springs Road, Sanger, CA 93657
Pinedale	7170 North San Pablo, Pinedale, CA 93650
Politi	5771 North 1st, Fresno, CA 93710
Reedley	1027 E Street, Reedley, CA 93654
Riverdale	20975 Malsbary Street, Riverdale, CA 93656
San Joaquin	8781 Main Street, San Joaquin, CA 93660
Sanger	1812 7th Street, Sanger, CA 93657
Selma	2200 Selma Street, Selma, CA 93662
Shaver Lake	41344 Tollhouse Road, Shaver Lake, CA 93664
Sunnyside	5566 East Kings Canyon, Fresno, CA 93727
Talking Book Library for the Blind	2420 Mariposa, Fresno, CA 93721*
Teague	4718 North Polk Avenue, Fresno, CA 93722
Tranquillity	25561 Williams Street, Tranquillity, CA 93668
West Fresno	188 East Cesar Chavez Boulevard, Fresno, CA 93706
Woodward Park	944 East Perrin, Fresno, CA 93720

Source: Fresno County Public Library. n.d. Branch Locations & Hours.
* Temporary Location

4.15.4 Regulatory Setting

Federal, State, and local regulations and programs related to public services that are applicable to the proposed project are described below.

4.15.4.1 Federal Regulations

Section 4(f) of the United States Department of Transportation Act. Section 4(f) of the Department of Transportation Act of 1966, codified in 49 United States Code (USC) 303, declares that "it is the

policy of the U.S. Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites." Section 4(f) only applies if a project has a federal component (i.e., requires a federal permit or receives federal funds).

Section 4(f) specifies that the Secretary of Transportation may approve a transportation program or project . . . "requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if:

- There is no prudent and feasible alternative to using that land; and
- The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use."

Section 6(f)(3) of the Land and Water Conservation Fund Act of 1965. Section 6(f)(3) of the Land and Water Conservation Fund Act of 1965 contains provisions to protect federal investments in park and recreation resources. Specifically, this section states that "No property acquired or developed with assistance under this section shall, without the approval of the Secretary, be converted to other than public outdoor recreation uses. The Secretary shall approve such conversion only if he finds it to be in accord with the then existing comprehensive statewide outdoor recreation plan and only upon such conditions as he deems necessary to assure the substitution of other recreation properties of at least equal fair market value and of reasonably equivalent usefulness and location." This requirement applies to all parks and other sites that have received grants from the Land and Water Conservation Fund Act.

4.15.4.2 State Regulations

Assembly Bills 2926, 1600, and 2751. To assist in providing facilities to serve students generated from new development projects, the State enacted Assembly Bill (AB) 2926 in 1986, which allows school districts to collect impact fees from developers of new residential, commercial, and industrial developments. Development impact fees (DIFs) are also referenced in the 1987 Leroy Greene Lease-Purchase Act, which requires school districts to contribute a matching share of the costs for the construction, modernization, or reconstruction of school facilities. Subsequent legislation has modified the fee structure and general guidelines. In 1987, the provisions of AB 2926 have been expanded and revised by AB 1600, which limits the ability of a school district to levy school fees unless (1) there is a need for the school fee revenues generated, and (2) there is a nexus or relationship between the need for school fee revenues and the type of development project on which the school fee is imposed. (The requirements of AB 1600 were clarified with the passage in 2006 of AB 2751, which codifies the findings of *Shapell Industries v. Milpitas Unified School District*).**Senate Bill 50 and California Education Code Section 17620.** Senate Bill (SB) 50, the Leroy F. Greene School Facilities Act of 1998, was signed into law on August 27, 1998. It is a program for funding school facilities largely based on matching funds. The approval of Proposition 1A authorized funds for SB 50 in the amount of $9.2 billion, including grants for construction of new schools and modernization of existing schools. The new construction grant provides funding on a 50/50 State and local match basis. The

modernization grant provides funding on a 60/40 State and local match basis. Districts that are unable to provide some or all of the local match requirements and are able to meet financial hardship provisions may be eligible for additional State funding. SB 50 (codified as California Education Code Section 17620) allows school districts to levy a fee, charge, dedication, or other requirement against any development project within their boundaries for the purpose of funding the construction or reconstruction of school facilities. The maximum fee amount that school districts can assess is limited by statutes provided in California Government Code Section 65995. The payment of these fees by a developer serves to mitigate all potential impacts on school facilities that may result from implementation of a project to levels that are less than significant (see California Government Code Section 65996). Stated another way, the provisions of SB 50 provide full and complete mitigation of school facilities impacts, notwithstanding any contrary provisions in CEQA or other State or local laws. The California Department of Education permits local school districts to increase facility fees subject to Department of Education review and with approval of a nexus study from the school district that demonstrates that costs incurred by the school district for the provision of school facilities and services are higher than Level 1 funding provides. In such an instance, a nexus must be demonstrated in the study between the increase proposed by the local school district and the actual cost of provision of school facilities and services.

California Fire Code. The California Fire Code (CFC) includes regulations for emergency planning, fire service features, fire protection systems, hazardous materials, fire flow requirements, and fire hydrant locations and distribution. Several fire safety requirements include the installation of sprinklers in all high-rise buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildlife hazard areas.

California Code of Regulations Title 14: Natural Resources. California Code of Regulations (CCR) Title 14, Division 1.5 (Department of Forestry and Fire Protection), establishes the regulatory framework for CAL FIRE and details a variety of wildfire preparedness, prevention, and response regulations. Title 14 §1280 provides official definitions for LRA, SRA, and Very High Fire Hazard Severity Zone (VHFHSZ).

California Code of Regulations Title 19: Public Safety. Title 19 of the CCR establishes a variety of emergency fire response, fire prevention, and construction/construction materials standards.

California Code of Resources Title 13: Motor Vehicles. CCR Title 13, Division 2 (Department of the California Highway Patrol) governs the operations of the CHP and authorizes them to adopt and enforce rules and regulations deemed necessary to carry out the agency's duties.

Office of Emergency Services. The State of California passed legislation authorizing the Office of Emergency Services to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. Noncompliance with SEMS could result in the State withholding disaster relief from the noncomplying jurisdiction in the event of an emergency disaster.

California Public Park Preservation Act of 1971. The Park Preservation Act (California Public Resources Code Sections 5400–5409) prohibits local and State agencies from acquiring any property that is in use as a public park at the time of acquisition unless the acquiring agency pays sufficient compensation or

land, or both, to enable the operator of the park to replace the park land and any park facilities on that land.

Quimby Act of 1975. The Quimby Act (California Government Code Section 66477) allows the legislative body of a city or county to require by ordinance the dedication of land, the payment of an in-lieu park fee, or a combination thereof, for the approval for a final tract or parcel map. In cases where such dedication or park fee is not obtained through a map, they may be imposed when building permits are issued. The following condition must be met to comply with the Quimby Act: The city or county ordinance must include definitive standards for determining the proportion of a subdivision to be dedicated and the amount of any fee to be paid in lieu thereof.

The legislative body must adopt a general plan containing a recreation element, and any proposed park or recreational facility must be consistent with the principles and standards established in the element.

Community Facilities Act of 1982 (California Government Code Section 5332). Also commonly known as the Mello-Roos Act, this legislation allows any county, city, special district, school district, or joint powers authority to establish a Mello-Roos Community Facilities District (CFD), which allows for financing of a broad range of public improvements and services, including infrastructure, police protection, fire protection, medical response, school facilities, parks, and other community facilities. Upon establishment of a Mello-Roos CFD, dedicated taxes are collected from residents to fund such improvements.

California Public Park Preservation Act of 1981 (Public Resources Code Sections 5400-5409). This legislation states that "No city, city and county, county, public district, or agency of the state, including any division, department or agency of the state government, or public utility, shall acquire (by purchase, exchange, condemnation, or otherwise) any real property, which property is in use as a public park at the time of such acquisition, for the purpose of utilizing such property for any nonpark purpose, unless the acquiring entity pays or transfers to the legislative body of the entity operating the park sufficient compensation or land, or both, as required by the provisions of this chapter to enable the operating entity to replace the park land and the facilities thereon."

California Mitigation Fee Act (California Government Code Sections 66000 et seq.). This legislation allows cities to impose fees on development projects for the purpose of mitigating the impact of development on a city's ability to provide public facilities. Consistent with the requirements of this legislation, cities must identify the purpose of the fee, the use to which the fee is being dedicated, and the relationship between the fee, the specific public utility, and the development project on which the fee is imposed.

4.15.4.3 Regional Regulations

There are no regional regulations that apply to the proposed project with respect to public services.

4.15.4.4 Local Regulations

Local General Plans. The Fresno COG Region contains Fresno County and 15 incorporated cities, each with an individual general plan prepared pursuant to California Government Code Section 65300. Each

general plan contains goals and policies related to public services within the particular jurisdiction. Although general plan element titles may vary, this information is typically found within the general plan safety and/or open space elements, or equivalent.

Local Municipal Codes. Fresno County and cities in the Fresno COG Region may have established DIFs for development projects within their jurisdictions for the purpose of ensuring adequate public facilities, including fire protection, police protection, schools, parks, and other community facilities. Where applicable, future land use development projects facilitated by the proposed project would be subject to such fees.

Local Park/Trail Master Plans. In addition to the discussion of local park facilities within each jurisdiction's general plan, some jurisdictions may have adopted separate park or trail master plans for the purpose of identifying existing and planned future park and recreational facilities within their boundaries. These plans may contain goals and policies related to park facilities.

4.15.5 Thresholds of Significance

The following thresholds of significance are based on Appendix G of the *State CEQA Guidelines*. Based on these thresholds, implementation of the proposed project would have a significant adverse impact with respect to public services if it would:

Threshold 4.15.1(i): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection;

Threshold 4.15.1(ii): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection;

Threshold 4.15.1(iii): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for schools;

Threshold 4.15.1(iv): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for parks; or

Threshold 4.15.1(v): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for other public facilities.

4.15.6 Project Impacts

The following discussion describes the potential impacts resulting from implementation of the proposed project with regard to public services.

Threshold 4.15.1(i): **Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection?**

Significant and Unavoidable Impact. Impacts to fire protection services are considered significant if an increase in population or building area would result in inadequate response times or other performance objectives for fire protection, and/or increased demand for services that would require construction or expansion of new fire protection facilities that could result in an impact on the environment.

As described in Section 4.15.3.1, fire protection services within the Fresno COG Region are provided by a variety of federal, State, County, city, and local fire protection agencies. As such, the agency anticipated to provide fire protection services would vary by the location of each future transportation improvement and land use development project facilitated by the proposed project.

Construction. Both transportation improvement and land use development projects facilitated by the proposed project could require partial lane closures or full roadway closures that could increase traffic congestion. This could increase response times for fire protection services. Detours, if needed, could also increase travel distance and further increase response times. As described in Section 4.17, Transportation, all transportation projects in the 2026 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) would follow the safety guidelines established by local or State authorities, which include maintaining roadway emergency access during construction. Roadway closures, if needed, would be temporary and implementing agencies would coordinate with the emergency responders prior to construction.

Projects requiring encroachment permits for construction activities in public roadways used for emergency response or evacuation are generally required to prepare traffic mitigation plans that address traffic control. Standard construction procedures established by authorities (California Department of Transportation [Caltrans] and local agencies, as appropriate) include notification of the appropriate fire protection agency and development of alternative routes for emergency access (if needed).

Operation. As described in Section 4.17, Transportation, roadway infrastructure provides key access for emergency response vehicles, personnel, and equipment during emergencies. In widespread disasters, accessibility via the region's overall transportation network can determine the success of emergency response and recovery. Transportation improvements included in the proposed 2026 RTP/SCS would generally improve the network's ability to provide effective and timely emergency access in the Fresno COG Region.

As discussed in Section 4.14, Population and Housing, urbanization and associated population growth in the Fresno COG Region are anticipated to increase significantly by the proposed project horizon year of 2049 regardless of whether the 2026 RTP/SCS is implemented. However, future transportation improvement projects and land use developments under the proposed project have the potential to increase the service population (e.g., residents, employees, or visitors) of the fire protection agency associated with each individual project site. Scenario C (Enhanced Transit and Smart Growth), emphasizes sustainable urban growth focused on existing urban centers and established areas, and higher-density growth with mixed-use development. These urban centers are typically served by city fire departments or through contract with the Fresno County FPD, and their higher population density typically corresponds with a greater degree of fire protection infrastructure and personnel than rural areas. However, depending on the scale of each project, this infrastructure and/or personnel could require expansion and/or new facilities. In addition, the proposed project does not preclude future development within urban fringe or rural areas, which could also result in the need for expansion and/or new facilities.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. As such, the potential service population increase during operation of each future project cannot be meaningfully quantified at this time. However, future projects subject to discretionary approval by the appropriate lead agency are required to comply with the requirements of CEQA. This includes an environmental review to determine if a project would result in significant impacts with respect to maintaining acceptable service ratios, response times, or other performance objectives for fire protection services. This review could involve coordination with local/State fire protection authorities, ensuring the design of each subsequent project meets the standards set for emergency access, and confirming responsible agencies are capable of adequately accommodating the proposed service population increase. Further, if needed, any future construction of new or expanded fire protection facilities would be subject to project-level environmental review and site-specific mitigation as appropriate.

Some cities in the Fresno COG Region (e.g., the City of Fresno) have established DIF requirements in their respective municipal codes, requiring project sponsors to pay DIFs related to fire facilities. The payment of such fees is generally recognized by most jurisdictions and fire protection agencies as fulfilling each project's fair-share requirement to offset the costs of increased personnel or equipment that could be required to maintain acceptable service ratios, response times, and other performance objectives following development of the project. Where applicable, these fees would be imposed on future transportation improvement and land use development projects facilitated by the proposed project to offset potential impacts to fire protection facilities. If additional

mitigation is necessary beyond the payment of such fees, appropriate project-specific mitigation measures would be identified in each individual CEQA document.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, this analysis represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. Through agency coordination and adherence to regulatory requirements, including the payment of DIFs where applicable, project impacts associated with fire protection facilities would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would remain below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with fire protection facilities are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.15.1(ii): Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection?

Significant and Unavoidable Impact. Impacts on police protection services are considered significant if an increase in population or building area would result in inadequate response times or other performance objectives for police protection, and/or increased demand for services that would require construction or expansion of new police protection facilities that could result in an impact on the environment.

Construction. As previously described, both transportation improvement projects and land use developments facilitated by the proposed project would involve construction activities, which could temporarily require partial lane closures, reduce roadway capacity, or increase congestion. However, as described under Threshold 4.15.1(i), above, all transportation projects would maintain roadway emergency access during construction, and the responsible entities would notify and coordinate with the emergency responders and develop an alternative route. Projects requiring encroachment permits for construction activities in public roadways used for emergency response or evacuation are generally required to prepare traffic mitigation plans that address traffic control. Standard construction procedures established by authorities (Caltrans and local agencies, as appropriate) include notification of the appropriate fire protection agency and development of alternative routes for emergency access (if needed).

Active construction sites can be vulnerable to criminal activity during non-construction hours. Construction equipment and vehicles, as well as unsecured construction materials, can be targets for vandalism and theft. To minimize trespassing, each project would incorporate standard

security procedures undertaken by construction contractors to avoid financial losses, including security fencing and lighting and locking of access points during non-construction hours. Construction equipment would be stored in well-lit areas, and smaller equipment would be locked in secure containers. By limiting trespass, demand for police protection services during construction would be minimized.

Operation. As described above under Threshold 4.17.1(i), the proposed 2026 RTP/SCS includes roadway transportation improvements such as lane widening, lane additions, and enhanced traffic visibility that would generally improve the ability for roadways in the Fresno COG Region to provide effective and timely emergency access.

As discussed in Section 4.14, Population and Housing, urbanization and associated population growth in the Fresno COG Region are anticipated to increase significantly by the proposed project horizon year of 2049 regardless of whether the 2026 RTP/SCS is implemented. However, future transportation improvement projects and land use developments under the proposed project have the potential to increase the service population (e.g., residents, employees, or visitors) of the police protection agency associated with each individual project site. Scenario C (Enhanced Transit and Smart Growth) emphasizes transit system upgrades/improvements, which would include new transit routes/stations. Increased transit operations would necessitate additional security detail, which may be provided by the transit operator but could also draw from police protection agencies.

Scenario C also emphasizes sustainable urban growth focused on existing urban centers and established areas, and higher-density growth with mixed-use development. These urban centers are served by individual city police departments, with the exception of the City of San Joaquin, which contracts with the Fresno County Sheriff's Office. The higher population density of these areas typically corresponds with a greater degree of police protection infrastructure and personnel than rural areas. However, depending on the scale of each project, this infrastructure and/or personnel could require expansion and/or new facilities. In addition, the proposed project does not preclude future development within urban fringe or rural areas, which could also result in the need for expansion and/or new facilities.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. As such, the potential service population increase during operation of each future project cannot be meaningfully quantified at this time. However, future projects subject to discretionary approval by the appropriate lead agency are required to comply with the requirements of CEQA. This includes an environmental review to determine if a project would result in significant impacts with respect to maintaining acceptable service ratios, response times, or other performance objectives for police protection during operation. This review could involve coordination with responsible police protection agencies and would ensure that each future project would incorporate safe design features where feasible and appropriate (e.g., lighting, adequate view from streets into parks) into new development, as encouraged by the County and individual cities. This review would also ensure the design of the projects meet the standards set for emergency access and would confirm whether responsible police protection agencies are capable of adequately accommodating the proposed service population increase from their existing service population.

Further, if needed, any future construction of new or expanded police protection facilities would be subject to project-level environmental review and site-specific mitigation as appropriate.

Some cities in the Fresno COG Region (e.g., the City of Fresno) have established DIF requirements in their respective municipal codes, requiring project sponsors to pay DIFs related to police facilities. The payment of such fees is generally recognized by most jurisdictions and police departments as fulfilling each project's fair-share requirement to offset the costs of increased personnel or equipment that could be required to maintain acceptable service ratios, response times, and other performance objectives following development of the project. Where applicable, these fees would be imposed on future transportation improvement and land use development projects facilitated by the proposed project to offset potential impacts to police protection facilities. If additional mitigation is necessary beyond the payment of such fees, appropriate project-specific mitigation measures would be identified in each individual CEQA document.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, this analysis represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. Through agency coordination and adherence to regulatory requirements, including the payment of DIFs where applicable, project impacts associated with police protection facilities would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would remain below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with police protection facilities are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.15.1(iii): Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for schools?

Significant and Unavoidable Impact. As described in Section 4.14, Population and Housing, the population of the Fresno COG Region is anticipated to increase to 1,128,530 individuals by 2060, regardless of the 2026 RTP/SCS being implemented. A portion of this population will involve school-age children. As described in Section 4.15.3.3, the Fresno COG projects that K–12 public school enrollment will decrease to 192,984 by 2060, which is 11,170 fewer students than the 2022 enrollment figure of 204,154. However, the overall participation rate (i.e., the ratio of total school-age youth enrolled in school) is anticipated to increase from 92.59 percent in 2022 to 98.79 percent in 2060.

Construction. Construction of transportation improvement and land use development projects facilitated by the proposed project would involve construction activities, which would create

temporary employment opportunities within the Fresno COG Region. However, the majority of construction-related employees would likely come from within the Fresno COG Region. Therefore, school-aged children of any potential construction-related employee would already be enrolled in schools in the Fresno COG Region. Given typical construction durations, it is not anticipated that construction-related employees would relocate to the Fresno COG Region, or even within the region, as a result of employment.

Both transportation improvement and land use development projects facilitated by the proposed project could require partial lane closures or full roadway closures that could increase traffic congestion and affect school bus routes. Detours, if needed, could also increase travel distance and further increase travel times. However, roadway closures, if needed, would be temporary and implementing agencies would coordinate with appropriate transit agencies, including school district bus route coordinators, prior to construction. Therefore, construction of future projects is not anticipated to result in an increased demand for school facilities.

Operation. Transportation improvements included in the proposed 2026 RTP/SCS include new pedestrian crossings, traffic signals, and bicycle lanes. These improvements would increase accessibility to schools in the Fresno COG Region, which could result in safer routes to school and higher school attendance levels. Further, the proposed project would direct growth toward existing urban centers and established areas, and encourage higher-density growth with mixed-use development. Given the dense nature of these areas, urban school facilities are generally designed to accommodate higher student volumes than rural areas. Because the proposed project does not preclude future development within urban fringe or rural areas, future transportation improvement and land use development projects have the potential to increase the population of school-aged children in both urban and rural portions of the Fresno COG Region.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. As such, the potential service population increase during operation of each future project cannot be meaningfully quantified at this time. However, future projects subject to discretionary approval by the appropriate lead agency are required to comply with the requirements of CEQA. This includes an environmental review to determine if a project would result in significant impacts with respect to maintaining acceptable staffing ratios or other performance objectives for school facilities, which are established in long-range plans prepared by school districts, during operation. This review could involve coordination with affected school districts, which typically prepare student generation rates based on unit counts of new residential development. Using these student generation rates, CEQA documents prepared for future projects would quantify the potential student generation resulting from each future project to determine whether the affected school district can adequately accommodate the proposed student population increase. Further, if needed, any future construction of new or expanded fire protection school facilities would be subject to project-level environmental review and site-specific mitigation as appropriate.

Pursuant to California Education Code 17620(a)(1), the governing board of any school district is authorized to levy a fee, charge, dedication, or other requirements against any construction within the boundaries of the district for the purpose of funding the construction or reconstruction of school facilities. The payment of such fees is recognized under CEQA as fulfilling each project's

fair-share requirement to offset the costs of increased personnel or equipment that could be required to maintain acceptable service ratios, response times, and other performance objectives following development of the project. Where applicable, these fees would be imposed on future transportation improvement and land use development projects facilitated by the proposed project to offset potential impacts to school facilities. Pursuant to the provisions of Government Code Section 65996, a project's impact on school facilities is fully mitigated through payment of the requisite school facility development fees current at the time a building permit is issued.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, this analysis represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. Through school district coordination and adherence to regulatory requirements, including the payment of DIFs where applicable, project impacts associated with school facilities would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would remain below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with school facilities are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.15.1(iv): Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for parks?

Significant and Unavoidable Impact. Refer to Section 4.16, Recreation, for a detailed analysis of the proposed project's potential impacts with respect to recreational facilities.

Construction. Construction of transportation improvement projects and land use developments facilitated by the proposed project would involve construction activities, which would create temporary employment opportunities within the Fresno COG Region. However, it is anticipated that the majority of construction-related employees would come from within the Fresno COG Region and therefore already use park facilities within the region. Given typical construction durations, it is not anticipated that construction-related employees would relocate to the Fresno COG Region, or even within the Fresno COG Region, as a result of employment. Therefore, construction of future projects is not anticipated to result in an increased use of existing park facilities in the Fresno COG Region.

Operation. Transportation improvements included in the proposed 2026 RTP/SCS include new pedestrian trails/paths, pedestrian crossings, traffic signals, and bicycle lanes that would increase connectivity between land uses and park facilities. These improvements could result in

accelerated use of these park facilities. Further, as described throughout this section, the proposed project would direct growth toward existing urban centers and established areas, and encourage higher-density growth with mixed-use development. Given the dense nature of these areas, urban park facilities are generally designed to accommodate higher usage volumes than rural areas. In addition, the proposed project does not preclude future development within urban fringe or rural areas. Therefore, future transportation improvement and land use development projects have the potential to accelerate the use of park facilities in both urban and rural portions of the Fresno COG Region.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. As such, the potential service population increase during operation of each future project cannot be meaningfully quantified at this time. However, future projects subject to discretionary approval by the appropriate lead agency are required to comply with the requirements of CEQA. This includes an environmental review to determine if a project would result in significant impacts with respect to maintaining acceptable performance objectives for recreational facilities, such as parkland-to-resident ratios. This review could involve coordination with affected park and recreation districts to determine whether existing parks are capable of adequately accommodating the proposed service population increase. Further, if needed, any future construction of new or expansion of existing park facilities would be subject to project-level environmental review and site-specific mitigation as appropriate.

It should be noted that some land use developments facilitated by the proposed project would include the development of park and open space facilities that would be open to use by residents, employees, and/or the general public. As such, although the proposed project could contribute to greater demand for park facilities within the Fresno COG Region, it would also result in the development of such facilities and would increase such facilities' accessibility to pedestrians and bicyclists.

Some cities in the Fresno COG Region (e.g., the City of Fresno) have established DIF requirements in their respective municipal codes, requiring project sponsors to pay DIFs related to park facilities. The payment of such fees is generally recognized by most jurisdictions as fulfilling each project's fair-share requirement to offset the costs of increased park facilities that could be required to address potential deterioration of existing park facilities following development of the project. Where applicable, these fees would be imposed on future transportation improvement projects and land use developments facilitated by the proposed project to offset potential impacts to park facilities. If additional mitigation is necessary beyond the payment of such fees, appropriate project-specific mitigation measures would be identified in each individual CEQA document.

As described in Chapter 3.0, Project Description, the design of each transportation improvement project and land use development facilitated by the proposed project is currently unknown. Therefore, this analysis represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. Through park and recreation district coordination and adherence to regulatory requirements, including the payment of DIFs where applicable, project impacts associated with park facilities would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the

Fresno COG Region, it cannot be definitively known whether all potential impacts would remain below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with park facilities are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.15.1(v): Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for other public facilities?

Significant and Unavoidable Impact.

Construction. Construction of transportation improvement projects and land use developments facilitated by the proposed project would involve construction activities, which would create temporary employment opportunities within the Fresno COG Region. However, it is anticipated that the majority of construction-related employees would come from within the Fresno COG Region and therefore already use public facilities, including library facilities, within the region. Given typical construction durations, it is not anticipated that construction-related employees would relocate to the Fresno COG Region, or even within the region, as a result of employment. Therefore, construction of future projects is not anticipated to result in an increased use of existing public facilities, including library facilities, in the Fresno COG Region.

Operation. Future transportation improvement projects facilitated by the proposed project would function to increase accessibility to libraries and other community facilities (hospitals, community centers, homeless shelters, etc.) in the Fresno COG Region, which could result in higher usage levels. Further, as described throughout this section, the proposed project would direct growth toward existing urban centers and established areas, and encourage higher-density growth with mixed-use development. Given the dense nature of these areas, urban library facilities and other community facilities are generally designed to accommodate higher usage volumes than rural areas. In addition, the proposed project does not preclude future development within urban fringe or rural areas. As such, future transportation improvement and land use development projects have the potential to increase the usage of libraries and other community facilities in both urban and rural portions of the Fresno COG Region.

Pursuant to **Project-Specific Mitigation Measure (PMM) LU-1** (refer to Section 4.11, Land Use and Planning), member agencies would be required to consider community facility access during the design stage of each future transportation improvement project and land use development. As such, future projects would be designed to avoid or minimize impacts to existing community facilities in the Fresno COG Region.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. As such, the potential service population increase during operation of each future project cannot be meaningfully quantified at this time. However, future projects subject to discretionary approval by the appropriate lead agency are required to comply with the requirements of CEQA. This includes an environmental review to determine if a project would result in significant impacts with respect to maintaining acceptable performance objectives for libraries and other community facilities. This review could involve coordination with affected library systems or other community service systems to determine whether existing facilities are capable of adequately accommodating the proposed service population increase. Further, if needed, any future construction of new or expansion of existing libraries or other community facilities would be subject to project-level environmental review and site-specific mitigation as appropriate.

Some cities in the Fresno COG Region (e.g., the City of Fresno) have established DIF requirements in their respective municipal codes, requiring project sponsors to pay DIFs related to library facilities. The payment of such fees is generally recognized by most jurisdictions as fulfilling each project's fair-share requirement to offset the costs of increased library facilities that could be required to address potential staffing or supply shortages following development of the project. Where applicable, these fees would be imposed on future transportation improvement and land use development projects facilitated by the proposed project to offset potential impacts to library facilities. If additional mitigation is necessary beyond the payment of such fees, appropriate project-specific mitigation measures would be identified in each individual CEQA document.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, this analysis represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. Through library system coordination, adherence to **PMM LU-1**, and adherence to regulatory requirements, including the payment of DIFs where applicable, project impacts associated with other public facilities would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would remain below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with other public facilities are considered significant and unavoidable for the purposes of this analysis.

4.15.7 Level of Significance Prior to Mitigation

Prior to mitigation, the proposed project would have potentially significant impacts related to public services.

4.15.8 Mitigation Measures

4.15.8.1 Fresno COG Measures

There are no applicable mitigation measures to be undertaken by the Fresno COG pertaining to public services. However, as appropriate and feasible, the Fresno COG will encourage the implementation of the project-specific mitigation strategy listed below.

4.15.8.2 Project-Specific Measures

The following mitigation measure would be applied to future transportation improvement and land use development projects to reduce potentially significant impacts related to public services to the extent feasible:

PMM LU-1 *See Section 4.11, Land Use and Planning.*

4.15.9 Level of Significance After Mitigation

While implementation of **PMM LU-1** would assist the Fresno COG and lead agencies of future transportation improvement and land use development projects in reducing impacts related to public services to the extent feasible, the analysis presented in this section is general in nature, and given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future transportation improvement and land use development projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. As appropriate and feasible, the Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified. Nevertheless, impacts related to public services are considered significant and unavoidable for the purposes of this analysis.

4.15.10 Cumulative Impacts

As defined in Section 15130 of the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for public services. The cumulative impact area for public services is the Fresno COG Region, which contains the service provider boundaries applicable to each future transportation improvement and land use development project (fire protection agencies, police protection agencies, school districts, park and recreation districts, and other public facility providers).

The need for new and/or maintenance of existing public services and associated facilities is measured by service area population, or the number of residents and workers within the service area for each individual public service provider, as well as the type and density of development. As additional development occurs within the Fresno COG Region, there may be an overall increase in the demand for fire protection and law enforcement services, including personnel, equipment, and/or facilities. Increases in demand are routinely assessed by these agencies as part of the annual monitoring and

budgeting process. Similarly, school districts plan for enrollment trends through long-range planning documents, and park and recreation districts manage a jurisdiction's park facilities through master plans or similar overarching documents. As such, public service providers in the Fresno COG Region acknowledge that future growth in the region could potentially impact these services and have planned to adapt accordingly.

Future transportation improvement and land use development projects facilitated by the proposed project would require additional CEQA documentation to determine future impacts to public services. Similarly, cumulative projects subject to discretionary review would be required to conduct an analysis of potential impacts to public services under CEQA, including a quantification of potential service population increases and resulting service ratios, response times, or other performance indicators. Based on the extent of identified impacts, cumulative projects would implement mitigation measures (as necessary) to reduce significant impacts.

Additionally, as with future transportation and land use developments facilitated by the proposed project, cumulative projects would be required to comply with DIFs, if applicable, proportional to the scale of development. Payment of a project's fair share of these fees would allow public service facilities to be expanded or constructed at appropriate sites within the cumulative setting and be adequately maintained.

As stated in Section 4.15.9, impacts of the proposed project on public services are considered significant and unavoidable given the programmatic nature of the proposed project, the scale of the Fresno COG Region, and the inability of the Fresno COG to enforce project-specific mitigation or make land use approvals. Because the proposed project would result in significant adverse environmental impacts, its impacts would represent an incremental contribution to the environmental impacts in the cumulative impact study area, ultimately leading to a **cumulatively considerable impact** related to public services.

4.16 RECREATION

This section of the Draft Program Environmental Impact Report (PEIR) describes existing recreational resources within and surrounding the project area and evaluates potential impacts associated with implementation of the proposed 2026 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (proposed project). Specifically, this section identifies parks, open space, and recreational facilities within the Fresno Council of Governments (COG) Region; assesses whether the proposed project would increase the use of existing facilities such that physical deterioration may occur; and considers whether the project would necessitate the construction or expansion of recreational facilities. The analysis also reviews consistency with applicable federal, State, and local plans and policies related to recreation.

4.16.1 Scoping Process

Potential impacts related to recreation were not identified during the public scoping meeting held for the proposed project on May 28, 2025.

The Fresno COG received no comment letters in response to the Notice of Preparation (NOP) issued for the proposed project between May 13 and June 12, 2025, concerning the proposed project's potential impacts related to recreation.

4.16.2 Methodology

Information regarding recreation was obtained from agency websites and planning documents. Information was also obtained from the County of Fresno General Plan Background Report[1] and General Plan PEIR.[2]

This section analyzes the potential recreation impacts of future transportation and land use development projects facilitated by the proposed project to the extent feasible. Since recreational facilities are generally localized, specific and detailed analyses are most appropriate at the individual improvement project and new development project level rather than the programmatic level that characterizes this PEIR. Subsequent project-specific California Environmental Quality Act (CEQA) documents may be required to further analyze the transportation improvements or new development facilitated by the proposed project to determine the magnitude of impacts to recreation, and to identify appropriate project-specific mitigation measures.

4.16.3 Existing Environmental Setting

The Fresno COG Region offers residents and visitors a wide range of parks, open space, trails, and other recreational opportunities. The scale of parkland within the Fresno COG Region ranges from national parks/forests, State parks, regional parks, city parks, and local/neighborhood parks.

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1 County of Fresno. 2023. *Fresno County General Plan Background Report. General Plan Review and Revision.* April.

2 County of Fresno. 2023. *Program Environmental Impact Report Public Review Draft. Fresno County General Plan Review and Zoning Ordinance Update*. April.

As discussed in Section 4.1, Aesthetics, of this PEIR, the eastern portion of the Fresno COG Region contains federally owned and operated parkland, including the Sierra National Forest, Sequoia National Forest, Sequoia National Park, and Kings Canyon National Park.

The Fresno County Resources/Parks Division is the primary agency responsible for the management of the County/regional park system, which comprises approximately 1,578 acres of parkland.[3] This acreage does not include city and local parks, which are also available for use by Fresno COG Region residents. The County Resources/Parks Division maintains 12 regional parks/recreational facilities, two fishing access areas, and one boat launch facility, as provided in Table 4.16.A, below:[4]

Table 4.16.A: Fresno COG Region County-Managed Recreational Facilities

Park	Address	Recreation Type(s)
Avocado Lake Park	3625 North Piedra Road, Piedra, CA 93649	Swimming, fishing, picnicking
Choinumni Park	26501 Pine Flat Road, Piedra, CA 93649	Camping, fishing, hiking
Courthouse Park	1100 Van Ness Avenue, Fresno, CA 93721	Various community activities
Kearney Park	6725 West Kearney Boulevard, Fresno, CA 93706	Picnicking, sports, dancing, horseshoes
Laton-Kingston Park	20055 South Fowler Avenue, Laton, CA 93242	Swimming, picnicking, barbecuing
Los Gatos Creek Park	46240 Los Gatos Creek Road, Coalinga, CA 93210	Picnicking, barbecuing, sports
Lost Lake Recreation Area	16385 North Friant Road, Friant, CA 93626	Bird watching, picnicking, hiking, sports, kayaking, canoeing, fishing
Skaggs Bridge Park	5901 North Madera Avenue, Kerman, CA 93630	Swimming, picnicking, barbecuing
Winton Park	25314 East Trimmer Springs Road, Sanger, CA 93657	Barbecuing, picnicking, fishing
Kings River Green Belt Park	769 North Piedra Road, Sanger, CA 93657	Walking, fishing
China Creek Park	Centerville Park, South Rainbow Route, Sanger, CA 93657	Hiking, fishing, bird watching
Thorburn River Access Park	SR-180 & North Rio Vista Avenue, Sanger, CA 93657	Fishing, kayaking, picnicking
Three Rocks Fishing Access	South Oil City Avenue and West Clarkson Avenue, Cantua Creek, CA 93608	Fishing
Pine Flat Handicap Fishing Access	27709 Pine Flat Road, Piedra, CA 93649	Fishing
Shaver Lake Launch Ramp	45795 Tollhouse Road, Shaver Lake, CA 93664	Boating

Source: County of Fresno. n.d. Parks. Website: https://www.fresnocountyca.gov/Departments/Public-Works-and-Planning/divisions-of-public-works-and-planning/resources-and-parks-division/parks (accessed December 10, 2025).
COG = Council of Governments
SR- = State Route

In addition to regional parks, residents of the Fresno COG Region may enjoy local parks, including those owned by cities, special districts, nonprofits, and other entities. Each city typically maintains an inventory of parks within its jurisdiction and Sphere of Influence.

As described below in Section 4.16.4.1, Section 6(f) of the Land and Water Conservation Fund Act (LWCA) of 1965 prohibits the conversion of all parks and other sites that have received grants from

[3] County of Fresno. 2024. *General Plan Background Report.* February. Page 7-94. Website: file:///P:/2025/20252196%20Fresno%20RTP_SCS%20EIR/PRODUCT/References/Land%20Use/background-report-2024.pdf (accessed December 10, 2025).

[4] County of Fresno. n.d. Parks. Website: https://www.fresnocountyca.gov/Departments/Public-Works-and-Planning/divisions-of-public-works-and-planning/resources-and-parks-division/parks (accessed December 10, 2025).

the LWCA to uses other than public outdoor recreation. Recreational facilities in the Fresno COG Region that have received LWCA funding are listed in Table 4.16.B, below.

Table 4.16.B: Fresno COG Region Section 6(f) Recreational Facilities

Recreational Area	Sponsor/Agency
Al Radka Park	City of Fresno
Basin Park	Fresno Metropolitan Flood Control District
Breckenridge Thomas Park	Fresno Metropolitan Flood Control District
Calwa Park	Calwa Recreation and Park District
Camacho Park	City of Reedley
Chaffee Zoo	City of Fresno
Florence Park	City of Fresno
Fowler/Shields Park	City of Fresno
Fresno Zoo	City of Fresno
Fulton Mall	City of Fresno
Hinton Park	City of Fresno
Holmes Playground	City of Fresno
Huron Community Park	Coalinga-Huron Recreation and Park District
Ivy School	City of Fresno
Jenni Basin Park	City of Sanger
JFK Park	City of Sanger
Kings Canyon National Park	United States National Park Service
Kings River Greenbelt	Fresno County
Lafayette Park	City of Fresno
Laton-Kingston Regional Park	Kings County and Fresno County
Lost Lake Campground	Fresno County
Mendota Wildlife Area	California Wildlife Conservation Board
Millerton Lake State Recreation Area	California Department of Boating and Waterways
Mosqueda Park	City of Fresno
Mueller Park	City of Reedley
Oso De Oro Basin Lake Park	Fresno Metropolitan Flood Control District
Panoche Coalinga Area of Critical Environmental Concern	BLM
Parlier City Park	City of Parlier
Pioneer Park	City of Reedley
Roeding Park	City of Fresno
Romain Playground	City of Fresno
Sanger Community Park	City of Sanger
Schallenburger Ridge	California Department of Parks and Recreation
South Finegold Day Use Area	California Department of Boating and Waterways
Trolley Creek Park	Fresno Metropolitan Flood Control District
Victoria West Park	City of Fresno
W.H. Shafer Park	City of Selma
Westside Park	Coalinga-Huron Recreation and Park District
Woodward Park	City of Fresno
Yosemite Jr. High School Park	City of Fresno
Other BLM Lands	BLM

Source: Trust for Public Land. n.d. The Land and Water Conservation Fund: Past Projects.
BLM = Bureau of Land Management
COG = Council of Governments

4.16.4 Regulatory Setting

Federal, State, and local regulations and programs related to recreation that are applicable to the proposed project are described below.

4.16.4.1 Federal Regulations

Section 4(f) of the United States Department of Transportation Act. Section 4(f) of the Department of Transportation Act of 1966, codified in 49 United States Code (USC) Section 303, declares that "it is the policy of the U.S. Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites." Section 4(f) only applies if a project has a federal component (i.e., requires a federal permit or receives federal funds).

Section 4(f) specifies that the Secretary of Transportation may approve a transportation program or project . . . "requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if:

- There is no prudent and feasible alternative to using that land; and
- The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use."

Section 6(f)(3) of the Land and Water Conservation Fund Act of 1965. Section 6(f)(3) of the LWCA contains provisions to protect federal investments in park and recreation resources. Specifically, this section states that "No property acquired or developed with assistance under this section shall, without the approval of the Secretary, be converted to other than public outdoor recreation uses. The Secretary shall approve such conversion only if he finds it to be in accord with the then existing comprehensive statewide outdoor recreation plan and only upon such conditions as he deems necessary to assure the substitution of other recreation properties of at least equal fair market value and of reasonably equivalent usefulness and location." This requirement applies to all parks and other sites that have received grants from the LWCA.

4.16.4.2 State Regulations

Quimby Act of 1975. The Quimby Act (California Government Code Section 66477) allows the legislative body of a city or county to require by ordinance the dedication of land, the payment of an in-lieu park fee, or a combination thereof, for the approval for a final tract or parcel map. In cases where such dedication or park fee is not obtained through a map, it may be imposed when building permits are issued. The following condition must be met to comply with the Quimby Act:

- The city or county ordinance must include definitive standards for determining the proportion of a subdivision to be dedicated and the amount of any fee to be paid in lieu thereof.

The legislative body must adopt a general plan containing a recreation element, and any proposed park or recreational facility must be consistent with the principles and standards established in the element.

Community Facilities Act of 1982 (Section 53324 of the Government Code). Also commonly known as the Mello-Roos Act, this legislation allows any county, city, special district, school district, or joint powers authority to establish a Mello-Roos Community Facilities District (CFD), which allows for financing of a broad range of public improvements and services, including infrastructure, police protection, fire protection, medical response, school facilities, parks, and other community facilities. Upon establishment of a Mello-Roos CFD, dedicated taxes are collected from residents to fund such improvements.

California Public Park Preservation Act of 1981 (Public Resources Code Sections 5400-5409). This legislation states that "No city, city and county, county, public district, or agency of the state, including any division, department or agency of the state government, or public utility, shall acquire (by purchase, exchange, condemnation, or otherwise) any real property, which property is in use as a public park at the time of such acquisition, for the purpose of utilizing such property for any nonpark purpose, unless the acquiring entity pays or transfers to the legislative body of the entity operating the park sufficient compensation or land, or both, as required by the provisions of this chapter to enable the operating entity to replace the park land and the facilities thereon."

California Mitigation Fee Act (California Government Code Sections 66000 et seq.). This legislation allows cities to impose fees on development projects for the purpose of mitigating the impact of development on a city's ability to provide public facilities. Consistent with the requirements of this legislation, cities must identify the purpose of the fee, the use to which the fee is being dedicated, and the relationship among the fee, the specific public utility, and the development project on which the fee is imposed.

4.16.4.3 Regional Regulations

San Joaquin River Parkway Master Plan. The San Joaquin River Parkway is a planned 22-mile regional natural and recreation area primarily in the floodplain of the San Joaquin River. The original San Joaquin River Parkway Interim Master Plan was adopted in December 1997 by the San Joaquin River Conservancy. The San Joaquin River Parkway Master Plan Update was adopted in April 2018 and includes goals, policies, and conceptual improvement projects and opportunities for the San Joaquin River Parkway.

4.16.4.4 Local Regulations

Local General Plans. The Fresno COG Region contains Fresno County and 15 incorporated cities, each with an individual general plan prepared pursuant to California Government Code Section 65300. Each general plan contains goals and policies related to recreation within the particular jurisdiction. Although general plan element titles may vary, this information is typically found within the general plan open space/conservation element, or equivalent.

Local Municipal Codes. Fresno County and cities in the Fresno COG Region may have established development impact fees (DIFs) for development projects within their jurisdictions for the purpose

of ensuring adequate recreational facilities. Where applicable, future transportation and land use development projects facilitated by the proposed project would be subject to such fees.

Local Park/Trail Master Plans. In addition to the discussion of local park facilities within each jurisdiction's general plan, jurisdictions may have adopted separate park or trail master plans for the purpose of identifying existing and planned future park and recreational facilities within their jurisdictions. These plans may contain goals and policies related to recreational facilities.

4.16.5 Thresholds of Significance

The following thresholds of significance are based on Appendix G of the *State CEQA Guidelines*. Based on these thresholds, implementation of the proposed project would have a significant adverse impact with respect to recreation if it would:

Threshold 4.16.1: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or

Threshold 4.16.2: Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

4.16.6 Project Impacts

Threshold 4.16.1: Would the project 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?

Significant and Unavoidable Impact. As described in Section 3.0, Project Description, the Fresno COG Region hosts many recreational destinations of regional significance and includes routes to others in adjacent counties. Residents and travelers of the region vacation to, or pay short visits to, many destinations, including Millerton Lake and the San Joaquin River. Transportation improvements included in the proposed 2026 RTP/SCS include transit improvements, lane widening, and lane additions, which would provide increased access to these facilities for residents and visitors. Transportation improvements included in the proposed 2026 RTP/SCS on a local scale include new pedestrian trails/paths, pedestrian crossings, traffic signals, and bicycle lanes that would increase connectivity between recreational facilities and nearby land uses at a local level, which could result in accelerated use of these facilities.

As described in Section 4.14, Population and Housing, the population of the Fresno COG Region is anticipated to increase to 1,128,530 individuals by 2060 regardless of whether the 2026 RTP/SCS is implemented. This increase in population would generate additional demand for recreational facilities beyond existing conditions. The proposed project would have a role in directing this growth toward specific areas in the Fresno COG Region. As described in Chapter 3.0, Scenario C (Enhanced Transit and Smart Growth) emphasizes sustainable urban growth focused on existing urban centers and established areas, and higher-density growth with mixed-use development. By encouraging growth in these areas, the proposed project would support the forecasted increase in population

but could result in increased usage of nearby recreational facilities. While recreational facilities in dense urban areas are generally designed to accommodate higher usage volumes than rural areas, the scale of increased usage could result in substantial physical deterioration (or accelerated deterioration). The proposed project does not preclude future development within urban fringe or rural areas, which could necessitate the construction of new recreational facilities to serve new populations in these areas. As such, future transportation improvement and land use development projects have the potential to increase the use of park facilities throughout the Fresno COG Region.

The proposed project would facilitate the development of both public and private recreational facilities. This includes local bike paths/trails, which are considered recreational facilities. Additionally, future land use developments may include public parks or other recreational facilities as part of their overall design. Residential land use developments (e.g., new apartment complexes) may include private recreational facilities (e.g., pools, recreation fields, playgrounds) depending on the conditions of approval imposed on each project by the lead agency. These facilities would satisfy the recreational needs of residents, employees, and visitors of each project site, thereby decreasing the frequency at which these individuals would travel to utilize other nearby recreational facilities. This could offset some of the increased usage of existing recreational facilities assumed under the proposed project.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. As such, the potential increase in recreational facility usage during operation of each future project cannot be meaningfully quantified at this time. However, future projects subject to discretionary approval by the appropriate lead agency are required to comply with the requirements of CEQA. This includes an environmental review to determine if a project would result in significant impacts with respect to increasing 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). This review could involve coordination with affected park and recreation districts to determine whether existing recreational facilities are capable of adequately accommodating the proposed service population increase.

Some cities in the Fresno COG Region (e.g., the City of Fresno) have established DIF requirements in their respective municipal codes, requiring project sponsors to pay DIFs related to recreational facilities. The payment of such fees is generally recognized by most jurisdictions as fulfilling each project's fair-share requirement to offset the costs of increased recreational facilities that could be required to address potential deterioration of existing facilities following development of the project. Where applicable, these fees would be imposed on future land use developments facilitated by the proposed project to offset potential impacts to park facilities. If additional mitigation is necessary beyond the payment of such fees, appropriate project-specific mitigation measures would be identified in each individual CEQA document.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, this analysis represents a general characterization of reasonably foreseeable impacts that could occur under implementation of the proposed project. Through park and recreation district coordination and adherence to regulatory requirements, including the payment of DIFs where

applicable, project impacts associated with substantial physical deterioration of a recreational facility would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would remain below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to the California Department of Transportation (Caltrans), local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with substantial physical deterioration of a recreational facility are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.16.2: Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Significant and Unavoidable Impact. Transportation improvement and land use development projects facilitated under the proposed project could include recreational facilities. As previously described, the preferred project scenario emphasizes sustainable urban growth focused on existing urban centers and established areas, and higher-density growth with mixed-use development. This could result in infill redevelopment of properties, including recreational facilities, resulting in the full or partial removal of such facilities. Similarly, transportation improvement projects that include new or expanded corridor alignments could impact recreational facilities, including pedestrian and bicycle trails, reducing their functionality.

Although it would encourage growth in existing urban centers, the proposed project does not preclude future development within urban fringe or rural areas, which may already have limited access to recreational facilities. This growth could place a strain on existing recreational facilities that could necessitate the construction or expansion of recreational facilities. However, where applicable, future project sponsors would be required to pay DIFs related to recreational facilities. The payment of such fees is generally recognized by most jurisdictions as fulfilling each project's fair-share requirement to offset the costs of new or expanded recreational facilities that could be required under implementation of each project.

The proposed project would facilitate the development of both public and private recreational facilities. This would include local transportation improvements such as bike paths/trails, or recreational spaces included with land use developments, such as private or public parks. These facilities would be intended to satisfy the daily recreational needs of residents, employees, and visitors of each project site.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. As such, potential impacts resulting from new or expanded recreational facilities associated with each future project cannot be meaningfully quantified at this time. However, future projects subject to discretionary approval by the appropriate lead agency are required to comply with the requirements of CEQA. This includes an environmental review to determine if a project would result in significant impacts, including impacts related to new or expanded recreational facilities. The construction of

new or expanded recreational facilities would be subject to project-level environmental review and site-specific mitigation as appropriate in order to ensure significant environmental impacts are avoided or mitigated.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, this analysis represents a general characterization of reasonably foreseeable impacts that could occur under implementation of the proposed project. Through park and recreation district coordination and adherence to regulatory requirements, including the payment of DIFs where applicable, project impacts associated with recreational facilities or requiring the construction or expansion of recreational facilities would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would remain below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with including recreational facilities or requiring the construction or expansion of recreational facilities are considered **significant and unavoidable** for the purposes of this analysis.

4.16.7 Level of Significance Prior to Mitigation

Prior to mitigation, the proposed project would have potentially significant impacts related to recreation.

4.16.8 Mitigation Measures

4.16.8.1 Fresno COG Measures

There are no applicable mitigation measures to be undertaken by the Fresno COG pertaining to recreation.

4.16.8.2 Project-Specific Measures

There are no applicable mitigation measures to be applied to future transportation improvement and land use development projects pertaining to recreation.

4.16.9 Level of Significance After Mitigation

As discussed above, no applicable mitigation measures have been identified with respect to recreational facilities at this time. The analysis presented in this section is general in nature, and given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would remain below levels of significance. The responsibility to approve future transportation improvement and land use development projects and ensure the implementation of project-specific mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Nevertheless, impacts related to recreation are considered significant and unavoidable for the purposes of this analysis.

4.16.10 Cumulative Impacts

As defined in Section 15130 of the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for recreation. The cumulative impact area for recreation is the Fresno COG Region, given that it hosts many recreational destinations of regional significance.

The need for new and/or maintenance of existing recreational facilities is measured by service area population, or the number of residents and workers within the service area for each agency responsible, as well as the type and density of development. As additional development occurs in the Fresno COG Region and as intermodal transportation facilitates more efficient local and regional travel, there may be an overall increase in the demand for recreational facilities. Typically, park and recreation districts manage a jurisdiction's park facilities through master plans or similar overarching documents. As such, responsible agencies in the Fresno COG Region acknowledge that future growth in the region could potentially impact recreational facilities and have planned to adapt accordingly.

Future transportation improvement and land use development projects facilitated by the proposed project would require additional CEQA documentation to determine future impacts to recreational facilities. Similarly, cumulative projects subject to discretionary review would be required to conduct an analysis of potential recreational impacts under CEQA, including a quantification of potential service population increases and resulting service ratios or other performance indicators. Based on the extent of identified impacts, cumulative projects would implement mitigation measures (as necessary) to reduce significant impacts.

Additionally, as with future transportation improvement and land use development projects facilitated by the proposed project, cumulative projects would be required to comply with DIFs, if applicable, proportional to the scale of development. Payment of a project's fair share of these fees would allow recreational facilities to be expanded or constructed at appropriate sites within the cumulative setting and be adequately maintained.

As stated in Section 4.16.9, impacts of the proposed project on recreation are considered significant and unavoidable given the programmatic nature of the proposed project, the scale of the Fresno COG Region, and the inability of the Fresno COG to enforce project-specific mitigation or make land use approvals. Because the proposed project would result in significant adverse environmental impacts, its impacts would represent an incremental contribution to the environmental impacts in the cumulative impact study area, ultimately leading to a cumulatively considerable impact related to recreation.

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4.17 TRANSPORTATION

This section of the Draft Program Environmental Impact Report (PEIR) discusses the existing transportation conditions within the Fresno Council of Governments (COG) Region and evaluates potential transportation-related impacts associated with implementation of proposed 2026 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (proposed project). Specifically, this section addresses the project's potential to affect vehicle circulation, multimodal access, transit service, bicycle and pedestrian facilities, and overall transportation network performance. The analysis also considers potential impacts related to vehicle miles traveled (VMT), roadway safety and design features, emergency access, and consistency with applicable federal, State, and local transportation plans and policies.

4.17.1 Scoping Process

Potential impacts related to transportation were not identified during the public scoping meeting held for the proposed project on May 28, 2025.

The Fresno COG received one comment letter concerning potential transportation impacts related to the 2026 RTP/SCS in response to the Notice of Preparation (NOP) issued between May 13 and June 12, 2025. For copies of the NOP comment letters, refer to Appendix A of this Draft PEIR. NOP comments related to transportation impact included the following:

- The San Joaquin Valley Air Pollution Control District (SJVAPCD), May 29, 2025, recommended that VMT be reduced through encouragement of mix-use development, walkable communities, and project design elements that prevent urban sprawl and provide options for alternative transportation.

4.17.2 Methodology

The study area for project impacts regarding transportation is the entire Fresno COG Region as the proposed land use growth and transportation improvement for this project are all within the boundaries of the Fresno COG Region. However, the study area for the cumulative transportation impact includes the neighboring Metropolitan Planning Organizations (MPOs) such as the Madera County Transportation Commission (MCTC), the Tulare County Association of Governments (TCAG), the Kings County Association of Governments (KCAG), and the Association of Monterey Bay Area Governments (AMBAG), as well as Inyo County and Mono County.

Specific and detailed analyses of transportation impacts are most appropriate at the individual improvement project and new development project levels rather than the programmatic level. Subsequent project-specific California Environmental Quality Act (CEQA) documents may be required to further analyze the specific projects facilitated by the proposed to determine potential impacts and identify appropriate potential mitigation measures. VMT is an appropriate performance metric to measure the transportation impacts for projects (CEQA Guidelines Section 15064.3). Specifically, Section 15065.3 (b) provides the following criteria for analyzing transportation impacts:

> (1) Land Use Projects. Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half

mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.

(2) Transportation Projects. Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, such as in a regional transportation plan EIR, a lead agency may tier from that analysis as provided in Section 15152.

(3) Qualitative Analysis. If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.

(4) Methodology. A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled, and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project. The standard of adequacy in Section 15151 shall apply to the analysis described in this section.

4.17.2.1 Key Concepts

The assessment of transportation impacts considers how a project may influence travel patterns, mobility, and accessibility within the transportation network. Transportation systems are composed of multiple modes of travel, including motor vehicles, public transit, bicycling, and walking. Travelers within the Fresno COG Region include residents, commuters, freight operators, visitors, and transit users. Each traveler interacts with the transportation network through a variety of modes and travel purposes, including commuting to work, accessing goods and services, and recreational travel. Evaluation of transportation impacts considers how projects may change travel demand, affect the efficiency of the transportation network, and influence the availability of transportation choices.

Transportation Network. The transportation network consists of the interconnected system of roadways, transit routes, bicycle facilities, pedestrian infrastructure, and supporting transportation facilities that enable the movement of people and goods. These facilities function together to provide

mobility and access between residential areas, employment centers, commercial destinations, and recreational areas. Transportation projects or land use changes can affect the performance of the network by altering travel demand, modifying circulation patterns, or requiring improvements to existing infrastructure.

Roadway Networks. Roadways typically serve a dual function by providing mobility and property access. Functional classifications are typically assigned to roadways to better understand whether a road serves to provide mobility or access. Roadways that are designed for mobility are typically freeways/highways, which maximize speed and minimize points of conflict by having controlled/limited access. Many such facilities are improved with grade separations where other streets and roads cross them. Local roadways are designed to maximize property access; however, they also have lower travel speeds.

Freeway/Highway. A freeway is a divided highway with full control of access and two or more lanes for the exclusive use of high volumes of traffic in each direction. Intersections with other streets and roads are grade-separated, with connections provided via ramps. Because of the grade separations and access control, these facilities do not provide direct access to land. These types of facilities serve primarily regional through-trips and connect to other regional and interregional facilities. Within the "Freeway" classification, there are several sub-classifications:

- **Freeway Ramps and Connectors.** Ramps and connectors link the region's surface street system to the freeway system or connect one designated freeway to another.

- **Freeway Auxiliary Lanes.** Auxiliary lanes are added at an on-ramp and then drop at the next downstream off-ramp to help facilitate merging and diverging traffic. In cases where parallel local streets do not exist, longer auxiliary lanes may extend beyond the next downstream interchange.

- **General-Purpose Freeway Lanes.** Freeway lanes that do not fall into one of the three categories above are characterized as general-purpose freeway lanes. These lanes are standard freeway lanes open to all vehicles at all times, without occupancy or vehicle-type restrictions.

Expressway. An expressway provides rapid through-traffic movement. Expressways are the main corridors that connect cities/communities within Fresno County and to State Routes (SRs)/other expressways with adjacent counties. There are strict access controls in place prohibiting direct access to abutting property driveways and private roads under urban/suburban areas and rural areas where parcels are less than 20 acres. In rural areas where parcels are greater than 20 acres, direct access is permitted under appropriate conditions. Public roads are allowed to access expressways with a minimum spacing of 0.5 mile between intersections.

Arterial. An arterial provides for mobility within the County and its cities and carries through traffic on continuous routes. Arterials are fed by local and collector roadways and provide access to freeways, expressways, other arterials, and major traffic generators. They serve as primary routes in both urban and rural areas and generally range from two to six lanes, depending on demand.

A super arterial is a higher-capacity arterial with greater access control, designed to carry larger volumes of traffic with fewer delays. These corridors provide regional mobility between major origins

and destinations and often function as primary routes for intercity and intra-city travel. Super arterials typically range from four to six lanes.

Access to arterials and super arterials is restricted to maintain capacity and safety. Abutting property driveways and private road access are restricted through spacing standards and roadway design requirements. Parcels with sufficient frontage are allowed to have one direct access, while parcels with insufficient frontage may share one access with adjacent parcels. Public roads with a functional classification of collector or higher are allowed to access arterials. Local streets access is generally restricted and may require the use of islands and turning lanes.

Collector. A collector provides for internal traffic within communities and connects local roads to arterials, super arterials, and expressways. Direct access from abutting property driveways and private roads is generally permitted. However, if the abutting property is a major traffic generator, then the property would be subject to development design requirements for access or may limit the number of direct access points. There are no access limitations for public roads intersecting with collector roads.

Local. A local road provides access to abutting property and connects to collectors, arterials, and super arterials. Direct access from abutting property driveways and private roads is generally unrestricted. There are no access limitations for public roads intersection with local roads.

Regional (Intercity) Rail and Bus Service. Intercity rail service is an electric or diesel-propelled railway for passenger trains operated on a regular basis by Amtrak or under contract with a transit operator for transporting passengers between and within urbanized and outlying areas. Such rail service is generally characterized by multi-trip tickets, specific station-to-station fares, railroad employment practices, and considerable distance between stations. Intercity bus service is similar to intercity rail service except that it uses the roadway system to transport passengers.

Fixed-Route Bus. Fixed-route bus (or "local bus") service is generally the largest share of bus transit services. Buses stop frequently along routes that are typically several miles long.

Paratransit Services. Paratransit services provide transportation service required by the Americans with Disabilities Act (ADA) of 1990 (Title 42 United States Code [USC] Section 12101 et seq.) for seniors or individuals with disabilities who are unable to use fixed-route transit systems.

Demand-Responsive Transit. Demand responsive transit is defined as a transit mode consisting of passenger cars, vans, or small buses operating in response to calls from passengers or their agents to the transit driver, who then dispatches a vehicle to pick up the passengers and transport them to their destinations.[1] This type of transit encompasses a variety of transit service products that provide on-demand service to passengers. Examples of demand-responsive transit service types include route deviation, which is also referred to as deviated-route, deviated-fixed-route, flexible-route, or flex-route service. Route deviation service can be a way to stretch limited resources in areas of low population, and this type of service is frequently operated in rural areas.[2] Micro-transit is a form of demand

1 National Rural Transit Assistance Program. 2024. ADA Toolkit. December.
2 Ibid.

responsive transit that is between traditional fixed-route transit and the services provided by taxis and new, technology-enabled models such as Uber and Lyft (transportation network companies [TNCs]). It is a demand-responsive, commuter-focused service that typically uses ad-hoc pickup and drop-off points within a few minutes' walk of multiple customers and generally within limited service zones.[3]

Active Transportation. Bicycling, scooters, skateboards, electric micromobility devices,[4] and walking are considered active transportation modes. In addition to providing low-cost transportation, bicycling and walking contribute to community health and wellness and reduce congestion, regional greenhouse gas (GHG) emissions, and other transportation-related pollutants.

Bicycle Facilities. The existing active transportation system for bicyclists includes bike paths, bike lanes, bike routes, cycle tracks, and bike parking. The following list provides a detailed explanation of each type of bicycle facility:

- Class I Bike Paths, also known as shared-use trails, are off-street routes for non-motorized travel like biking and walking. Generally located along landscaped corridors or greenways, they limit interaction with motor traffic and serve both recreational and commuter purposes. These paths connect areas separated by barriers, such as freeways or rivers, and benefit a range of users. Unless local laws permit, horses are typically not allowed; if they are, wider paths are typically provided to accommodate all users.

- Class II Bike Lanes are on-street facilities marked with stripes, symbols, and signs for bicyclist use. Positioned next to vehicle traffic, they help guide drivers around predictable cyclist movements and provide space for safer, more comfortable riding. Some cities have planned for them on all new collector and arterial roads.

- Class III Bike Routes use on-street markings or signs to link the bicycle network. These routes are typically found on low-speed, low-traffic roads where space is limited for dedicated lanes. While shoulders are helpful, they are not required.

- Class IV Separated Bikeways, or "cycle tracks," are exclusive bike paths separated from sidewalks and vehicle lanes by vertical elements like curbs, buffers, parked cars, or barriers. Located within the street right-of-way, they offer comfort and protection similar to Class I paths and can be one-way or two-way. Some are built at a raised elevation with smooth transitions from the road.

Pedestrian Facilities. Pedestrian facilities include shared-use paths, sidewalks, and crosswalks. Sidewalks are paved areas typically located in urbanized environments adjacent to the edge of the vehicle right-of-way dedicated to pedestrians. In addition to sidewalks, shared-used trails are paved off-street facilities that can also be used by pedestrians. Crosswalks are also important pedestrian facilities. Enhanced crosswalks with high-visibility markings, warning signage, curb extensions, median

[3] National Rural Transit Assistance Program. 2026. Glossary. Website: https://www.nationalrtap.org/Toolkits/ADA-Toolkit/glossary (accessed June 8, 2026).

[4] Electric micromobility includes any small, low-speed, electric-powered transportation device, including electric-assist bicycles (e-bikes), electric scooters (e-scooters), and other small, lightweight, wheeled, electric-powered conveyances.

islands, raised crosswalks, and pedestrian beacons can increase visibility and safety for pedestrians during street crossings.

Railways. Railways in the United States are designated as Class I, Class II, or Class III according to revenue benchmarks established by the Surface Transportation Board (STB).

- Class I railroads are the largest railway carriers in North America, designated by STB based on annual operating revenue. As of 2024, the revenue threshold for Class I status is $1,074,600,816 after inflation adjustment. There are six Class I Railroads operating in North America that focus primarily on transporting freight and cargo, including the following:
    - BNSF Railway (BNSF)
    - Canadian National Railway
    - Canadian Pacific Kansas City (CPKC)
    - CSX Transportation
    - Norfolk Southern Railway
    - Union Pacific Railroad (UPRR)
- Additionally, there is also a single Class I Railroad that is primarily focused on passenger transportation, Amtrak.[5]
- Class II railroads, also known as regional railroads, are railway carriers designated by STB with annual operating revenues between the Class III and Class I thresholds. As of 2024, that means revenues between $48,237,637 and $1,074,600,816. There are approximately 21 Class II carriers operating in the United States.[6]
- Class III railways, also known as shortline railroads, are the most numerous category of railroad in the United States. Class III railroads are railway carriers designated by STB that earn less than the Class II revenue threshold. As of 2024, that threshold is 48,237,637 in annual operating revenue. According to the American Short Line and Regional Railroad Association (ASLRRA), there are approximately 603 shortline and regional railroads operating in the United States, managing roughly 50,000 miles of track (about 40 percent of the total United States freight rail network by mileage).[7]

4.17.3 Existing Environmental Setting

This section describes the existing environmental setting of the Fresno COG Region pertaining to its transportation system. The Fresno COG Region includes interstate highways, State highways, regional and local roadways, a regional airport and several municipal airports, freight and passenger rail

[5] RailState. 2023. *The Ultimate Guide to Railroad Classes: Defining Class I, Class II, and Class III Railroads*. March. Website: https://www.railstate.com/the-ultimate-guide-to-railroad-classes-defining-class-i-class-ii-and-class-iii-railroads/ (accessed June 8, 2026).

[6] Ibid.

[7] Ibid.

service, a public transportation system as well as an active transportation network that includes bike and pedestrian facilities.

4.17.3.1 Roadway Network

The Fresno COG Region is served by an extensive network of freeways, arterials, and local roads as shown on Figure 3-3 in Chapter 3.0, Project Description. The network provides a high level of north-south connectivity with adjacent counties (i.e., Madera, Kings, Merced, and Tulare). There are currently no roadway connections to Inyo County or Mono County to the east and only limited roadway connectivity with San Benito County and Monterey County to the west. Internally, a radial pattern of major roadways serves the central City of Fresno, while roadways in the western part of the county provide access to local communities and Interstate (I) 5.

Freeways, Highways, and Arterials. The Fresno COG Region's regional road system consists of approximately 6,300 miles of roadways.[8] The most integral interregional roadways in the County are the State highways, particularly I-5, SR-99, and SR-41, all of which traverse the County from north to south. I-5 is the primary north-south route for interregional and interstate business, freight, tourist, and recreational travel, linking Southern California to Northern California and the Pacific Northwest. SR-99 performs a similar function on a regional level, connecting most of the cities in the San Joaquin Valley to Northern and Southern California. SR-41 links Fresno County to Yosemite National Park and the Sierra Nevada communities to the north, and to Kings County and the Central Coast to the south. In addition to these three routes, Fresno County is also served by SR-33, SR-43, SR-63, SR-145, SR-168, SR-180, SR-198, SR-201, SR-256, and SR-269. Many other County roads are used for commute, agricultural, recreational, and scenic purposes. As urbanization continues in the County, commuter and business trips will increase.[9] Additional information regarding the Fresno COG's regional roadway system inclusive of the main freeways in the Fresno COG Region is detailed below:

- **I-5:** Runs along the western edge of the Fresno COG Region as part of California's main north-south interstate corridor. Primarily serves long-distance freight and through traffic with minimal local interchange.

- **SR-99:** The most heavily traveled freeway in the Fresno COG Region, which serves as a vital artery of the Central Valley. Passes directly through the City of Fresno and moves both commuter and commercial traffic between Bakersfield and Sacramento.

- **SR-41:** Designated the Yosemite Freeway within Fresno, providing a major north-south link. Provides a direct connection from Fresno to Yosemite National Park and also supports daily traffic and regional tourism.

8 Fresno County. 2023. *Draft Program Environmental Impact Report. Fresno County General Plan Review and Zoning Ordinance Update.* April

9 Fresno County. 2023. *Program Environmental Impact Report Public Review Draft. Fresno County General Plan Review and Zoning Ordinance Update*. April.

- **SR-180:** Known as the Kings Canyon Freeway and serves as the Fresno COG Region's primary east-west expressway. SR-180 connects downtown Fresno with the Sierra Nevada and provides local access to Kings Canyon and Sequoia National Parks.

- **SR-168:** Known as the Sierra Freeway, running from Fresno through Clovis into the Sierra Nevada. It serves dual roles as a commuter route and as access to mountain destinations such as Shaver Lake and China Peak.

Fresno County also contains an arterial street network that provides connections between major traffic generators to the freeway, expressway, and arterial system. Arterials are classified as either urban or rural. Urban arterials are typically four-lane, divided roadways with moderate to high access control. Rural arterials are typically two-lane roadways or four-lane divided roadways with low to moderate access control.

4.17.3.2 Public Transit System

Public transit service within the Fresno COG Region is described below and also shown on Figure 4.17-1.

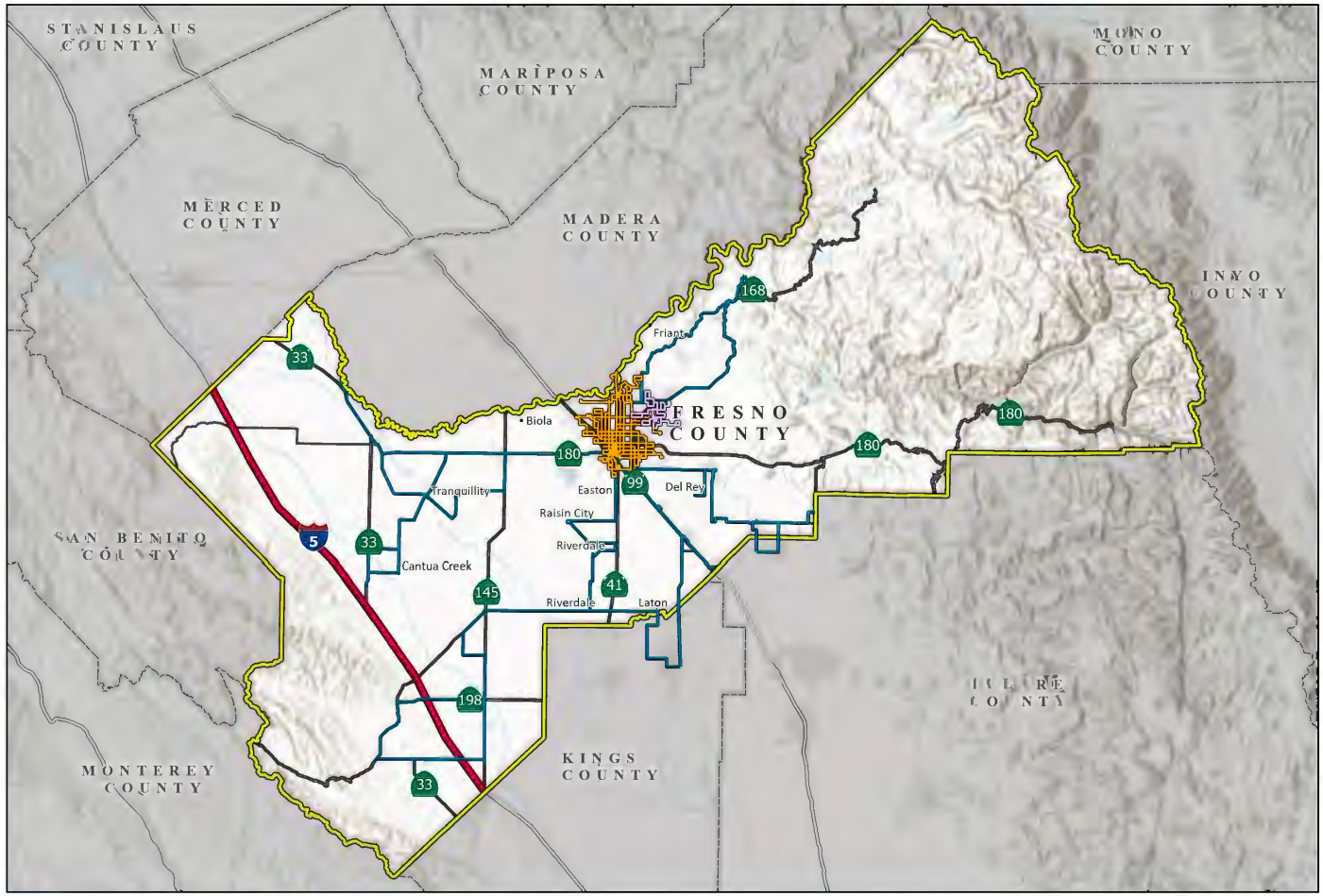
Intercity Rail and Bus Services. Amtrak provides intercity rail service to the surrounding region within the San Joaquin Valley as well as to the San Francisco Bay Area and Sacramento. The Gold Runner route is an intercity rail line that operates between Bakersfield and the Bay Area or Sacramento. Currently, the Golder Runner provides seven daily round trips, consisting of five round trips between Oakland and Bakersfield and two round trips between Sacramento and Bakersfield. Amtrak also offers Thruway Bus Routes to Yosemite National Park and Mammoth Lakes. Both the Gold Runner and Thruway Bus are located at the Amtrak Station in downtown Fresno (2650 Tulare Street).

Greyhound Lines also provides interregional bus services through the San Joaquin Valley to the Greater Sacramento Metropolitan Area, the San Francisco Bay Area, and Southern California. Stops are located at major population centers along SR-99.

Fixed-Route Transit Services. There are three public transit agencies that offer fixed-route bus services within the Fresno COG Region. These fixed-route services typically serve passengers within the City of Fresno, within the City of Clovis, and between the rural cities and major communities throughout the Fresno COG Region.

Fresno Area Express (FAX) is operated by the City of Fresno Department of Transportation. FAX currently operates 18 bus lines that primarily serve the City of Fresno and provide connections to the neighboring City of Clovis through the Bus Rapid Transit (BRT) "Q" line and other fixed-route services.

Clovis Transit Stageline is operated by the City of Clovis. Clovis Transit Stageline currently operates eight color-coded, fixed-route bus lines that primarily serve the City of Clovis, with connections provided to destinations in neighboring Fresno.



LSA

Fresno COG Region
Clovis Transit
Fresno Area Express (FAX)
Fresno County Rural Transit Agency (FCRTA)

0 9 18
Miles

SOURCE: Esri, USGS (2024)

I:\2025\20252196\GIS\Pro\Fresno COG RTP EIR\Fresno COG EIR for 2026 RTP SCS.aprx (6/16/2026)

FIGURE 4.17-1

Regional Transportation Plan/ Sustainable Communities Strategy
Regional Transit System

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Fresno County Rural Transit Agency (FCRTA) serves 13 incorporated cities and the unincorporated rural communities in the Fresno COG Region. FCRTA currently operates 26 transit subsystems serving 13 rural cities and 39 unincorporated communities throughout the Fresno COG Region that are outside the Fresno metropolitan area. FCRTA offers fixed route services and demand-responsive services, and provides connections/transfers to FAX, Clovis Transit Stageline, Kings Area Rural Transit (KART), and Dinuba Area Regional Transit (DART).

Paratransit Services. Handy Ride is a paratransit service operated by FAX that serves people who have disabilities that cannot utilize the FAX fixed-route bus system. The service is a shared ride with origin-destination service within the defined service area.

Clovis Round Up is a paratransit service operated by Clovis Transit that serves Clovis residents with disabilities who cannot utilize the Clovis Stageline fixed route service. The service area includes all of Clovis and locations within 0.75 mile of fixed route service, including limited areas of Fresno.

In addition, all FCRTA's, FAX's and Clovis Transit Stageline's services are accessible to elderly and disabled passengers in compliance with the ADA.

Demand Response Services. Demand response services are provided throughout the Fresno COG Region as a component of the local transit network. These services operate on a reservation basis and provide curb-to-curb transportation within established service areas during regular service hours. Riders request trips by contacting their local transit provider and specifying their location, destination, and desired departure time, after which a vehicle is dispatched to provide shared transportation.

The three primary providers of demand response services in the Fresno COG Region are:

- **FAX:** Operates the Handy Ride program, which provides complementary paratransit service for individuals who, because of a disability, are unable to use fixed-route buses.
- **Clovis Transit:** Operates the Round-Up program, a demand-responsive paratransit service serving elderly and disabled residents within the City and portions of the surrounding area.
- **FCRTA:** Provides demand response services to rural communities throughout the region, as part of a broader transit program that also includes scheduled fixed-route services. These services allow passengers to travel within their communities and connect to destinations throughout the Central Valley.

These demand response services complement fixed-route transit by providing additional mobility options. While Handy Ride and Round-Up are primarily ADA paratransit services, FCRTA's demand response program is available to the general public in rural areas and is not limited to riders with disabilities.

4.17.3.3 Active Transportation

The existing active transportation system within the Fresno COG Region is described below.

Bicycle Facilities and Pedestrian Facilities. According to the Fresno COG Active Transportation Plan[10] the Fresno COG Region bikeway network includes approximately 98.4 miles of Class I shared-use pathways, 639.2 miles of Class II bike lanes, 52.4 miles of Class III bike routes, and 21.2 miles of Class IV separated bikeways, as shown in Table 4.17.A. Additionally, Figure 4.17-2 shows bicycle facilities within the Fresno COG Region and a cross-section of each type of bicycle facility. The Fresno COG Region also includes approximately 3,188 miles of sidewalks, as also shown in Table 4.17.A. Much of the pedestrian network in the region is concentrated in densely populated areas such as the cities of Fresno and Clovis. Additionally, the cities in Fresno County provide a network of sidewalks and marked pedestrian crossings to support safer pedestrian mobility. [11]

Table 4.17.A: Existing Walking and Bicycling Facilities in the Fresno COG Region

Jurisdiction	Shared Use Path (Class I) Miles	Bike Lane (Class II) Miles	Bike Route (Class III) Miles	Separated Bikeway (Class IV) Miles	Sidewalks Miles
Clovis	23	59	0	N/A	N/A[1]
Coalinga	2	4.7	0	0.2	83.5
Fresno[2]	58	505	50	21	2,087
Firebaugh	1.8	0.0	0	0	33.6
Fowler	0.7	3.6	0	0	49.2
Huron	0	0.2	0	0	19.6
Kerman	0.9	6.5	2.4	0	85.0
Kingsburg	2.5	4.0	0	0	79.1
Mendota	0	2.4	0	0	477.1
Orange Cove	1.2	1.1	0	0	33.7
Parlier	1.1	6.0	0	0	57.7
San Joaquin	0.9	1.1	0	0	14.7
Sanger	2.1	11.6	0	0	135.2
Unincorporated Fresno County	3.74	88.3	0	0	133.1
Total	**98.4**	**639.2**	**52.4**	**21.2**	**3,188.0**

Source: Fresno Council of Governments. 2024. *Fresno County Regional Active Transportation Plan*. May.
Source: City of Clovis. 2023. *Active Transportation Plan Update.* September.
Source: City of Fresno. 2026. *Active Transportation Plan Draft*. May.
[1] The City of Clovis has not published an official total mileage of sidewalks.
[2] Bicycle and sidewalk mileage for the City of Fresno is recorded in each direction.
COG = Council of Governments
N/A = not applicable

[10] Fresno Council of Governments (COG). 2024. *Final Negative Declaration. Fresno County Regional Active Transportation Plan.* May.
[11] Ibid.

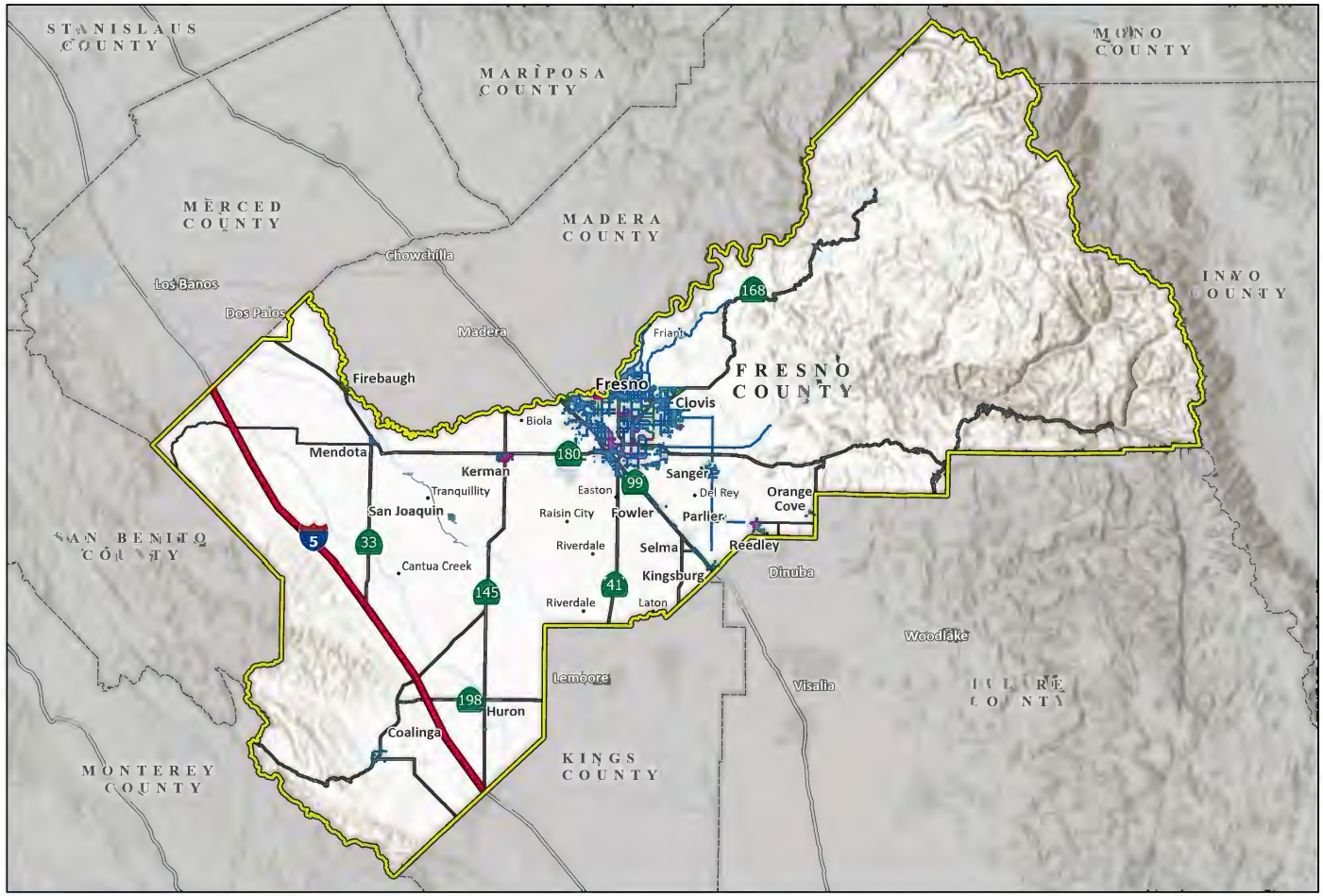


FIGURE 4.17-2

Regional Transportation Plan/Sustainable Communities Strategy
Fresno COG Regional Bikeways

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4.17.3.4 Aviation

The Fresno COG Region is served by nine public-use airports, including one primary commercial service airport, Fresno Yosemite International Airport (FAT), which is the largest airport in the San Joaquin Valley. FAT is located at 5175 East Clinton Way, in the northeastern portion of the City of Fresno. Fresno Chandler Executive Airport also serves general aviation needs. Additionally, Naval Air Station (NAS) Lemoore is located partially within the County and supports extensive military aviation operations. Figure 4.17-3 shows the general aviation airports in Fresno County. The airport system in the County supports a wide range of general aviation, commercial, agricultural, and military uses.

FAT is owned and operated by the City of Fresno and occupies approximately 2,159 acres with two runways. In 2025, the airport served 2,752,392 passengers, representing a 2.97 percent increase over the 2024 total of 2,672,881 passengers. International passenger volumes also grew in 2025, with more than 433,000 travelers flying between Fresno and Mexico.[12] The airport is currently served by six domestic airlines and two international airlines.[13]

4.17.3.5 Other

The Measure C Carpool Incentive Program is one of Fresno County's initiatives aimed at reducing reliance on single-occupant vehicles and promoting shared transportation. Through this program, residents who carpool with at least one other person two or more times per week can earn monthly prizes by registering online and submitting weekly carpool logs. These logs also serve as entries into an annual Grand Prize Giveaway, further incentivizing regular participation. The program supports regional efforts to decrease traffic congestion and improve air quality.

Complementing the carpool initiative, the Measure C Commuter Vanpool Program offers financial support to encourage the formation and sustainability of vanpools. Funded by the Measure C Extension—a 20-year half-cent transportation sales tax approved by voters in 2006—the program provides subsidies and reimbursements to vanpools that originate in Fresno County, include at least six riders and one driver, and operate at least 5 days per week. Exceptions are made for full-time workers on alternate schedules. This program plays a key role in expanding cost-effective and environmentally friendly commuting options across the County.

In addition to the Measure C Commuter Vanpool program, various agencies within Fresno have also partnered with Biz Werx to set up other rideshare related programs. These programs include EV-Werx, which is a membership-based carsharing service. EV-Werx allows anyone over the age of 21 with a driver's license, a relatively clean driving record, and a bank card to have 24/7 access to vehicles on an hourly or daily basis. Biz-Bikes is a bike lending program allowing users to rent a bike for commuting and errands for a monthly subscription. Biz-Bikes allows anyone 18 or older, in the Fresno-Clovis area

12 Fresno Yosemite International Airport. 2026. *Fresno Yosemite International Airport Achieves a Record-Breaking Year in 2025*. Website: https://flyfresno.com/airport-achieves-a-record-breaking-year-in-2025/ (accessed March 18, 2026).

13 Ibid.

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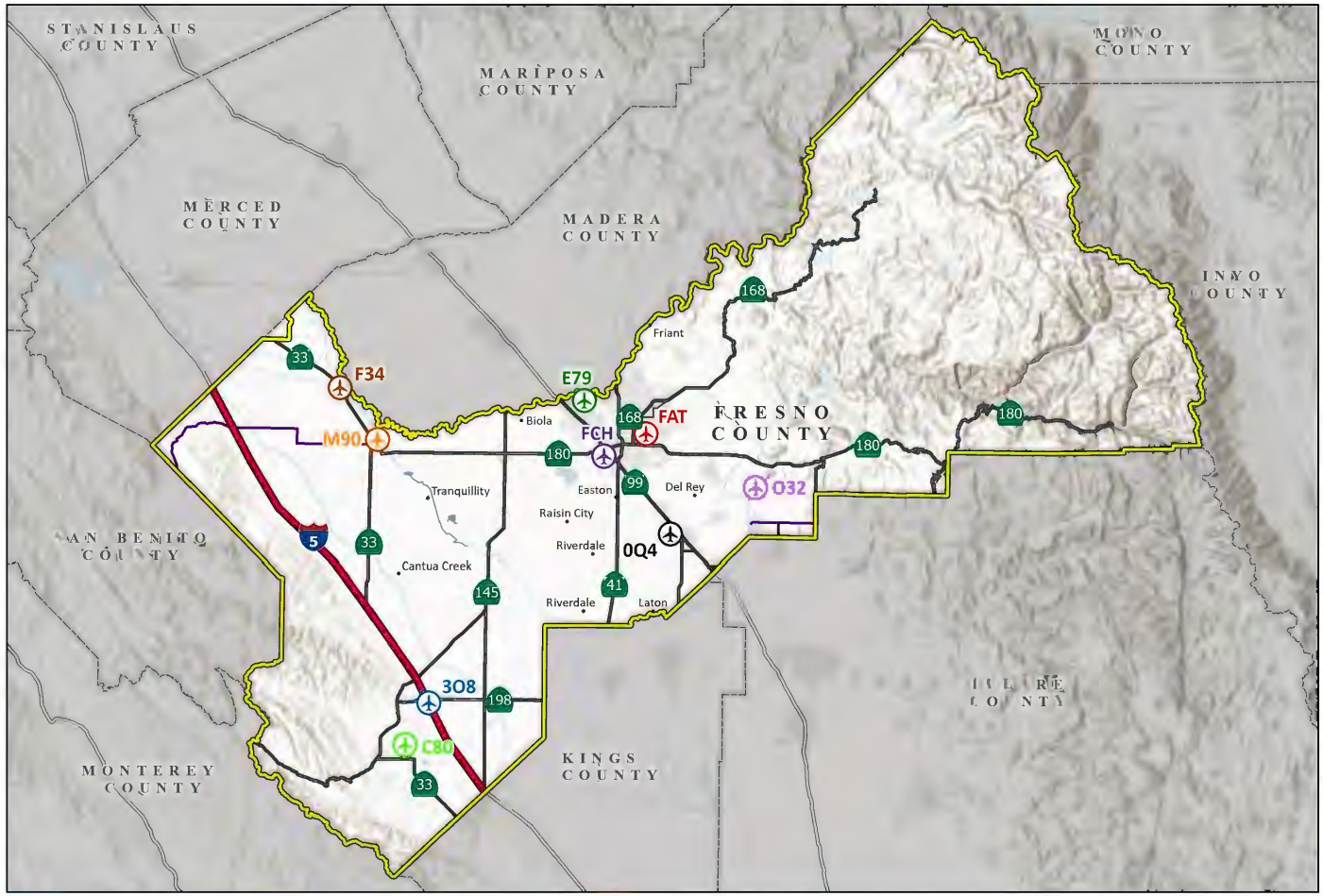


FIGURE 4.17-3

Regional Transportation Plan/ Sustainable Communities Strategy
Fresno COG Region Airports

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with the ability to store and charge a bike, and a smartphone to be eligible for the program. Van-Werx is a ride hailing service available to anyone 55 or older. Members of Van-Werx are allowed four round trips per month in the Fresno and Clovis area by appointment.

Telework or telecommuting for commute travel has risen since the 2020 pandemic. Based on the Central California Travel Study, approximately 30 percent of employed adults in the Fresno COG Region have telecommuted at least 1 day per week.

4.17.3.6 Goods Movement

The Fresno COG Region plays a central role in the San Joaquin Valley's goods movement system. Each year, millions of tons of goods flow into and out of the County to support a wide range of industries, particularly agriculture, manufacturing, and retail. Businesses and residents alike increasingly rely on home deliveries, with regional facilities supporting everything from next-day shipments to 2-hour delivery windows.

The transportation, warehousing, and trade sectors combined support roughly one-quarter of all jobs in the Fresno COG Region. Major employers like Amazon, UPS, and FedEx have expanded their presence in the area in recent years, opening large distribution hubs that serve both local and statewide markets. At the same time, small and medium-sized logistics companies continue to operate across the Fresno COG Region, linking farms, warehouses, and retail outlets to State and national freight corridors. As shown in Table 4.17.B, approximately 29.9 million tons of goods move to, from, and within the Fresno COG Region annually. Truck transportation is the primary freight system in the region, accounting for 96.8 percent of all goods tonnage. Trucks also account for nearly all goods moved within the region (99.9 percent).

Table 4.17.B: Mode Share by Tonnage of Goods Transported in Fresno COG Region

Mode	All Goods to/from Region	Goods Within Region	Goods to District from Points Outside Region	Goods to District to Points Outside Region
Truck	96.8%	99.9%	84.2%	74.0%
Rail	0.8%	0.0%	9.7%	7.6%
Water	0.0%	0.0%	0.0%	0.0%
Air (including truck-air)	0.0%[1]	0.0%	0.2%	0.4%
Multiple modes and mail	0.8%	0.1%	5.0%	3.3%
Pipeline	1.6%	0.0%	0.9%	14.7%
Other and Unknown	0.0%	0.0%	0.0%	0.0%
Total	100%	100%	100%	100%
Total Tonnage (in millions)	**29.9**	**8.9**	**2.6**	**0.8**

Source: Data compiled by LSA (July 2025). Based on FAF data dashboard at https://faf.ornl.gov/faf5/dtt_total.aspx.
Note: Region based on Zone 065 represents Fresno-Madera, CA Commodity Flow Survey Area.
[1] Note: Percentages in this table are rounded to one decimal place; therefore, values shown as 0.0% represent values that are greater than zero but less than 0.1%.
COG = Council of Governments
FAF = Freight Analysis Framework

Medium and Heavy-Duty Trucks. The vast majority of goods in the Fresno COG Region move by truck. SR-99 is the Fresno COG Region's primary freight corridor, running north-south through the San Joaquin Valley and connecting Fresno to Bakersfield, Sacramento, and beyond. SR-41 and SR-180 support east-west movement, with connectors to I-5 providing access to long-haul trucking routes across the western United States. While these routes are essential for commerce, they also contribute to regional congestion and air quality challenges, especially in densely populated areas near highways. As discussed in Section 4.17.4.2, pursuant to Assembly Bill (AB) 98, the County and all cities within the Fresno COG Region are required to designate specific truck routes that avoid residential areas in the next updates to the circulation/mobility elements of their general plans.

Rail Transport. The Fresno COG Region is primarily served by two Class I railroads, UPRR and BNSF, as well as one major regional shortline railroad, the San Joaquin Valley Railroad (SJVR). UPRR and BNSF support long-haul services to and from the Central Valley, providing connections to markets and ports beyond the region.

The SJVR connects rural communities to the mainline networks, allowing local growers and manufacturers to reach distant markets. Rail is particularly important for moving bulk commodities like produce, animal feed, and chemicals.

The Amtrak Gold Runner service also plays an important role in the region's transportation system. Managed by the San Joaquin Joint Powers Authority (SJJPA) and operated by Amtrak, the service helps fill the gap between intercity bus and airline travel. The Gold Runner operates multiple times daily between Bakersfield and the Bay Area or Sacramento, with intermediate stops including Stockton, Modesto, Merced, Martinez, and Fresno.[14] Currently, the Gold Runner provides approximately seven daily round trips, consisting of five round trips between Oakland and Bakersfield and two round trips between Sacramento and Bakersfield. This results in seven northbound and seven southbound departures from the Fresno COG Region's Amtrak Station (2650 Tulare Street) in downtown Fresno.[15] To expand access, Amtrak also operates thruway buses that connect rail stations to cities not directly served by the trains. These buses are essential to system performance, linking passengers to destinations such as Sacramento, Lodi, Stockton, Oakland, Emeryville, Martinez, Merced, Hanford, and Bakersfield. As shown in Table 4.17.B, rail accounted for approximately 0.8 percent of all goods tonnage moving to, from, and within the Fresno COG Region, with approximately 9.7 percent of goods to the district from points outside the region and 7.6 percent of goods from the district to points outside the region.

California's High-Speed Rail (HSR) Project, which is planned to provide HSR service between Southern California and Northern California, is currently under construction in the San Joaquin Valley. The HSR system will traverse the Fresno COG Region in a north-south orientation and will provide HSR access

[14] Amtrak. 2026. Gold Runner. Website: https://www.amtrak.com/gold-runner-train (accessed March 18, 2026).

[15] Ibid.

via a planned station in downtown Fresno. It is anticipated that passenger service from Merced to Bakersfield (the "initial operating segment") would begin between 2030 and 2033.[16]

Air Freight. FAT is the Fresno COG Region's primarily air cargo facility. The airport processes tens of thousands of tons of freight annually. Regular service from major carriers like FedEx and UPS supports time-sensitive shipments across the western United States. Continued passenger growth at the airport is also helping to expand runway and terminal infrastructure, indirectly supporting freight capacity.[17] As shown in Table 4.17.B, air freight accounts for less than 1 percent of all goods tonnage moving to, from, and within the Fresno COG Region, with approximately 0.2 percent of goods to the district from points outside the region and 0.4 percent of goods from the district to points outside the region.

4.17.4 Regulatory Setting

4.17.4.1 Federal Regulations

Federal Clean Air Act of 1970 (42 USC Section 7401 et seq). The federal Clean Air Act (CAA) was passed in response to growing concerns regarding the public health dangers of air pollution. The law was originally formulated in response to pollution generated by workplaces such as factories and subsequently was amended to address vehicle-generated pollution with a focus on regulating the composition of gasoline. In 1990, a set of CAA Amendments were passed that recognized the transportation system itself affects travel behavior, and by extension, air quality. As part of the amendments, new transportation projects are required to be in "conformity" with the CAA, meaning that transportation planning agencies such as the Fresno COG must examine the long-term air quality impacts of their transportation system and ensure that it is compatible with the region's air quality goals. In doing so, regional agencies must work with State and local partner agencies to assess the impacts of growth on air pollution. For MPO nonattainment and maintenance regions, the MPO, the Federal Highway Administration, and the Federal Transit Administration are responsible for making the conformity determination. Under the United States Department of Transportation (USDOT) Metropolitan Planning Regulations (Title 23 Code of Federal Regulations [CFR] Part 450 and 771 and Title 49 CFR Part 613) and the United States Environmental Protection Agency's (EPA) Transportation Conformity Rule (Title 40 CFR Part 93) requirements, the regional transportation plan needs to meet four requirements: (1) regional emissions analysis, (2) timely implementation of Transportation Control Measures, (3) financial constraints analysis, and (4) interagency consultation and public involvement. The Transportation Conformity Rule (Title 40 CFR Part 93 Subpart A) sets forth the policy, criteria, and procedures for demonstrating and assuring conformity of transportation activities.

Fixing America's Surface Transportation (FAST) Act (Public Law 114-94) and Moving Ahead for Progress in the 21st Century Act (MAP-21) (Public Law 112-141). Under the FAST Act and MAP-21, USDOT requires that MPOs, such as the Fresno COG, prepare RTPs and update them every 4 years if they are in areas designated as "nonattainment" or "maintenance" for the National Ambient Air Quality Standards. An RTP outlines the region's goals and strategies for meeting current and future mobility needs and for providing a foundation for transportation planning and funding decisions by local, regional, and State officials that are ultimately aimed at achieving a coordinated and balanced

[16] California High-Speed Rail Authority. 2024. *2024 Business Plan,* Page XII. Website: https://hsr.ca.gov/wp-content/uploads/2024/05/2024-Business-Plan-FINAL.pdf (accessed February 25, 2026).

[17] Fresno Yosemite International Airport. 2018. *Master Plan Update.*

transportation system. In addition, these plans identify the region's transportation needs; set forth actions, programs, and a plan of projects to address the needs, consistent with adopted regional strategies and goals; and document the financial resources needed to implement the plan. The process for development of the transportation plan takes into account all modes of transportation and is accompanied by a continuing, cooperative, and comprehensive planning approach that is also performance-driven and outcome-based, consistent with the provisions of MAP-21 and the FAST Act.

The key components of the RTP shall include:

- Current and projected transportation demand that stems from the need to move people and goods in the region.
- A financial plan that includes a realistic forecast of revenues that would be available during the planned period.
- A fiscally constrained project list that includes proposed multi-modal transportation improvements over the planning period.
- An action element that describes the short- and long-term strategies to implement the RTP.
- A system performance report that describes the performance of the transportation system and progress achieved over the targets.
- A discussion of environmental mitigation activities in consultation with federal, State and tribal land management, wildlife, and regulatory agencies. Such discussions may focus on policies, strategies, or programs that are not project-level.

Infrastructure Investment and Jobs Act (Public Law 117-58). The Infrastructure Investment and Jobs Act (IIJA) was signed into law in 2021 to provide transportation funding nationwide until 2026. The IIJA mostly continues all the requirements for metropolitan transportation planning under previous transportation bills, such as the FAST Act, and added languages to include housing consideration in the metropolitan transportation planning process. Although a housing coordination plan was made optional for the MPOs in the IIJA, the SCS required by the State law addresses the integration of land use, transportation, and housing.

4.17.4.2 State Regulations

State requirements for long-range transportation plans are similar to the federal regulations. However, key additional requirements described in Government Code Section 65080 include (1) compliance with CEQA; (2) consistency with the State Transportation Improvement Program; (3) use of program-level performance measures that include goals and objectives; (4) inclusion of a policy element, an action element, and a financial element; and (5) inclusion of a SCS for MPOs (see Senate Bill [SB] 375 discussion below).

California Transportation Commission Regional Transportation Plan Guidelines. The California Transportation Commission (CTC) publishes and periodically updates guidelines for the development

of long-range transportation plans, such as the Fresno COG's RTP/SCS. Pursuant to Government Code Section 65080(d), each regional transportation planning agency (RTPA) is required to adopt and submit an updated RTP to CTC and the California Department of Transportation (Caltrans) every 4 years. The Fresno COG is the designated RTPA for the County's 15 incorporated cities.

Sustainable Communities and Climate Protection Act of 2008 (Senate Bill 375). SB 375, which was passed in 2008, requires the 18 MPOs in California to develop an SCS as an integral component of their long-range transportation plan. The SCS is a forecast land use pattern combined with a transportation network, that if implemented, will reduce GHG emissions and achieve the GHG reduction targets set by the California Air Resources Board (CARB). SB 375 aims to reduce VMT, and thus GHGs, through integrated transportation and land use planning. GHG reduction is achieved through strategies such as infill and compact development, mixed uses, increased transit services, and active transportation. However, the land use authority rests the local governments, and the general plans' conformity with the SCS land use was made optional in the SB 375 legislation. If the SCS fails to achieve the GHG targets with the fiscally constrained project improvements list in the RTP, an Alternative Planning Strategy (APS) should be developed, which is outside of the RTP, and will identify the impediments of reaching the GHG targets and demonstrate how the region would be able to achieve the targets with additional resources beyond what is forecast in the RTP.

SB 375 also tried to link the SCS with the Regional Housing Needs Assessment (RHNA), a mandated housing planning process that allocates housing units assigned by the State to each of the local jurisdictions through the RHNA process conducted by the COGs, which are mostly MPOs. The SCS is required to set aside enough land to accommodate the housing needs identified by the RHNA, and essentially, the SCS and RHNA are expected to work in tandem to reduce VMT and GHGs. The RHNA is updated every 8 years and has a planning period of 8 years. The RHNA cycle coincides with the SCS' update process every 8 years.

According to the Government Code Section 65080(b)(2)(B), the SCS shall:

1. Identify the general location of uses, residential densities, and building intensities within the region.

2. Identify areas within the region sufficient to house all the population of the region, including all economic segments of the population, over the course of the planning period of the RTP considering net migration into the region, population growth, household formation and employment growth.

3. Identify areas within the region sufficient to house an 8-year projection of the regional housing need for the region pursuant to Government Code Section 65584.

4. Identify a transportation network to service the transportation needs of the region.

5. Gather and consider the best practically available scientific information regarding resource areas and farmland in the region as defined in Government Code Section 65080.01(a) and (b).

6. Consider the state housing goals specified in Government Code Sections 65580 and 65581.

7. Set forth a forecasted development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, will reduce the GHG emissions from automobiles and light trucks to achieve, if there is a feasible way to do so, the GHG emission reduction targets approved by the state board.

8. Allow the RTP to comply with Section 176 of the federal CAA (42 USC 7506).

SB 375 also provides CEQA streamlining benefits for residential/mixed uses projects and transit priority projects that meet the requirement as specified in the SB 375 legislation.

In order to encourage the regions to develop and implement SCS that meet the GHG targets, as part of the implementation mechanism, the State has linked the SCS approval with the eligibility of several State funding programs, such as the SB 1 discretional programs (e.g., Solutions for Congested Corridor Program [SCCP], the Trade Corridor Enhancement Program [TCEP], and the Local Partnership Program [LPP]), the Affordable Housing and Sustainable Communities (AHSC) program, Caltrans's Sustainable Transportation Planning Grant Program, the Local Transportation Climate Adaptation Program (LTCAP), and the Transformative Climate Communities (TCC) program.

Senate Bill 743 (Public Resources Code Section 21099 SB 743 was passed in 2013 and implemented through the CEQA Guidelines update in 2019. It fundamentally changed how transportation impacts are analyzed for development and transportation projects under CEQA. It shifts the focus of measuring the transportation impacts from level of service (LOS) to VMT to better align with the State's climate change and sustainability goals. SB 743 was considered a vehicle to implement SB 375 as part of the State's overall strategies to achieve its climate goals.

In January 2019, the Natural Resources Agency and the Governor's Office of Planning and Research (OPR) codified SB 743 into the Public Resources Code (PRC) and the *State CEQA Guidelines.* The OPR provides a Technical Advisory (TA) as a guidance document to establish thresholds for this new VMT metric. The TA is a reference document and does not have legal binding authority. The TA acknowledges that certain land use/transportation projects may result in reduced VMT and GHG emissions and therefore lead to less than significant impact to projects. Such projects could include affordable housing projects, small projects that generate fewer than 500 average daily trips, transit projects, active transportation projects, etc.

Caltrans has published the Transportation Analysis Framework (TAF) and Transportation Analysis Under CEQA (TAC) to guideline the implementation of transportation impact analysis for projects on the State highway system. Regional and local government agencies have established SB 743 implementation guidelines to direct regional/local implementation efforts. Many agencies are working to establish VMT mitigation programs that will streamline the VMT mitigation needs. Such programs include a VMT mitigation bank, a VMT exchange, and VMT impact fees. Potential VMT reduction projects that can help mitigate the VMT impact could include projects such as active transportation projects, transit, road diet, mobility hub, Intelligent Transportation Systems/Transportation Systems Management (ITS/TSM), affordable housing, vanpool/carpool, etc.

Assembly Bill 98. Signed into law on September 29, 2024, AB 98 mandates new California statewide standards for logistics use, including standards for building design and location, parking, truck loading

bays, landscaping buffers, entry gates, and signage. AB 98 also requires cities and counties to update their circulation/mobility elements within their respective general plans to identify and establish specific travel routes for the transport of goods, materials, or freight for storage, transfer, or redistribution to safely accommodate additional truck traffic and avoid residential areas and concentrations of sensitive receptors.

4.17.4.3 Regional Regulations

Airport Land Use Compatibility Plan (ALUCP). The California State Aeronautics Act and California Public Utilities Code Section 21001 require that ALUCPs be developed and address the compatibility of the land uses surrounding the airports to protect public health, safety and welfare and minimize the public exposure to noise and safety hazards. The Fresno COG leads the Fresno County Airport Land Use Commission, which is tasked with the compatibility planning for land uses near the nine private, public, and military airports in the Fresno COG Region. In addition to the nine public-use airports, the Fresno COG's latest ALUCP also incorporates the recommendations from Air Installation Compatible Use Zones (AICUZ) Report for the NAS in Lemoore, California.

Fresno County Regional Active Transportation Plan. The Fresno COG adopted the Fresno County Regional Active Transportation Plan (ATP) in February 2018 and amended the ATP in 2023. ATPs, and similarly, bicycle, pedestrian, or trail plans, are regional/local planning documents that provide guidance on the future development of the active transportation facilities in the region or its municipalities. It typically includes goals and objectives, existing inventories, a project list for future improvements, prioritized projects for funding, and implementation strategies.

The Fresno County ATP is a comprehensive guide outlining the vision for biking, walking, and other human-powered transportation in Fresno County and proposes a comprehensive network of countywide bikeways trails, and sidewalks; crossing improvements at key intersections; and locations for recommended bicycle parking.

4.17.4.4 Local Regulations

Local General Plans. The Fresno COG Region contains Fresno County and 15 incorporated cities, each with an individual general plan prepared pursuant to California Government Code Section 65300. Each general plan contains goals and policies related to transportation within the particular jurisdiction.

4.17.5 Thresholds of Significance

The following thresholds of significance are based on Appendix G of the *State CEQA Guidelines*. Based on these thresholds, implementation of the proposed project may have a significant adverse impact with respect to transportation and traffic if it would:

Threshold 4.17.1: Conflict with program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities;

Threshold 4.17.2: Conflict or be inconsistent with CEQA Guidelines Section 15064.3 subdivision (b), which is defined as VMT per capita failing to meet the overall state-wide goals set in CARB's 2022 Scoping Plan as discussed in the section Performance Measure:

VMT Per Capita. It should include both short-term and long-term induced VMT in the VMT quantification.

Threshold 4.17.3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);

Threshold 4.17.4: Result in inadequate emergency access.

4.17.6 Project Impacts

Threshold 4.17.1: Would the project conflict with program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Less Than Significant. The proposed project includes several elements to leverage the region's transportation network, including transit, bicycle, and pedestrian systems, to achieve the Fresno COG's regional goals. As described in Chapter 3.0, Project Description, the proposed 2026 RTP/SCS includes programs and policies for transportation management and finance, as well as planned transit, bicycle and pedestrian, roadway, passenger rail, freight, and airport facilities.

As part of the proposed 2026 RTP/SCS, a list of financially constrained projects in the Constrained Program of Projects (refer to Appendix B of the RTP/SCS) is provided, which identifies transportation investments for which funding is either currently available or reasonably expected to be available within the RTP planning horizon. The proposed 2026 RTP financially constrained listing reflects a total project amount of $9.91 billion in in programmed transportation investments. A total of 2,827 transportation investment projects are included in the constrained project list and are organized into six transportation categories: Bike and Pedestrian; Transit; Streets and Roads – Capacity; Streets and Roads – Operations; Streets and Roads – Maintenance; and Other.

These transportation improvement projects were derived from submissions by local governments, transit operators, and Caltrans and collectively represent the short- or long-term vision of the partner agencies' plans for their transportation system/services. At the local level, many projects on the constrained project list are part of the Capital Improvement Plan (CIP) of the local municipalities (such as the City of Fresno). The projects submitted by the local agencies are expected to be consistent with the circulation elements in their adopted general plans, which provide a long-term vision for the transportation system in their respective cities within the Fresno COG Region.

Within the constrained project list, the 2026 RTP/SCS includes "Regional Projects" that are part of the 2006 Measure C, a half-cent transportation sales measure in Fresno County. The State Highway Operation and Protection Program (SHOPP) project list for the State highway system in the Fresno COG Region was also included in the constrained project list as part of the statewide SHOPP program. The active transportation projects submitted by the jurisdictions are either from the ATPs that individual jurisdictions developed or are consistent with the Regional ATP that the Fresno COG developed for the region. The three transit agencies—FAX, Clovis Transit, and FCRTA—submitted transit projects from their short-range transit plans, which cover 10-year planning period for the transit services. The other longer term transit projects are consistent with the vision and goals/objectives of the Fresno County

Regional Long Range Transit Plan,[18] which guides transit and multimodal investments and services in the Fresno region through the year 2050.

Accordingly, implementation of these constrained projects and the proposed 2026 RTP/SCS would result in the construction and operation of new and expanded transit, active transportation, and other transportation facilities in the region. Implementation would also focus future development in proximity to various transportation options. The proposed 2026 RTP/SCS approach would be aligned with other regional programs, plans, and policies, as well as the general plans of each of the 15 incorporated cities and the County. Therefore, potential impacts related to conflicts with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, are considered **less than significant** for the purposes of this analysis.

Threshold 4.17.2: Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3 subdivision (b)? In other words, would the VMT per capita in the 2026 RTP/SCS fail to meet the overall state-wide goals set in CARB's 2022 Scoping Plan?

Significant and Unavoidable. As described in Section 4.17.2, Methodology, VMT is an appropriate performance metric to measure the transportation impacts for projects in *CEQA Guidelines* Section 15064.3. As further discussed in Section 4.16.4, Regulatory Setting, SB 743 established VMT as the performance metric to measure the transportation impacts. State agencies provided key guidance on the VMT metric and the transportation impacts. The OPR (now the Governor's Office of Land Use and Climate Innovation) developed the TA (December 2018) that provided recommended significance thresholds for assessing VMT impacts for project-level analysis, such as retail, residential, office, mixed-use, etc. It also recommended significance thresholds for local plans such as general plans and community plans. The TA recommended a "per capita or per employee VMT that is 15 percent lower than the existing regional average VMT" as the reasonable threshold for residential and office projects and "a net increase in total VMT" for retail projects. For local plans, OPR recommended that the transportation impact may be significant if proposed new residential, office, or retail land uses would, in aggregate, exceed the respective thresholds set for the projects. However, despite the recommended thresholds by the OPR, CEQA allows lead agencies to determine the methodology to evaluate VMT, pursuant to CEQA Guidelines Section 15064.3(b)(4), and establish the threshold of significance, pursuant to CEQA Guidelines Section 15064.7, that the agencies deem appropriate.

Additionally, CARB's 2022 Scoping Plan for Achieving Carbon Neutrality (the 2022 Scoping Plan)[19] established VMT-related action (in combination with other actions) in the Scoping Plan Scenario that VMT per capita be reduced 25 percent below 2019 levels by 2030 and 30 percent below 2019 levels by 2045 in order to achieve the State's climate goals of GHG emission reduction of 80 percent below 1990 levels by 2050 as established under Executive Order S-03-05.

Given that the RTP/SCS is a regional transportation plan, the thresholds for projects discussed above do not apply, nor does the recommended threshold for the local land use plans. Therefore, in the following analysis, the VMT-related goals established in the 2022 Scoping Plan were applied as the

18 Fresno County. 2019. *Fresno County Regional Long-Range Transit Plan.* March 13.

19 California Air Resources Board (CARB). 2022. *Scoping Plan.*

significance threshold—that is, if the 2026 RTP/SCS does not achieve 30 percent per capita VMT reduction by 2045 as identified in the 2022 Scoping Plan, the RTP/SCS would be considered in conflict with Section 15064.3 of the *State CEQA Guidelines.*

Fresno COG Activity-Based Model. As part of the 2026 RTP/SCS development process, the Fresno COG has applied the Activity Based Model (ABM), which generates VMT and other forecast travel demand results. The Fresno COG periodically updates and improves the ABM, and releases the ABM and data for uses by the member agencies and their consultants as requested. The version of the ABM is officially approved when an RTP/SCS is adopted by the Fresno COG's Policy Board. The Fresno COG's ABM has a base year of 2023, which coincides with the base year of the proposed 2026 RTP/SCS.

The Fresno COG's ABM includes three sets of travel demand: resident travel, truck travel, and auxiliary travel. DaySim simulates internal travel for Fresno residents. Truck travel within the region is produced by the truck model. Auxiliary demand, such as external travel (auto and truck), are provided as inputs in the form of trip tables to the model system.

DaySim is an activity-based travel demand model. It simulates 24-hour itineraries for individuals with parcel-level spatial resolution and minute-level temporal resolution. It captures the effects of travel time and cost upon activity and travel choices. DaySim comprises several subcomponents and is structured as a series of hierarchical or nested-choice models. DaySim's hierarchy places the long-term models at the top of the choice hierarchy and the short-term models at successively lower levels in the hierarchy.

The truck component with the Fresno COG's ABM is retained from the Valley Model Improvement Program (VMIP) model system. The truck component produces a trip table containing truck demand in small, medium, and heavy truck categories.

The auxiliary demand consists of demand external to the model region. Specifically, it consists of external auto demand and external truck demand. The external auto demand for internal-external (IE), external-internal (EI), and external-external (EE) trips by time period are provided as input trip tables to the model system.

For the purposes of analysis, the horizon year 2049 was compared to the base year condition of 2023 to assess changes in regional travel patterns and transportation system performance. The base year was calibrated and validated to the ground traffic conditions and met/exceeded the recommended calibration/validation thresholds by Caltrans. During the calibration/validation process, a series of sensitivity tests were also conducted to ensure the model performed within the range of reasonableness.

Although the Fresno COG issued the NOP in May 2025, which is typically the existing condition baseline for CEQA purposes, 2023 is the most recent year for which comprehensive transportation and travel data are available. Therefore, the analysis of transportation impacts in this section is based on the year 2023.

For impact analysis under CEQA, all impacts and thresholds are defined as differences or changes between 2023 and the horizon year of 2049 for the 2026 RTP/SCS.

Induced VMT by Capacity-Increasing Transportation Improvement Projects. It is generally believed that added travel capacity on general-purpose lanes induces additional vehicle travel that would otherwise not take place. Although debates about the local context and precondition of congestion on the roadway have been ongoing among practitioners with regard to the generation of induced VMT, the analysis of the induced VMT in the 2026 RTP/SCS is conducted through a hybrid methodology that includes both short-term and long-term induced VMT from added capacity-increasing transportation improvement projects in the plan. The induced VMT quantification methodology is documented in the Technical Methodology Memorandum, which is included as Appendix C in the RTP/SCS document.

In general, similar to other travel demand models, the Fresno COG's ABM is sensitive to short-term latent demand and can capture the short-term induced travel demand from capacity projects. Such short-term latent demand includes mode switching, route changing, time-of-day switching, destination change, and new trips. However, capacity increasing transportation projects are also believed to generate land use changes, typically enabling people to live farther away when travel conditions improve. Such land use changes would lead to longer travel distance, which can only be captured through an integrated land use and transportation modeling system. As such, the Fresno COG applies the California Induced Travel Calculator developed by the National Center for Sustainable Transportation (NCST) in the calculation of long-term induced VMT.

Since the NCST calculator generates both short-term and long-term induced VMT, an effort was taken by the Fresno COG to ensure that no double counting of short-term induced VMT during the process. The Fresno COG performed sensitivity tests to capture the ABM's reaction to additional general-purpose lanes. The resulting elasticity from such tests represents the short-term induced demand. The long-term induced VMT elasticity is calculated by deducting short-term elasticity from the model from the elasticity from the NCST tool. The long-term induced VMT is calculated by multiplying the increased lane miles by facility types by the respective elasticities.

Analysis. SB 375 requires that the SCS demonstrates that the GHG targets set by the CARB are achieved through the integrated transportation and land use planning. The proposed 2026 RTP/SCS combines efficient mobility with smart, sustainable urban growth focused on existing centers and established areas. The following land use and transportation strategies are applied in the preferred scenario (Scenario C):

- **Land Use Strategies**
  - Support higher-density growth with mixed-use development;
  - Encourage transit-oriented development along major transit routes;
  - Support infill development where there are existing services;
  - Encourage more growth in centers and established areas;
  - Provide a variety of housing options for all income levels; and
  - Conserve agricultural land and environmental resource land.
- **Transportation Strategies**
  - Improve the public transportation system**;**
  - Maintain existing streets and roads;
  - Improve bikeways, trails, walking paths, and sidewalks;
  - Enhance operational efficiency and transportation demand management (TDM) strategies;

- Provide an efficient, reliable, and safe roadway system for transporting goods;
- Improve access and connection between cities/towns;
- Improve traffic safety; and
- Improve transportation equity.

The compact land use and mixed-use development associated with the proposed project provide support for more efficient public transportation system. When land use is allocated along major transit corridors, transit ridership increases. With more investment in public transit, and therefore more frequent transit services, it would be more feasible for people to shift from cars to transit. Infill development is a critical strategy that would allocate new housing/employment at locations where there are existing services nearby. Placing growth in centers and established areas would reduce the travel distance, resulting in reduced VMT.

Furthermore, the enhanced investment in bikeways, trails, and walking facilities would provide additional non-automobile mobility options for residents. This TDM strategy would provide people with opportunities to carpool and vanpool, leading to reduced VMT.

There are other factors that would impact people's travel behavior and their choice of transportation mode other than the land use and transportation strategies discussed above. Fuel cost, for example, which is translated into Auto Operation Cost (AOC), would have an important impact on whether people choose transit over private automobiles. Other factors that influence travel in the Fresno region could include demographic characteristics, such as age, income, household size, and number of workers, as well as transit fare, parking cost, etc.

Table 4.17.C, below, summarizes the VMT results from the proposed 2026 RTP/SCS.

Table 4.17.C: 2026 RTP/SCS VMT Summary

	Model VMT	Induced VMT	Total VMT	Modeled Population	VMT/Capita
2023	23,140,594	N/A	23,140,594	1,002,377	23.09
2049	23,717,893	310,031	24,027,924	1,080,652	22.23
Percent Difference	2.49%	N/A	3.83%	7.81%	-3.72%

Source: Fresno Council of Governments 2026 RTP/SCS modeling results.
N/A = not applicable
RTP/SCS = Regional Transportation Plan/Sustainable Communities Strategy
VMT = vehicle miles traveled

As shown in Table 4.17.C, total VMT for the proposed project would grow from the base year (2023) to the horizon year (2049). This VMT growth is driven by projected increases in total population and employment over the next 20+ years. However, population growth is expected to outpace total VMT growth, resulting in a decline in per-capita VMT across the region. The reduction in per-capita VMT over the planning period indicates that the land use and transportation strategies implemented under the proposed project are effective in reducing automobile travel by encouraging shorter trip lengths, shifting trips to alternative modes, or reducing overall travel demand. This would result in a reduction in per-capita VMT.

The proposed project would result in a regional per-capita VMT decrease of 3.72 percent by 2049 from the base year of 2023. Although, the region is making progress in per-capita VMT reduction through integrated land use and transportation investments in the 2026 RTP/SCS and is not directly interfering with the statewide VMT reductions required to meet the statewide climate goals, the per-capita VMT reduction is not at the level established by the State's 2022 Scoping Plan. While the State acknowledged that the VMT reduction goals set forth in the Scoping Plan cannot be met without the collaboration and additional contribution from the State, it is uncertain at the time this PEIR was prepared whether sufficient State programs or policies are in place that, in combination with local and regional efforts, would fully achieve the State's VMT reduction targets. The gap between projected VMT performance and the State's targets therefore remains. As a result, future land use development and transportation improvements facilitated by the proposed project and planned in the 2026 RTP/SCS could result in impacts that are significant and unavoidable with respect to consistency with the VMT reduction goals set forth in CARB's 2022 Scoping Plan. Implementation of **Fresno COG Mitigation Measure (FMM) TRAN-1**, which requires coordination with State agencies and incorporation of regional and local measures that promote active transportation, transit improvements, sustainable development, and other VMT reduction strategies, would reduce the VMT impact to the extent feasible.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, the analysis presented represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. With implementation of **FMM-TRAN-1,** which requires coordination with State agencies and incorporation of measures that promote active transportation, transit improvements, sustainable development, and other VMT reduction strategies, potential transportation-related impacts would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether the potential impact related to VMT would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to the Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts related to VMT are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.17.3: Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Significant and Unavoidable Impact. The Fresno COG adopted the Regional Safety Plan (RSP) in 2021, which formalizes safety planning for the Fresno COG and aligns the COG's efforts with the State of California's Strategic Highway Safety Plan. The RSP also identified high incidences for collision, developed safety strategies and solutions to address safety issues, and created a roadmap for action to improve safety in the region. According to the Fresno COG RSP, on average, approximately 100 people are killed and over 300 are severely injured in traffic collisions in the region annually. While traffic collisions occur in communities all over the Fresno COG Region, the majority occur in urban

areas such as the cities of Fresno and Clovis, with a smaller proportion of collision-related fatalities in rural areas.[20]

To examine where fatalities and serious injuries were occurring across the region, the Fresno COG, in partnership with 10 jurisdictions in Fresno County, completed the Multijurisdictional Local Road Safety Plan (MLRSP) in January 2022.[21] The MLRSP identified crash patterns and trends; developed systemic engineering treatments to help reduce crash risk; identified education, enforcement, and emergency services strategies to improve roadway safety; identified high-priority locations with supporting design concepts; and developed Highway Safety Improvement Program (HSIP) grant applications to facilitate funding for high-priority safety projects.

Additionally, in 2023, the Fresno COG engaged multiple stakeholders to develop a Safe Routes to School (SRTS) Program, which aimed to support transportation projects serving primary and secondary students in accessing public school facilities. In November 2024, the Fresno COG's Policy Board approved a transfer of $6 million in Measure C funding from the Senior Scrip, carpool/vanpool, and agricultural vanpool programs into a new SRTS program for one-time funding of eligible projects on a formula, pro-rata basis for safety infrastructure projects within a 0.5-mile radius to prioritize bicycle- and pedestrian-friendly projects within 0.5 mile of school sites in rural Fresno County. The Measure C Expenditure Plan Amendment No. 9 was approved on June 18, 2025, by the Fresno County Transportation Authority (FCTA) Board.

In addition, the proposed project includes regional planning policies that support safety and security needs related to transportation systems. The proposed project also aims to address actionable strategies through which the Fresno COG can support local jurisdictions. Safety is one of the critical goals of the proposed 2026 RTP/SCS. During the project selection process, the Fresno COG included safety as one of the criteria to score and select projects. Local jurisdictions were incentivized to submit projects with features that addressed safety issues. Such projects received extra points during the project scoring process. Incorporating these projects would, therefore, reduce existing safety concerns within the region.

However, given the size of the region, the number of transportation and land use projects expected through the 2049 horizon year, the variety of potential safety-related conditions, and the potential for variability in the application of appropriate design measures affecting vehicle, bicycle, and pedestrian safety, implementation of the proposed project could result in hazards associated with design features or incompatible uses. Accordingly, future transportation and land use development projects facilitated by the proposed project could increase hazards to the transportation system. Implementation of **Project-Specific Mitigation Measure (PMM) TRAN-1**, which would require the preparation of a safety analysis in appropriate situations, would reduce impacts to the extent feasible.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. With implementation of **PMM TRAN-1,**

[20] Fresno Council of Governments (COG). 2021. *Regional Safety Plan*. December.

[21] Fresno Council of Governments (COG). 2022. *Multijurisdictional Local Road Safety Plan.* January.

impacts related to hazards due to geometric design features would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether the potential impact related to hazards due to geometric design features would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts related to hazards due to geometric design features are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.17.4: Would the project result in inadequate emergency access?

Significant and Unavoidable. The impacts of the proposed project on emergency services are analyzed under Section 4.15, Public Services, and Section 4.20, Wildfire. Transportation infrastructure plays a key role during emergencies. These systems provide access for emergency response vehicles, personnel, and equipment. In widespread disasters, the region's roads and other transportation networks contribute to the success (or failure) of the region during both the emergency and in the recovery.

Construction. Construction facilitated by the proposed project could require the temporary closure of traffic lanes or roadways adjacent to, or within, a specific project site. Depending on the timing, location, and duration of construction activities, temporary traffic congestion from lane restrictions and/or road closures could result in impacts to emergency access or a delay in emergency vehicle response times. As such, individual projects with temporary roadway closures would be required as appropriate by the project's lead agency to implement a Traffic Control Plan to maintain traffic flow; provide detours for vehicles, pedestrians, and bicycles; schedule truck trips outside peak hours; limit lane closures; and ensure access to sensitive facilities, pursuant to **PMM HAZ-4**. This would reduce temporary impacts to emergency access to the extent feasible.

Operation. Implementation of the proposed project would facilitate a range of future transportation improvement and land use development projects that could result in impacts related to emergency access. Transportation network improvements and programs facilitated by the proposed project would provide a safe and reliable system of multimodal transportation. This would help facilitate emergency access and the movement of people during emergencies. However, under this scenario, growth within existing urbanized areas would result in denser and more intensive development compared to existing conditions. In the event of an emergency, such as wildfire, higher-density development could increase the number of people using the same evacuation routes and place additional demand on emergency access corridors. In addition, localized increases in travel demand and congestion associated with future development could reduce roadway operating conditions for emergency response vehicles, particularly in areas with limited networks.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, this analysis represents a general characterization of reasonably foreseeable impacts that could occur under implementation of the proposed project. Pursuant to **PMM HAZ-4,** the implementation of a

Traffic Control Plan is required as appropriate by the lead agency to maintain traffic flow, provide detours, schedule truck trips outside peak hours, limit lane closures, and ensure access to sensitive facilities. Adherence to this measure would reduce impacts to emergency access to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts during construction and operation would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with emergency access are considered **significant and unavoidable** for the purposes of this analysis.

4.17.7 Level of Significance Prior to Mitigation

Prior to mitigation, the proposed project would have potentially significant impacts related to transportation. Specifically, it could conflict with *CEQA Guidelines* Section 15064.3, increase hazards due to geometric design or incompatible uses, and result in inadequate emergency access. However, the proposed project would result in less than significant impacts to conflicts with program, plan, ordinance or policy addressing the circulation system.

4.17.8 Mitigation Measures

4.17.8.1 Fresno COG Measures

The following mitigation measures would be applied on a regional scale by the Fresno COG to reduce potentially significant impacts related to transportation to the extent feasible:

FMM-TRAN-1 Fresno COG will continue to engage State agencies in developing such policies/program while implementing the following regional/local implementation measures:

- Fresno COG will continue to secure funding for active transportation projects to fund more bike/pedestrian projects in the Fresno County region.
- Fresno COG will encourage and support the local jurisdictions to grow more sustainably by building more infill, compact and mixed uses development.
- Fresno COG will work with transit agencies in Fresno County to secure funding to expand transit services and improve the efficiency of the transit system.
- Fresno COG will continue to support and encourage transit-oriented development through various funding programs.
- Fresno COG will continue to support grant applications to state-wide funding programs such as the Affordable Housing and Sustainable Communities (AHSC), the Transit-Oriented Development (TOD) Housing Program, etc.

- Fresno COG will continue to work with the transit agencies and the local governments to implement micro transit, mobility hubs, and micro-grid system in Fresno County.
- Fresno COG will encourage transit agencies and local governments to implement first mile/last mile strategies to provide connection to the transit service.
- Fresno COG will encourage local to explore the Missing Middle Housing issue, and develop mechanisms to fill the gap of such housing types to meet the affordable housing needs.
- Fresno COG will continue to incentivize carpooling and vanpooling to reduce total VMT in the region.
- Fresno COG will continue to support safe route to school programs/projects.
- Fresno COG will continue to work with the San Joaquin Valley Air Pollution Control District (the Air District) to implement Rule 9410, which requires major employers in the region to provide employees with alternative to private automobiles as commute method.
- Fresno COG will continue to provide support for the implementation of SB 743 by providing technical support for local agencies and the private sector.
- Fresno COG will explore the implementation of a regional VMT mitigation program.
- Fresno COG will explore the feasibility of managed lanes in the region.
- Fresno COG will work with the transit agencies and local governments to provide more efficient demand-response services.
- Fresno COG will encourage local governments to develop and implement Complete Street policies to facilitate more bike and walk trips.
- Fresno COG will continue to support efforts to provide shades to transit riders and pedestrians by building more bus shelters and planting more trees along sidewalks.

4.17.8.2 Project-Specific Measures

The following measures shall be applied to future transportation improvement and land use development projects by the lead agencies to reduce potentially significant impacts related to transportation to the extent feasible:

In addition to the measures outlined in this section, **PMM HAZ-4** (provided in Section 4.9, Hazards and Hazardous Materials) is applicable.

PMM TRAN-1 Prior to approval of individual RTP/SCS projects, the project sponsor shall consider preparation of a safety analysis as needed for locations where sight lines could be impeded or other potential safety hazards are present. If prepared, the safety analysis shall be prepared according to the jurisdiction's applicable Municipal Code requirements and the Caltrans Highway Design Manual (HCM) standards and guidelines. Depending on the outcome of the safety analysis, the implementing agency shall consider safety improvements to reduce substantial adverse effects, as applicable and feasible, such as the following:

- Limited use areas (e.g., low-height landscaping);
- On-street parking restrictions (e.g., red curb); and
- Turning restrictions (e.g., right in/right-out).

4.17.9 Level of Significance After Mitigation

Implementation of **FMM TRAN-1** and **PMMs TRAN-1 and HAZ-4** would assist the Fresno COG and lead agencies of future transportation improvement and land use development projects in reducing impacts related to transportation to the extent feasible. However, the analysis presented in this section is general in nature, and given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future transportation improvement and land use development projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. As appropriate and feasible, the Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified. Nevertheless, significant impacts previously identified in Section 4.17.7 remain **significant and unavoidable** for the purposes of this analysis.

4.17.10 Cumulative Impacts

As defined in Section 15130 of the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for transportation.

The cumulative impact analysis for transportation impacts includes the neighboring MPOs, such as the MCTC, the TCAG, KCAG, and AMBAG, as well as Inyo County and Mono County. Like Fresno County, these surrounding areas will continue to grow, which could result in a significant cumulative impact related to transportation. A significant cumulative impact to transportation would occur if the proposed project would result in incremental effects when combined with the effects on transportation resulting from other projects in the region.

The proposed project would result in a regional per-capita VMT decrease of 3.72 percent by 2049 from the base year of 2023. The region is making progress in per-capita VMT reduction through integrated land use and transportation investments in the 2026 RTP/SCS and is not directly interfering with the statewide VMT reductions required to meet the statewide climate goals. In addition, the land use strategies in the proposed project would focus on growth along key transportation corridors with infill,

mixed use, and more compact development, and housing development would be closer to employment centers to achieve better jobs and employment balance. Growth would also be discouraged from farmland and environmentally sensitive lands. Accordingly, the proposed project would be successful in achieving lower per-capita VMT. However, the Fresno COG Region would continue to grow, leading to higher total VMT for the region. Therefore, the per-capita VMT reduction would not be significant enough to offset the VMT increase from the population growth to lower the overall VMT for the region, and therefore would not help the State achieve its desired statewide VMT reduction goals. As such, the per-capita VMT reduction from the proposed project would not be at the level established by the State's 2022 Scoping Plan. Although the RTPs developed by the neighboring MPOs regions include measures and strategies to reduce VMT and improve the efficiency of the transportation, CARB acknowledged that State agencies would need to take action and develop statewide VMT reduction measures in order to achieve the VMT reduction goals set in the 2022 Scoping Plan. As such, it is unknown how CARB would work with the regional agencies and local governments to develop additional statewide VMT reduction programs. Therefore, the gap in VMT reduction needed to achieve the State's VMT reduction goals remains, leading to existing significant cumulative conditions in the analysis area.

Additionally, future projects facilitated by the proposed project, in combination with other reasonably foreseeable cumulative projects within the Fresno COG Region, could result in temporary and localized effects on regional circulation, including intermittent disruption of roadway capacity, transit operations, freight mobility, and emergency access. Cumulatively, these projects could also contribute to roadway safety conditions associated with geometric design features or operational constraints, including sight distance limitations and intersection design considerations, as well as increased exposure to transportation-related hazards in areas of incompatible land uses.

All projects in the region would be required to comply with applicable federal, State, regional, and local regulations. Implementation of **FMM TRAN-1** and **PMMs TRAN-1** and **HAZ-4** would reduce the proposed project's impacts associated with transportation to the extent feasible by incorporation of transit, bicycle, pedestrian, and micro-mobility facilities, features; coordination with State agencies and incorporation of regional and local measures; and implementation of a Traffic Control Plan as appropriate.

Impacts of the proposed project related to transportation are considered significant and unavoidable given the programmatic nature of the proposed project, the scale of the Fresno COG Region, and the inability of the Fresno COG to enforce project-specific mitigation or make land use approvals. Because the proposed project would result in significant adverse environmental impacts with respect to transportation, these impacts would represent an incremental contribution to the environmental impacts of other cumulative or related projects, including other regional-scale plans, ultimately leading to a **cumulatively considerable impact** to transportation in the cumulative impact area.

With the implementation of **FMM TRAN-1**, which requires coordination with State agencies and the incorporation of regional and local measures that promote active transportation, transit improvements, sustainable development, and other VMT reduction strategies, potential transportation-related impacts would be reduced to the extent feasible.

Despite this, the Fresno COG region will continue to grow, leading to higher total VMT for the region. The lower per-capita VMT indicates that the planned transportation projects and future land use development pattern would be effective in reducing people's daily travel by reducing trip distance or providing alternative transportation (biking, walking, and transit). However, the per-capita VMT reduction would not be significant enough to offset the VMT increase from population growth to lower the overall VMT for the region, and therefore would not help the State achieve its desired statewide VMT reduction goals. The contribution of the proposed project ultimately results in a **cumulatively considerable impact** to transportation.

4.18 TRIBAL CULTURAL RESOURCES

This section provides a discussion of the existing tribal cultural resource (TCR) environment and an analysis of potential impacts to TCRs within the Fresno Council of Governments (COG) Region from the proposed 2026 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (proposed project). According to California Public Resources Code (PRC) Section 21080.3.1 and Chapter 532, Statutes 2014 (i.e., Assembly Bill [AB] 52), "tribal cultural resources" are defined as the following:

1. Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either: (a) included in or determined to be eligible for inclusion in the California Register of Historical Resources (CRHR); or (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

This section summarizes information obtained from AB 52 Native American consultation efforts completed in support of the proposed project. The record of these consultation efforts is contained in Appendix B of this Program Environmental Impact Report (PEIR).

4.18.1 Scoping Process

Potential impacts related to TCRs were not identified during the public scoping meeting held for the proposed project on May 28, 2025.

The Fresno COG received one comment letter in response to the Notice of Preparation (NOP) issued for the proposed project between May 13 and June 12, 2025, concerning the proposed project's potential impacts related to TCRs. For copies of the NOP comment letters, refer to Appendix A of this Draft PEIR. NOP comments related to TCRs included the following:

- The **California Native American Heritage Commission,** May 27, 2025, detailing State procedures for compliance with AB 52, Senate Bill (SB) 18, and other State regulations related to tribal resources and the California Environmental Quality Act (CEQA).

4.18.2 Methodology

Pursuant to Public Resources Code (PRC) Section 21074, as added by Chapter 532, Statutes of 2014 (AB 52), lead agencies are required to evaluate a project's potential to impact "tribal cultural resources." Such resources include sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are eligible for inclusion in the CRHR or included in a local register of historical resources. AB 52 also gives lead agencies the discretion to determine, supported by substantial evidence, whether a resource falling outside the definition stated above nonetheless qualifies as a "tribal cultural resource."

Also, pursuant to PRC Section 21080.3.1 (AB 52), the Fresno COG, as lead agency, must consult California Native American Tribes that are traditionally and culturally affiliated with the geographic

area of the project site and have previously requested that the lead agency provide the Tribe with notice of such projects.

The Fresno COG requested a Sacred Lands File (SLF) Search and Native American contact list from the NAHC on March 3, 2026. In its response on March 10, 2026, the NAHC indicated that the record search results were positive. The NAHC also identified methodologies and contacts for conducting the required AB 52 tribal consultation and recommended that 56 Native American individuals representing tribal groups be contacted for information regarding cultural resources that could be affected by implementation of the proposed project.

On March 12, 2026, the Fresno COG provided notice of the proposed project via both certified mail and email to the Native American contacts provided by the NAHC and the tribes that had previously requested such notice and consulted with the Native American tribes that requested consultation in response to the notice, pursuant to the provisions of AB 52. Refer to Appendix B for the full list of tribal representatives that were contacted by the Fresno COG, as well as the dates that contact was made.

Pursuant to AB 52, the tribes were required to respond to the Fresno COG within 30 days of receipt of the notification if they wished to engage in consultation on the proposed project, and the Fresno COG was required to begin the consultation process within 30 days of receiving the request for consultation. Information regarding the outcome of the formal tribal consultation process with the consulting tribes is provided in Section 4.18.6, below, as well as Section 4.5, Cultural Resources, of this Draft PEIR. A full record of tribal consultation efforts is provided as Appendix B to this Draft PEIR.

It should be noted that tribal consultation requirements under AB 52 apply to projects that have an NOP or a notice of Negative Declaration (ND) or Mitigated Negative Declaration (MND) filed on or after July 1, 2015. As such, future transportation improvement and land use development projects facilitated by the proposed project that have an NOP or a notice of ND or MND would be required to initiate project-specific tribal consultation efforts pursuant to AB 52. In addition, future transportation improvement and land use development projects facilitated by the proposed project that involve the adoption or amendment of a General or Specific Plan would be subject to SB 18, which also requires local governments to contact, refer plans to, and consult with tribal organizations.

4.18.3 Existing Environmental Setting

The area that is now the Fresno COG Region was prehistorically occupied by several different Native American tribes with unique oral histories, societal structures, and ways of life. According to the County's General Plan Background Report, the Fresno COG Region consists of six traditional

ethnographic territories: the Northern Valley Yokuts, Southern Valley Yokuts, Foothill Yokuts, Mono, Owens Valley Paiute, and Salinan.[1]

4.18.3.1 Yokuts

Approximately 40 independent groups were collectively identified as the Yokuts. The Yokuts were traditionally divided into three major subgroups based on geography and language: the Northern Valley, the Foothill, and the Southern Valley Yokuts.

Yokuts established permanent villages and relied upon a mixed economy of fishing, collecting, and hunting small game. Bedrock milling features—frequently located near reliable water sources—represent some of the most enduring archaeological evidence of their long-term habitation.

The Yokuts were organized into distinct tribelets, each with its own name, dialect, and defined territory. These tribelets were typically governed by a hereditary chief residing in the principal village, who was aided by one or more advisors. Chiefs were responsible for community leadership, trade oversight, dispute resolution, and hosting visiting parties. The basic economic unit among the Yokuts was the nuclear family, centered around the male head of household. Totemic lineages were based on patrilineal descent.

Material culture among the Southern Valley Yokuts was shaped by their resource-rich environment and supplemented through trade. They relied heavily on locally available materials such as tule, which was used extensively in house construction, basketry, mats, cradles, and watercraft. The abundance of waterways made rafts a central mode of transportation. Tools and weapons were crafted from wood, bone, and stone. Resources not available locally—such as obsidian, salt, acorns, and seashells—were acquired through an extensive trade network in exchange for asphaltum, steatite, and animal skins.

4.18.3.2 Monache/Mono

At least six independent groups were collectively identified as the Monache or Mono, united by a common language. These groups generally inhabited a relatively small, mountainous region to the east of the Yokuts.

Mono settlements were typically small and loosely organized, consisting of a central village area surrounded by huts or hamlets. Governing power was generally associated with lineages, as each lineage had a totemic creature (e.g., eagle or roadrunner) that partially signified tribal duties, including leaders and messengers. It was not uncommon for more than one chief to be in office simultaneously, and smaller settlements may not have had one at all.

The Mono relied primarily upon hunting, fishing, and gathering wild plants. This system required the Mono to move about seasonally. Main food staples were deer, pine nuts, bear, ground squirrels,

[1] County of Fresno. 2024. Fresno County General Plan Background Report. February. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/planning-and-land-use/general-plan/background-report-2024.pdf (accessed November 25, 2025).

rabbits, pigeons, fish, acorns, manzanita berries, insects and grubs, and yucca. Tools and weapons were crafted from wood as well as obsidian, which was locally available near the present Devil's Postpile National Monument (just north of the Fresno COG Region) within the northern Mono area. The Mono were also skilled basket makers.

4.18.3.3 Owens Valley Paiute

The Owens Valley Paiute were united by a common language. These peoples inhabited a territory on the eastern side of the Sierra Nevada mountains into the eastern portion of the Fresno COG Region.

Owens Valley Paiute settlements were sedentary and generally occupied permanent villages, although temporary camps were also used for resource extraction purposes. Governing power was hereditary, and leaders were responsible for organizing labor and festivals. Leaders also organized an elaborate system for redistribution of goods within the tribe.

The Owens Valley Paiute are believed to have engaged in the trade of salt, pinyon pine nuts, obsidian, sinew-backed bows, rabbit blankets, moccasins, mountain sheepskins, baskets, sealed water bottles, shell money beads, acorns and acorn meal, cane, arrows, manzanita berries, and baskets made by the Yokuts.

4.18.3.4 Salinan

The Salinan language was of Hokan stock and included at least two mutually intelligible dialects. The primary Salinan territory was the middle and upper Salinas Valley and the Coast Ranges almost as far south as San Luis Obispo. Salinan territory extended inland as far east as the western edge of the Fresno COG Region, where it bordered Yokuts territory.

Twenty-one possible villages have been associated with Salinan tradition, all within the Salinas Valley, although it is thought that Salinan logistical foraging and hunting camps were established in the Coast Ranges. Permanent villages consisted of dome-shaped homes and communal structures such as sweathouses.

Although few Salinan cultural resources have been recovered, some baskets and tools, made from bone and stone, have been collected. Salinan tools included projectile points, scrapers, stone bowl mortars, arrow shaft straighteners, and bone awls.

4.18.4 Regulatory Setting

This section includes applicable federal, State, regional, and local policies and regulations.

4.18.4.1 Federal Regulations

Archaeological Resources Protection Act. The Archaeological Resources Protection Act was enacted in 1979 with the purpose of securing the protection of archaeological resources and sites on public lands and Native American lands, and to foster increased cooperation and exchange of information among governmental authorities, the professional archaeological community, and private individuals.

Native American Graves Protection and Repatriation Act. The Native American Graves Protection and Repatriation Act (NAGPRA) was passed in 1990 with the purpose of outlining a process for museums and federal agencies to return certain Native American cultural items (e.g., human remains, funerary objects, sacred objects, or objects of cultural patrimony) to lineal descendants, and culturally affiliated Indian Tribes. NAGPRA also establishes procedures for the inadvertent discovery or planned excavation of Native American cultural items on federal or tribal lands. While these provisions do not apply to discovery or excavations on private or State lands, the collection portions of NAGPRA may apply to cultural items if they are under the control of an institution that receives federal funding. NAGPRA also makes it a criminal offense to traffic in Native American human remains without right of possession or in cultural items obtained in violation of NAGPRA.

4.18.4.2 State Regulations

Native American Heritage Commission. In 1976, the California State Government passed AB 4239, creating the NAHC. The NAHC is responsible for identifying and categorizing Native American cultural resources as well as preventing damage to designated sacred sites and associated artifacts and remains. Legislation passed in 1982 authorized the NAHC to identify a Most Likely Descendant (MLD) when Native American remains are found outside the boundaries of a designated cemetery. An MLD has the authority to make recommendations with regard to the treatment and disposition of the discovered remains.

California Public Resources Code Sections 5097.9–5097.991. PRC Sections 5097.9–5097.991 provide protection to Native American historical and cultural resources (including sanctified cemeteries, places of worship, religious sites, or sacred shrines) and sacred sites, and give the NAHC enforcement authority.

Specifically, California PRC Section 5097.98 outlines procedures that must be followed in the event that human remains are discovered. The County Coroner shall make a determination within 2 working days from the time the person responsible for the excavation, or designee, notifies the County Coroner of the discovery or recognition of the human remains. If the County Coroner identifies the remains to be of Native American origin or has reason to believe that the remains are those of Native American origin, the County Coroner must contact the California NAHC within 24 hours. The NAHC representative will then alert a Native American MLD to conduct an inspection of the site and to determine the following course of treatment and action. Additionally, *State CEQA Guidelines* Section 15064.5 sets forth a procedure if human remains are found on land outside of federal jurisdiction.

Health and Safety Code Section 7050.5. The discovery of human remains is regulated according to California Health and Safety Code Section 7050.5, which states, "If human remains are encountered, no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the NAHC, which will determine and notify Most Likely Descendant (MLD). With the permission of the landowner or his or her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 24 hours of notification by the NAHC. The MLD may

recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials."

Assembly Bill 52. AB 52, the Native American Historic Resource Protection Act, sets forth a proactive approach intended to reduce the potential for delay and conflicts between Native American and development interests. Projects subject to AB 52 are those that file an NOP for an Environmental Impact Report (EIR) or Notice of Intent to adopt an ND or MND on or after July 1, 2015. AB 52 adds TCRs to the specific cultural resources protected under CEQA. Under AB 52, a TCR is defined as a site, feature, place, cultural landscape (must be geographically defined in terms of size and scope), sacred place, or object with cultural value to a California Native American tribe that is either included or eligible for inclusion in the CRHR, or included in a local register of historical resources. A Native American tribe or the lead agency, supported by substantial evidence, may choose at its discretion to treat a resource as a TCR. AB 52 also mandates that lead agencies consult with tribes, if requested by the tribe, and sets the principles for conducting and concluding consultation.

Senate Bill 18. California Government Code Section 65352.3 (adopted pursuant to the requirements of SB 18) requires local governments to contact, refer plans to, and consult with tribal organizations prior to making a decision to adopt or amend a general or specific plan. The tribal organizations eligible to consult have traditional lands in a local government's jurisdiction and are identified, upon request, by the NAHC. As noted in the Governor's Office of Planning and Research's *Tribal Consultation Guidelines, Supplement to General Plan Guidelines* (2005),[2] "the intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places."

4.18.4.3 Regional Regulations

There are no regional regulations that apply to the proposed project with respect to tribal cultural resources.

4.18.4.4 Local Regulations

Local General Plans. The Fresno COG Region contains Fresno County and 15 incorporated cities, each with an individual general plan prepared pursuant to California Government Code Section 65300. Each general plan contains goals and policies related to cultural resources within the particular jurisdiction. Although general plan element titles may vary, this information is typically found within the general plan conservation element, or equivalent.

4.18.5 Thresholds of Significance

The following thresholds of significance are based on Appendix G of the *State CEQA Guidelines*. Based on these thresholds, implementation of the proposed project would have a significant adverse impact with respect to TCRs if it would:

Threshold 4.18.1: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site,

[2] State of California. 2005. *Tribal Consultation Guidelines, Supplement to General Plan Guidelines.* November.

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:

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k); or

b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.

4.18.6 Project Impacts

Threshold 4.18.1(a): **Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is: Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k);**

Or

Threshold 4.18.1(b): **Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is: A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.**

Significant and Unavoidable Impact. As described in Section 3.0, Project Description, the Fresno COG selected Scenario C (Enhanced Transit and Smart Growth) as the preferred project scenario. One of the focal points of this scenario is sustainable urban growth focused on existing urban centers and established areas. While limited potential exists for projects within urban centers to impact cultural resources due to prior disturbance from past grading and development activities, future transportation improvement projects and future land use developments involving excavation

activities in undisturbed subsurface sediments may encounter unknown, unrecorded TCRs. Excavation activities associated with future transportation improvement projects and land use developments facilitated by the proposed project would result in potentially significant direct and indirect impacts on known and/or unknown buried TCRs since construction activities would have the possibility to damage resources or remove them from their local context.

As part of the tribal consultation process, the SLF conducted by the NAHC indicated positive results. The NAHC provided a list of 56 representatives of various Native American tribes who could provide relevant information to inform the proposed project. The Fresno COG provided formal notification letters via certified mail to Native American tribal contacts provided by the NAHC, as well as local Native American tribal representatives who previously requested to be notified of future projects proposed by the Fresno COG, in compliance with AB 52 consultation requirements.

Of the 56 tribal representatives contacted by Fresno COG, representatives of three tribes provided a response, as detailed below:

- **Traditional Choinumni Tribe.** On March 16, 2026, a representative of the Traditional Choinumni Tribe contacted Fresno COG, indicating that the Tribe would like to continue their partnership. No further correspondence has been received to date, and consultation is considered closed.

- **Chicken Ranch Rancheria of Me-Wuk Indians.** On March 26, 2026, a representative of the Chicken Ranch Rancheria of Me-Wuk Indians contacted Fresno COG, requesting formal consultation and additional project materials. On March 26, 2026, Fresno COG responded and provided the project materials available at that time and noted that the Draft 2026 RTP/SCS/PEIR would be made available during the public review period. No further correspondence has been received to date, and consultation is considered closed.

- **Pakan'yani Maidu of Strawberry Valley Rancheria.** On April 4, 2026, representatives of the Table Mountain Rancheria contacted Fresno COG, indicating that the project site is located within the Tribe's cultural area of interest. On April 9, 2026, Fresno COG responded and provided the project materials available at that time and noted that the Draft 2026 RTP/SCS/PEIR would be made available during the public review period. No further correspondence has been received to date, and consultation is considered closed.

As indicated by the correspondence described above, during the tribal consultation process for the proposed project, no resources were identified requiring evaluation as potential tribal cultural resources as defined by Public Resources Code Section 21074. None of the responding tribes identified any "sites, features, places, cultural landscapes, sacred places, and objects that hold cultural value for a California Native American tribe" that would have the potential to be impacted by the proposed project at this time.

Future transportation improvement projects and land use developments under the proposed project that require an ND, MND, or EIR under CEQA would be required to undergo project-specific tribal consultation efforts pursuant to AB 52 and, if a General Plan amendment or update is involved, SB 18. These processes would inform whether Native American archaeological resources are present within each individual project site and the significance of any potential impacts to such

resources. Project-specific mitigation measures (PMMs) could be developed during these processes, if required.

Future projects would comply with **PMMs CUL-1, CUL-3,** and **CUL-4** pertaining to archaeological resources, as described in Section 4.5, Cultural Resources, of this PEIR. These measures would reduce potential impacts to TCRs. Pursuant to **PMM CUL-1**, during the environmental review process for each individual project, a record search would be conducted at the Southern San Joaquin Valley Information Center (SSJVIC) to determine whether the individual area has been previously surveyed and whether cultural resources have been identified, including TCRs. The results of the search would determine whether the area has the potential to yield archaeological resources. Pursuant to **PMM CUL-3**, such sites would be monitored by a qualified archaeologist during ground-disturbing activities. Pursuant to **PMM CUL-4,** buried cultural materials (including those associated with Native American tribes) encountered during construction would result in stoppage of work in that area until a qualified archaeologist evaluates the nature and significance of the find and determines appropriate treatment.

As described in Chapter 3.0, Project Description, the design of each transportation improvement project and land use development facilitated by the proposed project is currently unknown. Therefore, this analysis represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. With adherence to AB 52, SB 18, and **PMMs CUL-1, CUL-3,** and **CUL-4,** impacts associated with TCRs would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to the California Department of Transportation (Caltrans), local jurisdictions, and other responsible agencies with jurisdiction over each project site. As such, potential impacts associated with TCRs are considered **significant and unavoidable** for the purposes of this analysis.

4.18.7 Level of Significance Prior to Mitigation

Prior to mitigation, implementation of the proposed project would have potentially significant impacts related to TCRs.

4.18.8 Mitigation Measures

4.18.8.1 Fresno COG Measures

There are no applicable mitigation measures to be undertaken by the Fresno COG pertaining to TCRs. However, as appropriate and feasible, the Fresno COG would encourage the implementation of the project-specific mitigation strategies listed below.

4.18.8.2 Project-Specific Measures

The following mitigation measures would be applied to future transportation improvement and land use development projects to reduce potentially significant impacts related to TCRs to the extent feasible:

PMM CUL-1 *Refer to Section 4.5, Cultural Resources.*

PMM CUL-3 *Refer to Section 4.5, Cultural Resources.*

PMM CUL-4 *Refer to Section 4.5, Cultural Resources.*

4.18.9 Level of Significance After Mitigation

Implementation of **PMMs CUL-1**, **CUL-3,** and **CUL-4** would assist the Fresno COG and lead agencies of future transportation improvement projects and land use developments in reducing impacts related to TCRs to the extent feasible. However, the analysis presented in this section is general in nature, and given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future transportation improvement projects and land use developments, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. As appropriate and feasible, the Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified. Nevertheless, impacts related to TCRs are considered **significant and unavoidable** for the purposes of this analysis.

4.18.10 Cumulative Impacts

As defined in Section 15130 of the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for TCRs. The cumulative impact area for tribal cultural resources is the Fresno COG Region based on its shared cultural context. As described above in Section 4.18.2, the NAHC indicated that the record search conducted for the entire Fresno COG Region returned positive results.

The Fresno COG Region is anticipated to contain a number of unknown, unrecorded TCRs in undisturbed subsurface sediments that have not yet been surveyed. As with the proposed project, ground-disturbing activities associated with construction of cumulative projects in the Fresno COG Region may have the potential to unearth such resources.

Each discretionary development proposal in the Fresno COG Region received by the appropriate lead agency is required to comply with the requirements of CEQA, including an environmental review as applicable to determine if a project would have a substantial adverse change in the significance of a TCR. These environmental reviews may involve literature review, field surveys, SSJVIC and NAHC searches, as well as other methods to determine the potential for TCR impacts.

In addition, any cumulative projects that have an NOP or a notice of ND or MND filed on or after July 1, 2015 would be subject to the requirements of AB 52. In addition, cumulative projects that involve the adoption or amendment of a general or specific plan would be subject to SB 18. As such, cumulative projects would be required to participate in the tribal consultation process, as

applicable, which would inform the assessment of whether TCRs are present within each project site and the significance of any potential impacts to such resources.

Based on the outcome of tribal consultation, applicable requirements established by each lead agency, and the extent of identified impacts, cumulative projects would implement standard conditions and/or the mitigation measures identified in the site- and project-specific cultural resource assessments prepared (as necessary) for those projects.

As stated above under Section 4.18.9, impacts of the proposed project related to cultural resources are considered significant and unavoidable given the programmatic nature of the proposed project, the scale of the Fresno COG Region, and the inability of the Fresno COG to enforce project-specific mitigation or make land use approvals. Because the proposed project would result in significant adverse environmental impacts with respect to TCRs, these impacts would represent an incremental contribution to the environmental impacts of other cumulative or related projects, including other regional-scale plans, ultimately leading to a cumulatively considerable impact to TCRs in the cumulative impact area.

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4.19 UTILITIES AND SERVICE SYSTEMS

This section of the Draft Program Environmental Impact Report (PEIR) describes existing utilities and service systems that serve the Fresno Council of Governments (COG) Region and evaluates potential impacts associated with implementation of the 2026 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (proposed project). Specifically, this section addresses existing conditions and service capacities related to water supply, wastewater collection and treatment, stormwater drainage, solid waste management, and energy and telecommunications infrastructure. The analysis considers whether the proposed project would result in the need for new or expanded utility facilities, generate service demands that would exceed current capacities, or conflict with applicable federal, State, or local plans and regulations governing utilities and service systems.

4.19.1 Scoping Process

Potential impacts related to utilities and service systems were not identified during the public scoping meeting held for the proposed project on May 28, 2025.

The Fresno COG received no comment letters in response to the Notice of Preparation (NOP) issued for the proposed project between May 13 and June 12, 2025, concerning the proposed project's potential impacts related to utilities and service systems.

4.19.2 Methodology

Information regarding utilities and service systems was obtained from agency websites and planning documents. Information was also obtained from the County of Fresno General Plan Background Report[1] and General Plan PEIR.[2]

This section analyzes the potential utility and service system impacts of future transportation and land use development projects facilitated by the proposed project to the extent feasible. Since utility impacts are related to specific project improvements, impact analyses are most appropriate at the individual improvement project and new development project levels rather than the programmatic level that characterizes this PEIR. Subsequent project-specific California Environmental Quality Act (CEQA) documents may be required to further analyze the transportation improvements or new development facilitated by the proposed project to determine the magnitude of impacts to utilities and service systems, and to identify appropriate project-specific mitigation measures.

4.19.2.1 Key Concepts

The assessment of utilities and service systems impacts is guided by the ability of existing and planned infrastructure to accommodate the demands of a proposed project. Utility systems include potable and non-potable water, wastewater, stormwater, electricity, natural gas, telecommunications, and solid waste. Impacts generally occur when a project exceeds available capacity, requires substantial modifications to existing systems, or otherwise interferes with service

1 County of Fresno. 2023. *Fresno County General Plan Background Report. General Plan Review and Revision. April.*

2 County of Fresno. 2023. *Program Environmental Impact Report Public Review Draft. Fresno County General Plan Review and Zoning Ordinance Update*. April.

delivery. Users of these services include residents, businesses, and institutions, all of whom may experience varying sensitivity to changes in service reliability or quality. An assessment of a project's utility and service system impacts generally utilizes the following concepts.

Utility Infrastructure. Utility infrastructure refers to the physical systems and facilities necessary to provide essential services, including pipelines, treatment facilities, pumping stations, storage reservoirs, distribution networks, appurtenances, electrical transmission and distribution lines, natural gas pipelines, and telecommunications facilities such as fiber-optic lines and communication towers. The condition, reliability, and capacity of these facilities determine the ability of a system to accommodate new demand without degradation of service.

Service Capacity. Service capacity is the maximum level of demand a utility system can reliably support. Exceeding capacity may necessitate system upgrades, which could have temporary or permanent environmental effects associated with construction and operation.

Water Supply. The evaluation of water supply quantifies the amount of water that would be required to support operation of a proposed project and compares the demand on a city's or county's available water supply to identify if sufficient water supplies are available to serve the project and reasonably foreseeable development during normal, dry, and multiple dry years. Additionally, the water supply infrastructure is evaluated to ensure design capacity would be adequate to supply the proposed site or to identify if expansions would be required to serve the proposed development.

Wastewater Demand. The evaluation of wastewater infrastructure and demand quantifies the amount of wastewater that would be generated from operation of a project and compares the demand on the existing and planned sewer infrastructure to the wastewater treatment plant that treats flows from a project. The evaluation identifies whether expansions would be required to serve the proposed development and if those expansions have the potential to result in an environmental impact.

Stormwater Drainage. The evaluation of stormwater drainage infrastructure quantifies the amount of impervious surfaces and stormwater runoff that would be generated from the proposed Project and identifies if runoff from a project that would be accommodated by the existing stormwater drainage infrastructure in that area. The evaluation identifies if expansions would be required to serve the proposed development, and if those expansions have the potential to result in an environmental impact.

Solid Waste. Solid waste generation from construction and operation of a project is estimated using either the United States Environmental Protection Agency (EPA), California Department of Resources Recycling and Recovery (CalRecycle) solid waste generation factors derived for residential and commercial uses, or California Emissions Estimator Model (CalEEMod) modeling. Solid waste volumes are then compared with recent estimates of remaining disposal capacity of the landfill serving a city or county. In addition, potential impacts related to compliance with solid waste regulations are evaluated by identifying how a project would be implemented relevant to the exiting requirements.

Energy and Natural Gas. Energy and natural gas demand from construction and operation of a project is estimated using CalEEMod modeling. Construction energy use includes equipment, vehicles, and temporary facilities, while operational energy use includes electricity and natural gas for the completed project. Estimated project demand is then compared with the available capacity of the electrical and natural gas systems serving the city or county to determine whether upgrades or expansions would be required. Potential impacts are evaluated based on the potential for interruptions to service, strain on system capacity, or environmental effects associated with new or expanded infrastructure.

Telecommunications. Telecommunications infrastructure includes fiber-optic lines, communication towers, and other supporting facilities necessary to provide telephone, internet, wireless, and data services. The evaluation considers whether the project would require upgrades to existing infrastructure, the ability of the system to support new demand, and potential impacts associated with construction or expansion of telecommunications facilities.

4.19.3 Existing Environmental Setting

Utilities and service systems within the Fresno COG Region are provided by a combination of regional agencies, local jurisdictions, special districts, and private service providers. These systems support existing urban, agricultural, and rural land uses throughout Fresno County. The availability and capacity of water supply, wastewater treatment, solid waste disposal, energy, and telecommunications infrastructure vary by location and service provider. Regional planning efforts rely on coordination with utility providers to ensure that long-term growth and transportation investments are supported by adequate public services. This section describes the existing environmental setting of the Fresno COG Region pertaining to utilities and service systems.

4.19.3.1 Water Supply

Water supply in the Fresno COG Region is provided through a combination of surface water deliveries, groundwater pumping, and imported water supplies. Major water sources include the Kings River, the San Joaquin River, groundwater basins underlying the San Joaquin Valley, rainfall/snowmelt, and federal and State water conveyance systems such as the Central Valley Project (CVP) and State Water Project.[3] Municipal water service is provided by incorporated cities, water districts, and community service districts, while agricultural and rural areas rely primarily on irrigation districts and private wells. Non-potable uses, including agricultural irrigation, also utilize recycled water.

Groundwater resources play a critical role in meeting water demands, particularly during dry years when surface water resources are reduced. Water suppliers in the County draw groundwater resources from the San Joaquin Valley Groundwater Basin, which is underlain by the Kings, Delta-Mendota, Westside, and Pleasant Valley subbasins. The Department of Water Resources (DWR) has

[3] County of Fresno. 2000. *General Plan Update 2000.* 4.8 Water Resources. Pages 4.8-4—4.8-7. Website: https://www2.co.fresno.ca.us/4510/4360/general_plan/gp_final_eir/eir/water4-8.pdf (accessed February 13, 2026)

designated the Kings, Delta-Mendota, and Westside subbasins as high-priority overdraft areas,[4] meaning the average annual amount of groundwater extraction exceeds the long-term average annual supply of water to the basin.[5] The Sustainable Groundwater Management Act (SGMA) requires governments and water agencies of high- and medium-priority basins to halt overdrafts of groundwater basins. The SGMA requires the formation of local groundwater sustainability agencies (GSAs) that are required to adopt Groundwater Sustainability Plans (GSPs) to manage the sustainability of the groundwater basins. GSPs have been prepared for each subbasin within the County, including the three high-priority overdraft areas as well as the Pleasant Valley Subbasin. These GSPs ensure the active management of groundwater supplies to ensure long-term availability.

Refer to Section 4.10, Hydrology and Water Quality, for additional information regarding water resources within Fresno County.

4.19.3.2 Wastewater (Sanitary Sewer) System

Wastewater collection, treatment, and disposal services in the Fresno COG Region are provided by municipal wastewater treatment plants, sanitation districts, and community service districts. Incorporated cities operate centralized wastewater collection systems and treatment facilities that serve urbanized areas, while unincorporated and rural areas may rely on smaller treatment systems or individual on-site wastewater treatment systems (septic systems).

Wastewater treatment facilities within the Fresno COG Region are regulated under State and federal water quality requirements and discharge permits issued by the Central Valley Regional Water Quality Control Board (RWQCB). Existing wastewater infrastructure capacity and service availability vary by jurisdiction and are generally planned and managed through local capital improvement programs and wastewater master plans.[6]

4.19.3.3 Stormwater

Local and regional stormwater drainage infrastructure within a majority of the County is provided and managed by the Fresno Metropolitan Flood Control District (District), which is the only flood control district in the Fresno COG Region.[7] The District primarily services the cities of Fresno and Clovis, including the unincorporated areas east of the two cities. District facilities include drainage facilities, flood control watercourses, and retention basins.

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4 County of Fresno. 2024. *General Plan Background Report.* February. Page 7-6. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/planning-and-land-use/general-plan/background-report-2024.pdf (accessed January 8, 2026).

5 California Department of Water Resources (DWR). n.d. Critically Overdrafted Basins. Website: https://water.ca.gov/programs/groundwater-management/bulletin-118/critically-overdrafted-basins (accessed January 8, 2026).

6 State Water Resources Control Board (SWRCB). n.d. National Pollutant Discharge Elimination System (NPDES) – Wastewater. Website: https://water.waterboards.ca.gov/water_issues/programs/npdes/ (accessed February 13, 2026)

7 County of Fresno. 2024. *General Plan Background Report.* February. Page 6-32. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/planning-and-land-use/general-plan/background-report-2024.pdf (accessed January 8, 2026).

Some individual communities in the Fresno COG Region have storm drainage systems serviced by community services districts, including Biola, Caruthers, Del Rey, Easton, Riverdale, and Tranquillity.[8] Drainage infrastructure in these areas includes retention basins to collect stormwater.

4.19.3.4 Solid Waste

Solid waste collection and disposal services in the Fresno COG Region are provided by local jurisdictions, franchised waste haulers, and regional landfill operators. Solid waste generated within the County is disposed of at permitted landfill facilities located within and outside the region, as well as through recycling, composting, and waste diversion programs. According to the CalRecycle Solid Waste Information System (SWIS) Database, there are currently 33 active solid waste processing facilities in the Fresno COG Region, including landfills, transfer stations, composting sites, in-vessel digestion sites, engineered municipal solid waste conversion facilities, transformation facilities, and closed disposal sites.[9] Additionally, five planned waste collection and disposal services are anticipated to be constructed within the Fresno COG Region.[10]

4.19.3.5 Electricity and Natural Gas

Electricity and natural gas services in the Fresno COG Region are primarily provided by investor-owned utilities. Energy infrastructure includes transmission lines, substations, natural gas pipelines, and distribution facilities that serve residential, commercial, industrial, and agricultural uses.

Electricity is provided to a majority of the Fresno COG Region by Pacific Gas and Electric Company (PG&E), which serves all incorporated cities within the region.[11] Electricity in the northeast area of the Fresno COG Region and in the communities of Shaver Lake and Big Creek is provided by Southern California Edison Company (SCE).[12] Other electrical service providers include local and regional entities.

According to the California Energy Commission (CEC),[13] total electricity consumption in the PG&E service area in 2024, the most recent year for which data was available, was 75,337.58 gigawatt-

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8 County of Fresno. 2024. *General Plan Background Report.* February. Page 6-33. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/planning-and-land-use/general-plan/background-report-2024.pdf (accessed January 8, 2026).

9 California Department of Resources Recycling and Recovery (CalRecycle). Solid Waste Information System Facility/Site Search. Website: https://www2.calrecycle.ca.gov/SolidWaste/Site/Search (accessed January 8, 2025).

10 Ibid.

11 County of Fresno. 2023. *General Plan Review and Zoning Ordinance Update Program Environmental Impact Report, Public Review Draft.* April. Page 4.17-4. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/environmental-impact-reports/1_draft-program-environmen.pdf (accessed January 8, 2026).

12 County of Fresno. 2024. *General Plan Background Report.* February. Page 6-50. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/planning-and-land-use/general-plan/background-report-2024.pdf (accessed November 26, 2025).

13 California Energy Commission (CEC). California Electricity Consumption. Website: https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/california-energy-consumption-dashboards-0 (accessed November 26, 2025).

hours (GWh), or 75,337,580,000 kilowatt-hours (kWh). In the same year, total electricity consumption in the SCE service area was 79,342.01 GWh, or 79,342,010,000 kWh. Lastly, the Fresno COG Region's total electricity consumption in 2024 was 7,968 GWh, or 7,968,000,000 kWh.

PG&E provides all natural gas services within the Fresno COG Region.[14] The entire service area for PG&E covers 70,000 square miles and extends from Northern to Central California.[15] In 2024, total natural gas consumption in the PG&E service area was 4,256.05 million therms, or 4,266,050,000 therms. The same year, Fresno County consumed 303.6 million therms, or 303,600,000 therms.[16]

Energy planning is guided by State policies related to energy reliability, efficiency, and greenhouse gas reduction. Refer to Section 4.6, Energy, for additional information regarding energy resources within the Fresno COG Region.

4.19.3.6 Telecommunications

Telecommunications services, including telephone, internet, wireless, and data services, are provided by a variety of private service providers. Infrastructure consists of fiber-optic lines, communication towers, and related facilities distributed throughout urban and rural areas. Telecommunications infrastructure continues to expand in response to population growth, technological advancement, and increased demand for high-speed connectivity.

4.19.4 Regulatory Setting

Federal, State, and local regulations and programs related to utilities and service systems that are applicable to the proposed project are described below.

4.19.4.1 Federal Regulations

Clean Water Act. Pursuant to Section 404 of the Clean Water Act (CWA) (33 United States Code [USC] Section 1251 et seq.), the **United States Army Corps of Engineers** (USACE) is authorized to regulate any activity that would result in the discharge of dredged or fill material into waters of the United States (including wetlands), which include those waters listed in 33 Code of Federal Regulations (CFR) 328.3 (as amended in 80 Federal Register (FR) 37104, June 29, 2015).

Pursuant to Section 401 of the CWA, the RWQCB, a division of the State Water Resources Control Board (SWRCB), is required to provide "certification that there is reasonable assurance that an activity that may result in the discharge to waters of the U.S. will not violate water quality

[14] County of Fresno. 2024. *General Plan Background Report.* February. Page 6-53. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/planning-and-land-use/general-plan/background-report-2024.pdf (accessed November 26, 2025).

[15] Pacific Gas and Electric Company (PG&E). 2026. Company Profile – Fast facts about PG&E. Website: https://www.pge.com/en/about/company-information/company-profile.html?utm_source=chatgpt.com (accessed March 11, 2026).

[16] California Energy Commission (CEC). n.d. California Natural Gas Consumption. Website: https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/california-energy-consumption-dashboards-1 (accessed November 26, 2025).

standards." Water quality certification must be based on the finding that the proposed discharge will comply with applicable water quality standards.

The National Pollutant Discharge Elimination System (NPDES) is the permitting program for discharge of pollutants into surface waters of the United States under CWA Section 402.

Safe Drinking Water Act. The Safe Drinking Water Act (SDWA) (42 USC Section 300f et seq.) is intended to protect public health by regulating the nation's public drinking water supply. The federal SDWA authorizes the EPA to set national standards for drinking water to protect against both naturally occurring and manmade contaminants.

Resource Conservation and Recovery Act (42 USC §6901 et seq.). The federal Resource Conservation and Recovery Act (RCRA) was enacted in 1976 to ensure that solid and hazardous wastes are properly managed from their generation to their ultimate disposal or destruction. Implementation of the RCRA has largely been delegated to federally approved State waste management programs and, under Subtitle D, further promulgated to local governments for management of planning, regulation, and implementation of nonhazardous solid waste disposal. The EPA retains oversight of State actions under CFR Title 40, Parts 239–259. Where facilities are found to be inadequate, Section 256.42 requires that necessary facilities and practices be developed by the responsible State and local agencies, or by the private sector. In California, that responsibility was created under AB 939, the California Integrated Waste Management Act, in 1989.

4.19.4.2 State Regulations

California Integrated Waste Management Act of 1989. The California Integrated Waste Management Act of 1989 (Public Resources Code [PRC] Division 30), enacted through AB 939 and modified by subsequent legislation, required all California cities and counties to implement programs to reduce, recycle, and compost at least 50 percent of waste by 2000 (PRC §41780). The State determines compliance with this mandate to "divert" 50 percent of generated waste (which includes both disposed and diverted waste) through a complex formula. This formula requires cities and counties to conduct empirical studies to establish a "base year" waste generation rate against which future diversion is measured. The actual determination of the diversion rate in subsequent years is arrived at through deduction, not direct measurement: instead of counting the amount of material recycled and composted, the city or county tracks the amount of material disposed at landfills, then subtracts the disposed amount from the base year amount. The difference is assumed to be diverted (PRC §41780.2).

Urban Water Management Planning Act. The Urban Water Management Planning Act (UWMP Act) (California Water Code [CWC], Division 6, Part 2.6, §10610 et seq.) was enacted in 1983. The UWMP Act applies to municipal water suppliers that provide water service directly to more than 3,000 connections. The UWMP is a public document prepared by water suppliers to guide long-term water management planning over a 20-year period and ensure adequate water supplies are available to meet existing and future water demands. The UWMP Act requires these suppliers to update their UWMPs every 5 years to demonstrate an appropriate level of reliability in supplying anticipated short-term and long-term water demands during normal, dry, and multiple dry years.

General Construction Activity Storm Water Permit. The *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order No. WQ 2022-0057-DWQ, NPDES No. CAS000002* (Construction General Permit),[17] adopted by the SWRCB, regulates construction activity that includes clearing, grading, and excavation resulting in soil disturbance of at least 1 acre of total land area. The Construction General Permit authorizes the discharge of stormwater to surface waters from construction activities.

The Construction General Permit requires that all developers of land where construction activities will occur over more than 1 acre do the following:

- Complete a Risk Assessment to determine pollution prevention requirements pursuant to the three risk levels established in the General Permit;
- Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the United States;
- Develop and implement a Storm Water Pollution Prevention Plan (SWPPP) that specifies best management practices (BMPs) that will reduce pollution in stormwater discharges to the Best Available Technology/Economically Achievable/Best Conventional Pollutant Control Technology standards as described in the CWA;
- Perform inspections and maintenance of all BMPs; and
- Conduct stormwater sampling, if required based on risk level.

To obtain coverage under the Construction General Permit, a project applicant must electronically file all permit registration documents with the SWRCB prior to the start of construction. Permit registration documents must include a:

- Notice of Intent (NOI);
- Risk assessment;
- Site map;
- SWPPP;
- Annual fee; and
- Signed certification statement.

Typical BMPs contained in SWPPPs are designed to minimize erosion during construction, stabilize construction areas, control sediment, and control pollutants from construction materials. The SWPPP must also include a discussion of the program to inspect and maintain all BMPs.

[17] State Water Resources Control Board (SWRCB). 2022. *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order No. WQ 2022-0057-DWQ, NPDES No. CAS000002.* September 8. Effective September 1, 2023.

Sustainable Groundwater Management Act. The =SGMA is a comprehensive three-bill package that Governor Jerry Brown signed into California State law in September 2014. The SGMA provides a framework for sustainable management of groundwater supplies by local authorities, with a limited role for State intervention if necessary to protect the resource. The plan is intended to ensure a reliable groundwater supply for California for years to come.

The SGMA requires governments and water agencies of high- and medium-priority basins to halt overdrafts of groundwater basins. The SGMA requires the formation of local GSAs that are required to adopt GSPs to manage the sustainability of the groundwater basins.

California Water Conservation in Landscaping Act, Government Code §65591 et seq. Pursuant to the Water Conservation in Landscaping Act of 2006 (Government Code 65591 et seq.), cities and counties in California are required to adopt a water-efficient landscape ordinance. Local ordinances are intended to reduce water use for landscaping and irrigation purposes and encourage the use of recycled and reclaimed water for these purposes. The DWR maintains a Model Water Efficient Landscape Ordinance (MWELO) (California Code of Regulations [CCR] 490 23 et seq.) after which local jurisdictions can model their ordinances.

California Water Recycling in Landscaping Act, Government Code §65601 et seq. The California Water Recycling in Landscaping Act promotes the efficient use of water through the development of water recycling facilities. This act stipulates that landscape design, installation, and maintenance should be water efficient, and the use of potable domestic water for landscaped areas is considered a waste or unreasonable use of water if recycled water is available that meets the conditions described in Section 13550 of the CWC.

Senate Bill 610. SB 610 requires that detailed information regarding water availability be provided to relevant city and county decision makers prior to approval of specified large development projects (as defined in California Water Code Section 10912 [a]). Under SB 610, water assessments must be furnished to local governments for inclusion in any environmental documentation for certain projects subject to CEQA.[18]

Senate Bill 1374. SB 1374 requires that the annual report submitted to CalRecycle include a summary of the progress made in diversion of construction and demolition waste materials. In addition, SB 1374 required that CalRecycle adopt a model ordinance suitable for adoption by any local agency to require 50 to 74 percent diversion of construction and demolition waste materials from landfills by March 1, 2004. Local jurisdictions are not required to adopt their own construction and demolition ordinances, nor are they required to adopt CalRecycle's model by default. However, adoption of such an ordinance may be considered by CalRecycle when determining whether to impose a fine on a jurisdiction that has failed to implement its Source Reduction and Recycling Element (SRRE).

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18 California Department of Water Resources (DWR). 2003. *Guidebook for Implementation of SB 610 and SB 221 to Assist Water Suppliers, Cities, and Counties in Integrating Water and Land Use Planning.* October 10. Website: https://cawaterlibrary.net/document/guidebook-for-implementation-of-sb-610-and-sb-221-to-assist-water-suppliers-cities-and-counties-in-integrating-water-and-land-use-planning/ (accessed August 21, 2025).

Assembly Bill 75. AB 75, passed in 1999, took effect on January 1, 2000. This bill adds new provisions to the PRC, mandating that State agencies develop and implement an Integrated Waste Management Plan (IWMP); it also mandates that community service districts providing solid-waste services report disposal and diversion information to the city, county, or regional agency in which the community service district is located.

California Energy Code. Energy consumption by new buildings in California is regulated by the Building Energy Efficiency Standards, in Part 6 of CCR Title 24, referred to as the Energy Code. The CEC first adopted the Building Energy Efficiency Standards for Residential and Non-residential Buildings in 1978 in response to a legislative mandate to reduce energy consumption in the State. The Energy Code is updated every 3 years, with the most recent update consisting of the 2025 Energy Code that became effective January 1, 2026. The efficiency standards apply to both new construction and rehabilitation of both residential and nonresidential buildings, and regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. The building efficiency standards are enforced through the local building permit process. Local government agencies may adopt and enforce energy standards for new buildings, provided these standards meet or exceed those provided in the Energy Code.

Title 24 of the California Code of Regulations. Energy and water consumption by new buildings in California is regulated by the California Green Building Standards Code (CALGreen), which is embodied in CCR Title 24. Title 24 provides efficiency standards for new construction and the rehabilitation of both residential and nonresidential buildings, including building energy consumption, water conservation, and operational efficiencies. Title 24 regulates building energy consumption for heating, cooling, ventilation, water heating, and lighting regarding both electricity and natural gas while also regulating water consumption through the installation of efficient plumbing fixtures. The efficiency standards apply to both new construction and rehabilitation of both residential and non-residential buildings. The building efficiency standards are enforced through the local building permit process. Local government agencies may adopt and enforce energy standards for new buildings, provided these standards meet or exceed Title 24 Building Code requirements. CALGreen took effect on January 1, 2011. It is updated on a regular basis, with the most recent update consisting of the 2025 CALGreen standards that became effective January 1, 2026.

Additionally, CALGreen Section 5.408.1 identifies that construction projects shall "recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1, 5.408.1.2 or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent."

Assembly Bill 341. AB 341, enacted in 2011 and applicable beginning in 2012, changes the due date of the State agency waste management annual report to May. The bill makes a legislative declaration that it is the policy goal of the State of California that no less than 75 percent of solid waste generated be source reduced, recycled, or composted by 2020.

Public Health and Safety Code Part 9.5, Section 115700. Public Health and Safety Code Part 9.5, Section 115700, requires the proper decommissioning of inactive wells to prevent the contamination of groundwater. The section provides specifics for the casting, securing, and marking of wells and the

surrounding area. This section also provides that at a minimum; permanently inactive wells shall be destroyed in accordance with standards developed by the DWR pursuant to CWC Section 13800 and adopted by the SWRCB or local agencies in accordance with CWC Section 13801. Minimum standards recommended by the DWR and adopted by the SWRCB or local agencies for the abandonment or destruction of groundwater monitoring wells or Class 1 hazardous injection wells shall not be construed to limit, abridge, or supersede the powers or duties of the department, in accordance with CWC Section 13801.

California Energy Efficiency Strategic Plan. On 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. 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 the CPUC established in Decisions D.07-10-032 and D.07-12-051[19]:

- All new residential construction will be zero net energy (ZNE) by 2020.[20]
- All new commercial construction will be ZNE by 2030.
- 50 percent of commercial buildings will be retrofitted to ZNE by 2030.
- 50 percent of new major renovations of State buildings will be ZNE by 2025.

California Code of Regulations Title 20 Appliance Efficiency Standards. The 2006 Appliance Efficiency Regulations (20 CCR §§ 1601–1608) were adopted by the CEC on October 11, 2006, and approved by the State's Office of Administrative Law on December 14, 2006. The Appliance Efficiency Regulations regulate the sale of appliances in California and include energy performance, energy design, water performance, and water design standards for both federally regulated appliances and non-federally regulated appliances. Twenty-three categories of appliances are included in the scope of these regulations. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the State and those designed and sold exclusively for use in recreational vehicles or other mobile equipment.

4.19.4.3 Regional Regulations

Fresno Multi-Jurisdictional 2023-2031 Housing Element. The Fresno Multi-Jurisdictional 2023-2031 Housing Element serves as the Housing Element for the County and all but one of the incorporated cities within the County, as required by California State law (Sections 65580–65589 of the Government Code). Refer to Section 4.14, Population and Housing, for more information regarding the Fresno Multi-Jurisdictional 2023-2031 Housing Element. The following goals and policies related

[19] California Public Utilities Commission (CPUC). n.d. *Zero Net Energy*. Website: https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/energy-efficiency/zero-net-energy (accessed August 2025).

[20] Achievement of this goal was determined to not yet be feasible in time for the 2019 Building Energy Efficiency Standards (effective 2020), but State regulators continue to take steps toward this goal.

to energy contained in the Fresno Multi-Jurisdictional 2023-2031 Housing Element are relevant to the proposed project:

- **Goal 1:** Facilitate and encourage the provision of a range of housing types to meet the diverse needs of residents.
    - **Policy 1.7:** Ensure the adequate provision of water, sewer, storm drainage, roads, public facilities, and other infrastructure necessary to serve new housing.
- **Goal 6:** Encourage energy efficiency in all new and existing housing.
    - **Policy 6.1:** Encourage the use of energy conserving techniques in the siting and design of new housing.
    - **Policy 6.2:** Actively implement and enforce all State energy conservation requirements for new residential construction.

Water Supplier Urban Water Management Plans. As previously described, the UWMP Act applies to municipal water suppliers that provide water service directly to more than 3,000 connections. As such, service districts within Fresno County providing water service to more than 3,000 connections are required to develop an Urban Water Management Plan (UWMP) for submittal to DWR within 30 days and review 60 days prior to public hearing for plan adoption and implementation. The preparation of the plan includes a guidebook, workshops, and programming for comprehensive strategies to conserve water. These suppliers will also be required to update their UWMPs every 5 years to demonstrate an appropriate level of reliability in supplying anticipated short-term and long-term water demands during normal, dry, and multiple dry years.

4.19.4.4 Local Regulations

Local General Plans. The Fresno COG Region contains Fresno County and 15 incorporated cities, each with an individual general plan prepared pursuant to California Government Code Section 65300. Each general plan contains goals and policies related to utilities and service systems within the particular jurisdiction. Although general plan element titles may vary, this information is typically found within the general plan conservation element, or equivalent.

Local Municipal Codes. Fresno County and cities in the Fresno COG Region may have established development impact fees for development projects within their jurisdictions for the purpose of ensuring adequate utility and service infrastructure, including water, wastewater, solid waste, electricity, and natural gas. Where applicable, future transportation and land use development projects facilitated by the proposed project would be subject to such fees.

Jurisdictions within Fresno County may also have adopted municipal code chapters governing utility connections and maintenance. These could be found throughout each jurisdiction's municipal code.

Local Utility Master Plans and Capital Improvement Programs. Jurisdictions typically have utility master plans or other planning documents that are updated on a regular basis in order to facilitate the maintenance of adequate levels of utility service through improvements and expansions, as

necessary. Individual jurisdictions and local service providers within Fresno County are likely to have facility master plans that outline provider priorities and planned capital improvement projects.

4.19.5 Thresholds of Significance

The following thresholds of significance are based on Appendix G of the *State CEQA Guidelines*. Based on these thresholds, implementation of the proposed project would have a significant adverse impact with respect to utilities and service systems impacts if it would:

Threshold 4.19.1: 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;

Threshold 4.19.2: Not have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years;

Threshold 4.19.3: Not result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;

Threshold 4.19.4: 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

Threshold 4.19.5: Fail to comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

4.19.6 Project Impacts

The following discussion describes the potential impacts related to utilities and service systems that could result from implementation of the proposed project.

Threshold 4.19.1: Would the project 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?

Significant and Unavoidable Impact. Implementation of future transportation improvement and land use development projects facilitated by the proposed project would result in increased demand for utility and service systems, including water supply, wastewater treatment, stormwater drainage, electric power, natural gas, and telecommunication systems. As discussed in Section 4.14, Population and Housing, urbanization and associated population growth in the Fresno COG Region would increase significantly by the proposed project horizon year of 2049 regardless of whether the 2026 RTP/SCS is implemented. However, future transportation improvement and land use development projects under the proposed project have the potential to increase service populations (e.g., residents or employees) for utility facilities. Scenario C (Enhanced Transit and Smart Growth)

emphasizes sustainable urban growth in existing urban centers and established areas, and higher-density growth with mixed-use development. These urban centers are served by existing utilities. Depending on the scale of each project, this infrastructure could require expansion and/or construction of new facilities where existing infrastructure is limited (especially in urban fringe or rural areas). The remainder of this section provides additional discussion on each utility type.

Water Supply. Implementation of the proposed project would increase demand on water supply facilities. While construction and operation of each future transportation improvement and land use development project implemented under the proposed project cannot be meaningfully quantified at this time, future projects would be subject to discretionary approval by the appropriate lead agency and would be required to comply with the requirements of CEQA. This includes conducting project-level review consistent with **Project-Specific Mitigation Measure (PMM) UTIL-1**, which requires that individual RTP/SCS projects ensure the provision of adequate water service and avoid/reduce significant environmental impacts associated with the construction or expansion of such facilities.

While total water consumption for each future project cannot be precisely quantified at this time, incremental regional development would require construction of new or expanded water conveyance and storage infrastructure, including pipelines, pump stations, and water storage tanks. Water agencies and municipal agencies routinely construct and maintain their distribution systems. Local jurisdictions require project applicants coordinate with the relevant water service providers to verify that existing or planned facilities can meet anticipated demand. Accordingly, any new infrastructure improvements necessitated by the proposed project would comply with CEQA, undergo project-level review consistent with **PMM UTIL-1,** and be designed in accordance with applicable municipal codes or local plans.

Wastewater (Sanitary Sewer) System. Implementation of the proposed project would result in increased demand for wastewater facilities. The potential increased demand on wastewater systems during construction and operation of future transportation improvement and land use development projects implemented under the proposed project cannot be meaningfully quantified because insufficient detail is known about each project at this time. Future projects would be subject to discretionary approval by the appropriate lead agency and would be required to comply with the requirements of CEQA. This would include conducting project-level review consistent with **PMM-UTIL-1**, which requires that individual RTP/SCS projects ensure the provision of adequate wastewater service and avoid/reduce significant environmental impacts associated with the construction or expansion of such facilities.

While wastewater demand for each future project cannot be precisely quantified at this time, incremental regional development would require construction of new or expanded wastewater facilities, including treatment plants, lift stations, sewer pipelines, and storage/equalization basins. Wastewater agencies and municipalities routinely construct and maintain their wastewater systems. Local jurisdictions require project applicants to coordinate with the relevant service providers to verify that existing or planned facilities can meet anticipated demand. Accordingly, any new infrastructure improvements necessitated by the proposed project would comply with CEQA, undergo project-level review consistent with **PMM UTIL-1**, and be designed in accordance with applicable municipal codes or local plans.

Stormwater. Implementation of the proposed project would result in increased demand for stormwater facilities. Future transportation improvement and land use development projects would increase impervious surface area and have the potential to increase stormwater runoff. Increased stormwater runoff, especially in urban and suburban areas, can result in greater quantities of contaminants flowing into receiving waters. Substantially increasing impervious surface area would require the construction of new stormwater drainage facilities and/or expansion of existing facilities.

As discussed in Section 4.10, Hydrology and Water Quality, construction of future transportation improvement and land use development projects facilitated by the proposed project would be required to comply with the requirements of the Construction General Permit, including the preparation and implementation of a SWPPP, as applicable (**PMM HYD-1**). The SWPPP would include BMPs to control the rate and amount of on-site surface runoff to ensure that stormwater runoff from each construction site does not result in on- or off-site flooding. In addition, the introduction of new impervious surfaces facilitated by the proposed project could increase the volume and rate of stormwater runoff discharged from each project. This could result in runoff that would exceed the capacity of existing or planned storm water drainage systems, or additional sources of polluted runoff. A hydrologic condition of concern (HCOC) occurs when post-development runoff conditions exceed pre-development runoff conditions, and discharge from a project site has a flow rate greater than 110 percent of the pre-development 2-year peak flow. The potential for additional sources of runoff would be addressed through **PMM HYD-2**, which addresses potential impacts related to increased runoff volumes in excess of system capacities by requiring project sponsors mitigate changes to the runoff volumes and maintain pre-project flow velocities, rates, and volumes.

While stormwater runoff for each future project cannot be precisely quantified at this time, incremental regional development would require construction of new or expanded stormwater facilities, including detention and retention basins, conveyance channels, storm drains, pump stations, and infiltration systems. Additionally, municipalities routinely construct and maintain their stormwater systems. Local jurisdictions require project applicants to coordinate with the relevant service providers to verify that existing or planned facilities can accommodate runoff and flow demands. Accordingly, any infrastructure improvements necessitated by the proposed project would comply with CEQA, undergo project-level review consistent with **PMM UTIL-1**, and be designed in accordance with applicable municipal codes or local plans.

Electricity and Natural Gas. As discussed in Section 4.6, Energy, implementation of the proposed project would increase the demand for energy and natural gas. However, potential energy and natural gas consumption during construction and operation of each future transportation improvement and land use development project under the proposed project cannot be meaningfully quantified at this time. Future projects would be subject to discretionary approval by the appropriate lead agency and would be required to comply with the requirements of CEQA, including conducting project-level review consistent with **PMM-UTIL-1**. This measure requires that individual RTP/SCS projects ensure the provision of adequate electricity and natural gas facilities to avoid or reduce significant environmental impacts associated with the construction or expansion of such facilities.

While energy and natural gas demand for each future project cannot be precisely quantified, incremental regional development may necessitate new or expanded electrical or natural gas

facilities, including substations, distribution lines, transmission lines, gas mains, and associated equipment. PG&E and SCE routinely construct and maintain electrical and natural gas infrastructure within their service areas. Local jurisdictions would require project applicants to coordinate with the relevant service providers to verify that existing or planned facilities accommodate anticipated electricity and natural gas demands. Accordingly, any new infrastructure improvements necessitated by the proposed project would comply with CEQA, undergo project-level review consistent with **PMM UTIL-1**, and be designed in accordance with applicable municipal codes or local plans.

Additionally, similar to other utilities, land use development typically results in the need for the construction or relocation of some power lines or service connections, such as the undergrounding of power lines. Future projects subject to discretionary approval by the appropriate lead agency are required to comply with the requirements of CEQA and would typically undergo an environmental review to determine impacts to electricity and natural gas services and facilities within the respective local jurisdiction(s). However, impacts from future construction or relocation work would normally be anticipated to be less than significant as they would likely be constructed and/or installed in the existing right-of-way. These and similar public easements have been previously disturbed; in these instances, substantial adverse impacts would not be expected to occur. However, given the size and geographic complexity of the region, the potential for large-scale improvement projects, and the extent of sensitive resources in the region, it is possible that the construction of new or expanded electrical facilities could result significant impacts.

Telecommunications. Implementation of the proposed project would increase demand for telecommunication systems. However, the construction of new or expanded telecommunications facilities would likely be undertaken by private telecommunication service providers in accordance with applicable federal, State, and local regulations. Total telecommunication demand for each future project cannot be precisely quantified at this time. Incremental regional development would require the construction of new or expanded telecommunications facilities, including central offices, switching stations, fiber-optic lines, distribution lines, and related equipment.

Private service providers routinely construct and maintain telecommunication infrastructure within their service areas. Local jurisdictions would require project applicants to coordinate with the relevant service providers to verify that existing or planned facilities can accommodate anticipated demand. Accordingly, any new infrastructure improvements necessitated by the proposed project would comply with CEQA, undergo project-level review consistent with **PMM UTIL-1**, and be designed in accordance with applicable municipal codes, ordinances, or local plans.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. With adherence to **PMM UTIL-1** and compliance with all applicable federal, State, and local regulations, potential impacts associated with the construction or expansion of water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the

applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to the California Department of Transportation (Caltrans), local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with the construction or expansion of water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities would be reduced to the extent feasible but are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.19.2: Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

Significant and Unavoidable Impact. As discussed in Section 4.19.3, Existing Environmental Setting, and Section 4.10, Hydrology and Water Quality, the water sources within the Fresno COG Region include the Kings River, the San Joaquin River, groundwater basins underlying the San Joaquin Valley, rainfall/snowmelt, and federal and State water conveyance systems such as the CVP and State Water Project.[21] Water supplied to unincorporated portions of the Fresno COG Region is sourced from both surface water and groundwater via 16 County service areas, 5 County waterworks districts, and numerous private water districts, irrigation districts, and individual sources.[22] In addition, incorporated cities within the Fresno COG Region are served by municipal or private water districts, such as the City of Fresno Department of Public Utilities Water Division. Surface water supplied to Fresno COG Region's residents is sourced from the Kings River, the San Joaquin River (via the Friant-Kern Canal), and the CVP Delta Export Division. Groundwater supplied to Fresno COG Region residents is sourced from the San Joaquin Valley Groundwater Basin, including the Kings, Delta-Mendota, Westside, and Pleasant Valley subbasins. The DWR has designated the Kings, Delta-Mendota, and Westside subbasins as high-priority overdraft areas,[23] meaning the average annual amount of groundwater extraction exceeds the long-term average annual supply of water to the Basin.[24] The SGMA requires governments and water agencies of high- and medium-priority basins to halt overdrafts of groundwater basins. SGMA also requires the formation of local GSAs that are required to adopt GSPs to manage the sustainability of the groundwater basins. GSPs have been prepared for each subbasin within the Fresno COG Region, including the three high-priority overdraft areas as well as the Pleasant Valley Subbasin.

Pursuant to the UWMP Act, water agencies in the Fresno COG Region are required to produce UWMPs and other long-range planning studies to provide a system adequate to supply water

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21 County of Fresno. 2000. *Fresno County General Plan Update 2000.* 4.8 Water Resources. Pages 4.8-4—4.8-7. Website: https://www2.co.fresno.ca.us/4510/4360/general_plan/gp_final_eir/eir/water4-8.pdf (accessed February 13, 2026)

22 Ibid. Page 7-5.

23 County of Fresno. 2024. *General Plan Background Report.* February. Page 7-6. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/planning-and-land-use/general-plan/background-report-2024.pdf (accessed January 8, 2026).

24 California Department of Water Resources (DWR). n.d. Critically Overdrafted Basins. Website: https://water.ca.gov/programs/groundwater-management/bulletin-118/critically-overdrafted-basins (accessed January 8, 2026).

demand. These plans show projected water supplies and demand for average years and multiple dry years and are updated on a 5-year cycle. Furthermore, UWMPs include evaluations of projected water demand and supplies accounting for urban growth, higher-density development, and potential recycled water expansion. As part of statewide efforts to reduce water usage, the UWMP Act was amended to require urban water suppliers to include narrative descriptions of their water demand management measures in the UWMPs. The descriptions include discussions on progress over the last 5 years and identify additional measures and water-saving practices to help suppliers achieve water use reduction targets.

As discussed in Section 4.14, Population and Housing, urbanization and associated population growth in the Fresno COG Region would increase significantly by the proposed project horizon year of 2049 regardless of whether the 2026 RTP/SCS is implemented. However, future transportation improvement and land use development projects under the proposed project have the potential to increase the demand for both potable and reclaimed (recycled) water. Scenario C (Enhanced Transit and Smart Growth) emphasizes sustainable urban growth focused on existing urban centers and established areas, and higher-density growth with mixed-use development. These urban centers are generally served by municipal water providers, including city water departments, water districts, and community service districts. Higher population densities in these areas would increase demand for water service. Although Scenario C prioritizes infill and redevelopment within established urban areas, it does not preclude future development on the urban fringe or in rural areas. Such development could result in additional demand for both potable and recycled water. In rural and agricultural areas, water supply is primarily provided by irrigation districts and private wells.

Although the exact amount of water consumption for construction and operation of each future transportation improvement and land use development project under the proposed project cannot be quantified at this time, future projects would be subject to discretionary approval by the appropriate lead agency and would comply with CEQA. This would include conducting a project-level analysis to determine whether sufficient water supplies are available to serve the project and reasonably foreseeable future development under normal, dry, and multiple dry-year conditions. Given the uncertainty of water supplies and projected population growth, overall regional water demand could exceed existing and reasonably foreseeable water supplies. With adherence to the *NPDES Permit and Waste Discharge Requirements General Permit for Discharges from Municipal Separate Storm Sewer Systems, Order No. R5-2016-0040, NPDES No. CAS0085324* (Region-wide MS4 Permit) and water supply assessment requirements (e.g., SB 610 and SB 221), and with implementation of design features and BMPs to ensure adequate infiltration and groundwater recharge pursuant to **PMM HYD-2**, project impacts associated with substantially decreasing groundwater supplies or interfering with groundwater recharge would be reduced to the extent feasible. Furthermore, adherence to **PMM UTIL-2** would require coordination with water service providers to ensure sufficient water supply for future projects. The measure would further require incorporation of water conservation and efficiency measures, including drought-tolerant landscaping, water-efficient irrigation systems, and the use of reclaimed water for non-potable purposes where available, thereby reducing potential impacts to the region's water supply.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore,

this analysis represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. With adherence to **PMM HYD-2** and **PMM UTIL-1**, impacts to water supplies would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with sufficient water supplies are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.19.3: Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Significant and Unavoidable Impact. Implementation of the proposed project would result in increased demand for wastewater facilities. The potential increase in demand during construction and operation of each future project facilitated by the proposed project cannot be meaningfully quantified at this time. However, future projects would be subject to discretionary approval by the appropriate lead agency and would be required to comply with CEQA. This would include a project-level review consistent with **PMM UTIL-1**, which requires that individual RTP/SCS projects ensure the provision of adequate wastewater service. This project-level review would include whether a future project would result in insufficient capacity for existing wastewater facilities due to projected wastewater demands. The review would also involve the use of CalEEMod to prepare wastewater capacity and demand analyses, ensuring that potential deficiencies are identified and addressed. Furthermore, local agencies support long-term resource planning to ensure adequate levels of wastewater services meet existing and future demands. In addition to federal and State regulations governing these sewer planning efforts, cities, counties, water districts, or other utility districts may provide additional requirements to ensure adequate levels of service. Many jurisdictions include these additional requirements in the form of policies or goals in the relevant management plans that would include policies to maintain adequate levels of service, goals, or planned improvements.

Urbanization and associated population growth in the Fresno COG Region would increase significantly by the proposed project horizon year of 2049, regardless of whether the 2026 RTP/SCS is implemented. Implementation of future transportation improvement and land use development projects under the proposed project would further increase service populations (e.g., residents or employees) for wastewater facilities. Scenario C (Enhanced Transit and Smart Growth) emphasizes sustainable urban growth focused on existing urban centers and established areas, and higher-density, mixed-use development. Urban centers are generally served by existing wastewater infrastructure. Depending on the scale and location of each future project, future demand may exceed the capacity of wastewater treatment facilities.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore,

this analysis represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. With adherence to **PMM UTIL-1** and compliance with all applicable federal, State, and local regulations, including local sewer management plans, potential impacts on wastewater treatment capacity would be minimized to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with wastewater treatment capacity are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.19.4: Would the project 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?

Significant and Unavoidable Impact.

Construction. Construction of future transportation improvement and land use development projects would generate a substantial amount of solid waste through grading and excavation activities, as well as debris resulting from removal of structures. Construction debris would either be recycled or transported to the nearest landfill site and disposed of appropriately. As stated in Section 4.14.3, Existing Environmental Setting, there are currently 33 active solid waste processing facilities in the Fresno COG Region.[25] These would be available to manage construction and demolition waste. Potential solid waste generation during construction of each future transportation improvement and land use development project implemented under the proposed project cannot be meaningfully quantified at this time. However, future projects would be subject to discretionary approval by the lead agency and must comply with CEQA. This would include environmental review to determine whether construction would exceed the capacity of local infrastructure or impair the achievement of solid waste reduction goals. Such review may involve estimating construction waste generation using modeling tools, such as CalEEMod, or using CalRecycle solid waste generation rates to inform project-specific waste management and diversion measures.

Ultimately, construction of each future transportation improvement and land use development project implemented under the proposed project would be temporary, and associated solid waste generation use is assumed to be relatively small in comparison to the Fresno COG Region's overall solid waste generation. Each individual project would be required to adhere to applicable regulations governing solid waste during construction. These include the 2025 CALGreen standards, which establish waste reduction, recycling, and diversion requirements, including implementation of a Construction Waste Management Plan and a minimum 65 percent diversion

[25] California Department of Resources Recycling and Recovery (CalRecycle). n.d. Solid Waste Information System Facility/Site Search. Website: https://www2.calrecycle.ca.gov/SolidWaste/Site/Search (accessed January 8, 2025).

standard. Projects must also comply with the California Integrated Waste Management Act (AB 939), which sets local recycling and waste diversion goals, and Mandatory Commercial Recycling (AB 341), which applies to commercial construction and demolition waste activities. Applicable local ordinances may establish additional recycling, diversion, or disposal requirements. Guidance from the CalRecycle *Construction and Demolition Waste Management Guide* provides BMPs for tracking, reporting, and diverting construction waste. Finally, if projects involve asbestos, lead, or other regulated materials, handling, removal, and disposal must comply with California Department of Toxic Substances Control (DTSC) and California Occupational Safety and Health Administration (Cal/OSHA) regulations. Beyond these requirements, **PMM UTIL-3** would require projects to, during project design, evaluate the maintenance, salvage, or reuse of existing building structures and materials associated with proposed building renovations and redevelopment, and, during construction, divert construction waste from landfills wherever feasible by preparing and implementing a Construction Waste Management Plan that identifies materials to be diverted from disposal; prioritizes the use of salvaged, refurbished, or reused materials where feasible; and establishes diversion targets to minimize the generation of solid waste in excess of State or local standards, to the extent feasible given local infrastructure capacity.

Operation. Similar to the construction analysis above, potential solid waste generation during operation of each future transportation improvement and land use development project facilitated by the proposed project cannot be meaningfully quantified at this time. However, future projects would be subject to discretionary approval by the lead agency and must comply with CEQA. This would include an environmental review to determine whether operation would exceed the capacity of local infrastructure or impair the achievement of solid waste reduction goals. Such review may involve estimating operational waste generation using modeling tools, such as CalEEMod, or using CalRecycle solid waste generation rates, to inform project-specific waste management and diversion measures.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. Compliance with all applicable federal, State, and local solid waste regulations, along with adherence to **PMM UTIL-3**, which requires implementation of solid waste reduction measures, would minimize impacts related to solid waste generation and conflicts with solid waste regulations to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with the generation of solid waste in excess of State or local standards, exceeding the capacity of local infrastructure, or otherwise impairing the attainment of solid waste reduction goals are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.19.5: Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Significant and Unavoidable Impact. Future land use and transportation projects facilitated by the proposed project would be required to comply with federal, State, and local statutes and regulations related to solid waste, including relevant County and city general plans. Local jurisdictions have established goals and policies for recycling and waste diversion to comply with the California Integrated Waste Management Act (AB 939), the California Solid Waste Reuse and Recycling Act, and the Solid Waste Diversion Rule (AB 341). Jurisdictions are required to submit annual reports to CalRecycle documenting the implementation of their waste diversion programs and progress toward meeting per capita disposal targets. CalRecycle reviews these reports and may refer jurisdictions for a compliance evaluation; however, fewer than 1 percent of jurisdictions are typically referred. If a jurisdiction fails to demonstrate "good faith" in implementing its diversion program or in meeting disposal targets, CalRecycle may issue a compliance order, and continued noncompliance could result in penalties.

Additional laws aimed at reducing solid waste generation include the Mandatory Commercial Organics Recycling Law (AB 1826), which requires local jurisdictions to implement programs for recycling organic waste and to track program performance. Section 5.408 of CALGreen requires all new construction and demolition projects to prepare a Construction Waste Management Plan that salvages or recycles at least 65 percent of nonhazardous construction and demolition waste.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, the analysis presented above represents a general characterization of reasonably foreseeable impacts that could occur with implementation of the proposed project. Compliance with all applicable federal, State, and local solid waste regulations, along with adherence to **PMM UTIL-3**, which requires implementation of solid waste reduction measures, would minimize impacts related to solid waste generation and conflicts with solid waste regulations to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with conflicts to federal, State, and local management and reduction statutes and regulations related to solid waste are considered **significant and unavoidable** for the purposes of this analysis.

4.19.7 Level of Significance Prior to Mitigation

Prior to mitigation, implementation of the proposed project would have potentially significant impacts related to utilities and service systems.

4.19.8 Mitigation Measures

4.19.8.1 Fresno COG Measures

There are no applicable mitigation measures to be undertaken by the Fresno COG pertaining to utilities and service systems. However, as appropriate and feasible, the Fresno COG will encourage the implementation of the project-specific mitigation strategies listed below.

4.19.8.2 Project-Specific Measures

The following mitigation measures would be applied to future transportation improvement and land use development projects to reduce potential impacts related to utilities and service systems to the extent feasible:

PMM HYD-1 *See Section 4.10, Hydrology and Water Quality.*

PMM HYD-2 *See Section 4.10, Hydrology and Water Quality.*

PMM UTIL-1 Implementing agencies for a project shall consider mitigation measures to ensure adequate capacity and availability of utility and service systems, as applicable and feasible. Such utilities and services include, but are not limited to, water supply, wastewater treatment, stormwater drainage, electric power, natural gas, and telecommunications systems, as applicable and feasible:

During the environmental review for individual RTP/SCS projects, implementing agencies shall ensure the provision of adequate utilities, including water supply, wastewater treatment, stormwater drainage, electric power, natural gas, and telecommunication systems, to avoid or reduce significant environmental impacts associated with the construction or expansion of such facilities. Projects requiring wastewater service, solid waste collection, or potable water service shall coordinate with the relevant local agencies to confirm that existing public services and utilities can accommodate the anticipated demand. If the current infrastructure serving an individual RTP/SCS project is inadequate, necessary infrastructure improvements shall be identified in the CEQA documentation for that individual project. Environmental impacts associated with the construction or expansion of utility infrastructure shall be avoided or minimized by adopting conditions of approval that must be followed by those responsible for construction or expansion activities.

PMM-UTIL-2 Implementing agencies for a project shall consider mitigation measures to ensure sufficient water supplies, as applicable and feasible:

- During design of individual RTP/SCS projects, coordination shall be conducted with relevant water service providers to ensure existing water supplies can accommodate the increase in demand. If any water service provider servicing the project site has inadequate water supply, improvements and/or mitigation measures shall be identified in each project's CEQA documentation.

- Projects shall reduce the use of potable water for landscape irrigation. Project design shall include drought-tolerant plantings for landscaping, water-efficient irrigation systems, and rainwater capture infrastructure, where feasible.
- Project design shall specify drip or other water-conserving or weather-based irrigation systems for landscaping.
- Project design shall incorporate elements that reduce the use of potable water, including water-conserving fixtures such as low-flow toilets, water-efficient clothes washers, reduced-flow faucets, and EnergyStar-rated appliances.
- Project design shall incorporate the use of reclaimed water for non-potable uses, such as landscape irrigation, ornamental water features, concrete mixing, and dust control, when located in an area with existing reclaimed water conveyance infrastructure. For projects areas with planned reclaimed water service, design shall specify dual plumbing systems in anticipation of future reclaimed water use.

PMM UTIL-3 The implementing agency for a project shall consider mitigation measures to reduce the generation of solid waste, as applicable and feasible:

- Maintenance or reuse of existing building structures and materials associated with proposed building renovations and redevelopment shall be incorporated into the project to the extent feasible.
- Construction waste shall be diverted from landfills, where feasible, through the following measures:
    - A construction waste management plan shall be implemented that identifies materials to be diverted from disposal.
    - Salvaged, refurbished, or reused materials shall be used, where practicable, to divert such items from landfills.
    - Diversion targets for construction waste shall be established and met.

4.19.9 Level of Significance After Mitigation

Implementation of **PMMs HYD-1, HYD-2,** and **UTIL-1** through **UTIL-3** would assist the Fresno COG and lead agencies of future transportation improvement and land use development projects in reducing impacts related to utilities and service systems to the extent feasible. However, the analysis presented in this section is general in nature, and given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future transportation improvement and land use development projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and

other responsible agencies with jurisdiction over each project site. As appropriate and feasible, the Fresno COG will encourage implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified. Nevertheless, impacts related to utilities and service systems are considered **significant and unavoidable** for the purposes of this analysis.

4.19.10 Cumulative Impacts

As defined in Section 15130 of the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for utilities and service systems. The cumulative impact area for public services is the Fresno COG Region, which contains the service provider boundaries applicable to each future transportation improvement and land use development project.

The need for the construction of new or expansion of existing utility services and facilities is measured by service area population, or the number of residents and workers within the service area for each individual public service provider, as well as the type and density of development. As additional development occurs within the Fresno COG Region, there may be an overall increase in the demand for utilities and service systems, including water supply and conveyance facilities, wastewater collection and treatment facilities, stormwater management facilities, electric power facilities, natural gas facilities, and telecommunications facilities. Implementation of the proposed project would incrementally increase demand for these systems, particularly in higher-density urban centers and areas of new development. This would likely require construction of new infrastructure or expansion of existing facilities to meet projected demand. Increases in demand are routinely assessed by these agencies as part of the annual monitoring and budgeting process. As such, public service providers in the Fresno COG Region acknowledge that future growth in the region could potentially impact these services and have planned to adapt accordingly.

Future transportation improvement and land use development projects facilitated by the proposed project would require additional CEQA documentation to determine their impacts to utility service providers. Similarly, cumulative projects subject to discretionary review would be required to conduct an analysis of potential impacts to public services under CEQA, including a quantification of potential demand increases and resulting capacity analysis, including evaluation of water, wastewater, stormwater, energy, and telecommunications systems. Based on the extent of identified impacts, cumulative projects would implement mitigation measures (as necessary) to reduce significant impacts, such as adherence to **PMM UTIL-1** through **PMM UTIL-3**, which require incorporation of water efficiency, wastewater management, stormwater BMPs, and solid waste reduction measures.

As stated in Section 4.19.6, impacts of the proposed project on utilities and service systems are considered significant and unavoidable, given the programmatic nature of the proposed project, the scale of the Fresno COG Region, and the inability of the Fresno COG to enforce project-specific mitigation or make land use approvals. Because the proposed project would result in significant adverse environmental impacts, its impacts would represent an incremental contribution to the environmental impacts in the cumulative impact study area, ultimately leading to a **cumulatively considerable impact** related to utilities and service systems.

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4.20 WILDFIRE

This section of the Draft Program Environmental Impact Report (PEIR) describes the existing wildfire environment within the Fresno Council of Governments (COG) Region and provides an evaluation of potential impacts associated with implementation of the 2026 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (proposed project) related to wildfire. Specifically, this section assesses existing fire hazards and conditions within the Fresno COG Region, the potential for the proposed project to expose people or structures to wildfire risk, the extent to which project activities may exacerbate fire hazards, and any constraints related to emergency response, evacuation, or fire protection services.

4.20.1 Scoping Process

Potential impacts related to wildfire were not identified during the public scoping meeting held for the proposed project on May 28, 2025.

The Fresno COG received no comment letters in response to the Notice of Preparation (NOP) issued for the proposed project between May 13 and June 12, 2025, concerning the proposed project's potential impacts related to wildfire.

4.20.2 Methodology

As described further below in Section 4.20.3, Existing Environmental Setting, the Fresno COG Region contains areas with varying susceptibility to wildfires. The analysis presented in this section is based in part on information obtained from the County's General Plan, General Plan PEIR, and Hazard Mitigation Plan (HMP), as well as other background literature research. The information obtained from these sources was utilized to analyze the potential for impacts under future transportation improvement and land use development projects facilitated by the proposed project.

Subsequent project-specific California Environmental Quality Act (CEQA) documents may be required to further analyze the conditions related to wildfire risks at each individual project site, further analyze the transportation improvements or new development facilitated by the proposed project to determine the magnitude of potential impacts, and identify appropriate project-specific mitigation measures.

4.20.2.1 Key Concepts

Fire Environment. Fire environments are dynamic systems and include many types of environmental factors and characteristics. Fires can occur in any environment where conditions are conducive to ignition and fire movement. Areas of naturally vegetated open space typically comprise conditions that may be favorable to wildfire spread. The three major components of fire environment are topography, climate, and vegetation (fuels). The state of each of these components and their interactions with each other determines the potential characteristics and behavior of a fire at any given moment.

It is important to note that wildland fire may transition to urban fire if structures are receptive to ignition. Structure ignition depends on a variety of factors and can be prevented through a layered system of protective features, including fire-resistive landscapes adjacent to structure(s), application

of known ignition-resistive materials and methods, and suitable infrastructure for firefighting purposes. Understanding the existing wildland vegetation and urban fuel conditions in the Fresno COG Region is necessary to understand the potential for fire occurrences.

The California Department of Forestry and Fire Protection (CAL FIRE) publishes maps that delineate the financial responsibility of preventing and suppressing wildfires by agency and predict the threat of fire for each county within the State.

Local Responsibility Areas (LRAs) are incorporated cities, urban regions, agriculture lands, and portions of the desert where the local government is responsible for wildfire protection.[1] Alternatively, State Responsibility Areas (SRAs) are areas where CAL FIRE is the primary emergency response agency responsible for fire suppression and prevention.[2] Lastly, in a Federal Responsibility Area (FRA), the responsibility of preventing and suppressing wildfires is primarily the responsibility of a federal agency.[3]

Topography. Topography influences fire risk by affecting fire spread rates. Typically, steep terrain results in faster fire spread upslope and a slower fire spread downslope in the absence of wind. Flat terrain tends to have little effect on fire spread, resulting in fires that are driven by wind.

Climate. Climate has a large influence on fire risk. Warmer, drier temperatures can increase wildfire danger and intensity by drying out and preheating vegetation, thereby making possible the burning of fuels that otherwise might not burn under cooler, moister conditions.

Fuels. Variations in vegetative cover type and species composition have a direct effect on fire behavior. Some plant communities and their associated plant species have increased flammability based on plant physiology (resin content), biological function (flowering, retention of dead plant material), physical structure (bark thickness, leaf size, branching patterns), and overall fuel loading.

Fire History. Fire history is an important component in analyzing wildfire susceptibility. Fire history data provide valuable information regarding fire spread, fire frequency, most vulnerable areas, and significant ignition sources, among other information. This understanding of why fires occur in an area and how they typically spread can then be used for pre-planning and designing defensible communities.

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1 California Department of Forestry and Fire Protection (CAL FIRE). 2019. Frequently Asked Questions About: 2020 Fire Hazard Severity Zones. November. Website: https://bof.fire.ca.gov/media/ttpi3n3m/full-14-b-vhfhsz-frequently-asked-questions.pdf (accessed June 24, 2025).

2 California Board of Forestry and Fire Protection. *State Responsibility Area Five-Year Review.* Website: https://calfire-umb05.azurewebsites.net/ (accessed June 24, 2025).

3 California Department of Forestry and Fire Protection (CAL FIRE). 2025. Fire Hazard Severity Zones. Website: https://osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones (accessed January 8, 2026).

4.20.3 Existing Environmental Setting

4.20.3.1 Fire Environment

As shown on Figure 4.20-1, the central San Joaquin Valley portion of the Fresno COG Region is generally located within an LRA, while the eastern and western portions of the valley are located within an SRA. Further, as described in Section 4.1, Aesthetics, the eastern portion of the Fresno COG Region contains federally owned and operated parkland, including the Sierra National Forest, the Sequoia National Forest, Sequoia National Park, and Kings Canyon National Park. As such, portions of eastern Fresno County are considered FRAs. In addition, lands designated as FRAs are also present near the Fresno COG Region's western border within the coastal mountains west of the Fresno COG Region.

Figure 4.20-1 also shows wildfire hazard severity zones as mapped by CAL FIRE. According to this mapping, the Fresno COG Region contains land categorized as Very High Fire Hazard Severity Zone (VHFHSZ), High Fire Hazard Severity Zone (HFHSZ), and Moderate Fire Hazard Severity Zone (MFHSZ). The portion of the Fresno COG Region located east of Interstate (I-)5 and west of the Sierra Nevada foothills is generally not considered to be within any fire hazard severity zone. VHFHSZs within the Fresno COG Region are generally located within areas of higher elevations in the Sierra Nevada mountains and the coastal mountains west of the Fresno COG Region. It should be noted that FRAs do not receive fire hazard severity zone designations.

In the Fresno COG Region, wildfire potential varies substantially due to difference in land cover, development patterns, and natural conditions across the region. Wildfire risk is generally higher in the eastern portion of the Fresno COG Region, where the Sierra Nevada foothills and mountain areas contain extensive vegetation, steeper terrain, and limited access for firefighting resources.[4] In contrast, the western and central portions of the Fresno COG Region are characterized primarily by agricultural lands and urbanized areas, where wildfire potential is comparatively lower due to reduced fuel continuity and the presence of irrigated landscapes and fire protection infrastructure. Fire hazard conditions within the Fresno COG Region are influenced by regional climatic patterns, vegetation types, and historical land management practices.

4.20.3.2 Topography

The Fresno COG Region encompasses a wide range of topographic conditions, extending from the relatively flat San Joaquin Valley floor in the western and central portions of the region to the foothills and mountainous terrain of the Sierra Nevada along the eastern edge of the Fresno COG Region. Elevations range from approximately 59 feet above mean sea level in the valley floor to approximately 14,233 feet in the eastern mountain areas.[5] Steeper slopes and complex terrain in the eastern portion of the Fresno COG Region can contribute to increased wildfire spread rates, flame lengths, and spotting

[4] Fresno County Office of Emergency Services. 2023. *Fresno County Multi-Jurisdictional Hazard Mitigation Plan.* March. Pages 4-146–4-150.

[5] County of Fresno. 2023. *General Plan Review and Zoning Ordinance Update Program Environmental Impact Report Public Review Draft.* April. Page 3-2. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/environmental-impact-reports/1_draft-program-environmen.pdf (accessed January 8, 2026).

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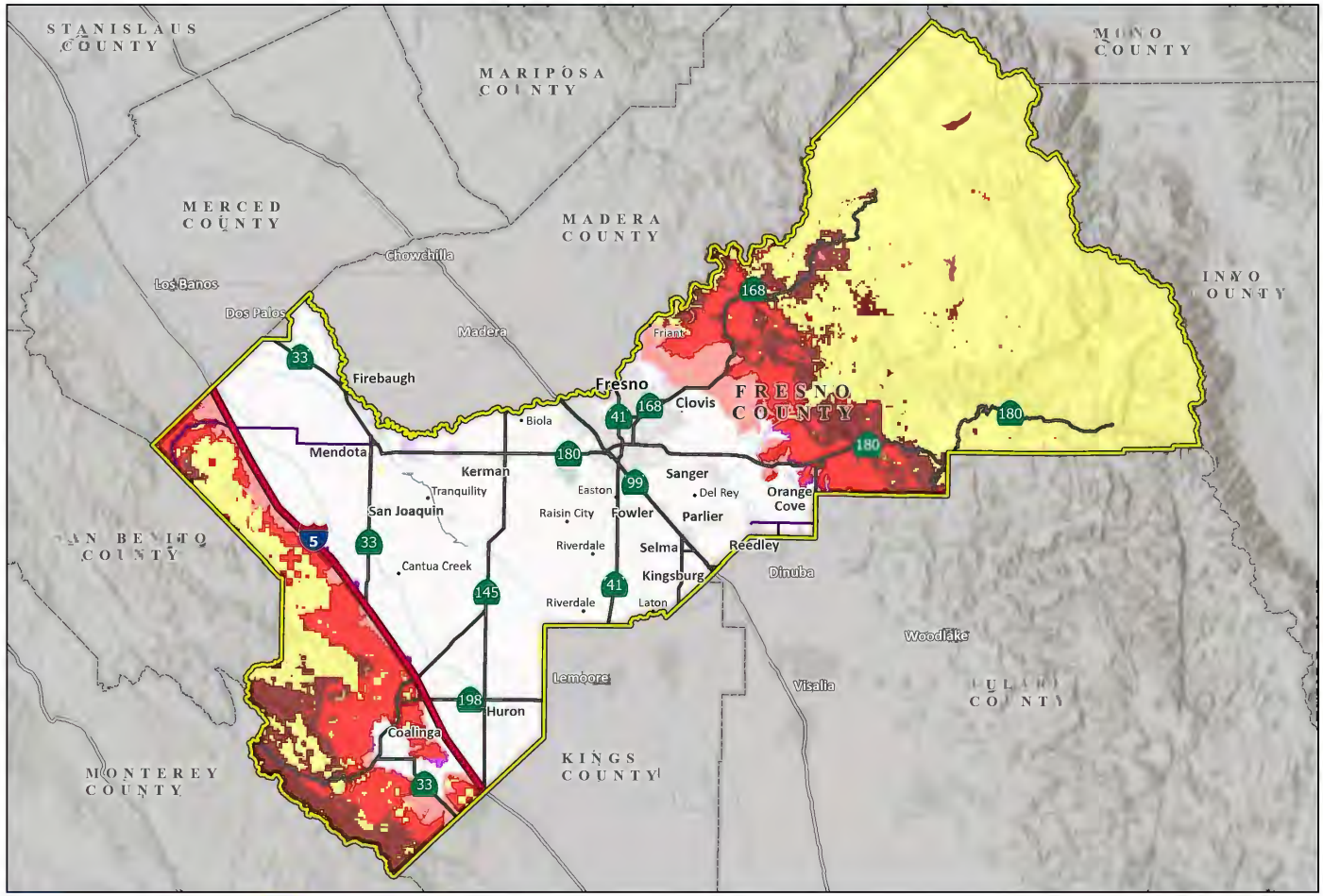


FIGURE 4.20-1

Regional Transportation Plan/Sustainable Communities Strategy
Fresno COG Region Fire Hazard Severity Zones

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potential, particularly during wind-driven fire events. Conversely, the predominantly flat terrain in the valley floor generally results in wildfire behavior that is more strongly influenced by wind and fuel characteristics rather than slope.[6]

4.20.3.3 Climate

The Fresno COG Region experiences a Mediterranean climate characterized by hot, dry summers and mild, wet winters.[7] The majority of annual precipitation occurs between November and April, while summer months are typically dry with prolonged periods of low relative humidity.[8] On average, temperatures are cooler in the eastern portion of the Fresno COG Region due to the higher elevations of the Sierra Nevada mountains. Additionally, precipitation is more frequent in this portion of the Fresno COG Region, with about 35 to 40 days of precipitation annually. The mountain peaks representing the highest elevations of the region also experience precipitation in the form of snowfall and can maintain year-round snow cover.

Seasonal conditions contribute to the curing and drying of vegetation during the late spring and summer months, increasing susceptibility to wildfire ignition and spread. The "fire season" is generally considered to occur during the months of June through October due to low rainfall and humidity coupled with high temperatures.[9] Periodic drought conditions, elevated temperatures, and strong regional wind events further exacerbate wildfire risk, particularly in wildland and wildland-urban interface (WUI) areas. Climate trends observed throughout California, including increasing temperatures and more frequent extreme heat events, have the potential to lengthen the wildfire season and increase fire intensity.[10]

4.20.3.4 Fuels (Vegetation)

Vegetation within the Fresno COG Region varies by elevation, climate, and land use. The western and central portions of the region are dominated by agricultural lands and urban development, which generally limit fuel continuity. In general, vegetation cover within these portions of the Fresno COG Region outside of the Sierra Nevada region is limited to grass, which is considered a light fuel that burns rapidly with a short period of intense maximum heat output.[11] Grass has been identified as the most common wildfire fuel in the Fresno COG Region by CAL FIRE.[12]

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6 Fresno County Office of Emergency Services. 2023. *Fresno County Multi-Jurisdictional Hazard Mitigation Plan.* March. Pages 4-146–4-150.

7 Ibid. Page 3-2.

8 Ibid. Page 4.18-2.

9 County of Fresno. 2024. *General Plan Background Report.* February. Page 8-44. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/planning-and-land-use/general-plan/background-report-2024.pdf (accessed January 8, 2026).

10 Fresno Council of Governments (COG). 2025. *Fresno County Climate Adaptation and Resiliency Plan*. Page 10-16.

11 County of Fresno. 2023. *General Plan Review and Zoning Ordinance Update Program Environmental Impact Report Public Review Draft.* April. Page 4.18-2. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/environmental-impact-reports/1_draft-program-environmen.pdf (accessed January 8, 2026).

12 County of Fresno. 2024. *General Plan Background Report.* February. Page 8-49. Website: https://www.fresnocountyca.gov/files/sharedassets/county/v/1/public-works-and-planning/development-services/planning-and-land-use/general-plan/background-report-2024.pdf (accessed January 8, 2026).

In contrast, the eastern portion of the Fresno COG Region, which contains foothill and Sierra Nevada mountain areas, contains vegetation classified as conifer forest, hardwood forest, herbaceous, shrub, and conifer woodland, which can support higher fire intensities and rates of spread under favorable conditions.[13] Additionally, the foothill and coastal mountain areas west of the Fresno COG Region generally contain vegetation classified as herbaceous, shrub, and hardwood woodland. Seasonal grasses and brush species common in foothill areas can act as flashy fuels that readily ignite and carry fire, particularly during dry and windy conditions. Forested areas at higher elevations may contain heavier fuel loads that contribute to more intense and longer-duration fire events. Fuel accumulation in some areas has been influenced by historical fire suppression practices.[14]

4.20.3.5 Fire History

Fire history for the Fresno COG Region was determined by referencing the CAL FIRE Fire and Resources Assessment Program (FRAP) database.[15] The FRAP summarizes fire perimeter data that date to the early 1900s but is not comprehensive due to the fact that it only includes fires over 10 acres and has incomplete perimeter data, especially for the first half of the 20th century. However, the FRAP serves as a useful reference as it provides a summary of recorded fires, can be used to show whether large fires have occurred in the Fresno COG Region, and indicates whether large fires in the Fresno COG Region may be possible in the future.

Recent (within the last 10 years) significant[16] fires in the Fresno COG Region identified by CAL FIRE include the following:

- **2017 Garza Fire:** Burned a total of 48,886 acres near Black Mountain in Fresno, Kings, and Monterey counties from July 9, 2017, through July 25, 2017.
- **2020 Creek Fire:** Burned a total of 379,842 acres in the Sierra Nevada mountains in both Fresno and Madera counties from September 4, 2020, through December 24, 2020.
- **2020 Mineral Fire:** Burned a total of 29,667 acres near Bald Mountain in western Fresno County from July 13, 2020, through July 26, 2020.
- **2024 Boone Fire:** Burned a total of 17,615 acres near Bald Mountain in western Fresno County from September 3, 2024, through September 21, 2024.

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13 California Department of Forestry and Fire Protection (CAL FIRE). 2022. Historical California Wildfires, California Vegetation Layer. Website: https://experience.arcgis.com/experience/b72eede32897423683a94c61bf9d3027 (accessed January 8, 2026).

14 Fresno County Office of Emergency Services. 2023. *Fresno County Multi-Jurisdictional Hazard Mitigation Plan.* March. Pages 4-146–4-150.

15 California Department of Forestry and Fire Protection (CAL FIRE). 2025. Historical California Wildfires, California Historical Fire Perimeters Layer. Website: https://experience.arcgis.com/experience/b72eede32897423683a94c61bf9d3027 (accessed January 8, 2025).

16 As of 2008, the FRAP database considers a fire to be "significant" if it meets one of the following criteria: burns ≥10 acres in timber, burns ≥50 acres in brush, burns ≥300 acres in grass, damages or destroys three or more structures, causes $300,000 worth of damage, or results in loss of life.

- **2024 Basin Fire:** Burned a total of 14,020 acres in the Sierra Nevada mountains in eastern Fresno County from June 26, 2024, through July 19, 2024.

- **2024 Happy Fire:** Burned a total of 12,543 acres in the Sierra Nevada mountains in eastern Fresno County from July 16, 2024, through November 5, 2024.

- **2024 Fresno June Lightning Complex Fire:** Burned a total of 10,641 acres in the Sierra Nevada foothills in eastern Fresno County between June 24, 2024, and July 4, 2024.

Figure 4.20-2 shows the fire perimeters from each fire discussed above. Notably, virtually no wildfires have been recorded in the central San Joaquin Valley portion of the Fresno COG Region.

4.20.4 Regulatory Setting

Federal, State, regional, and local regulations and programs related to wildfire that are applicable to the proposed project are described below.

4.20.4.1 Federal Regulations

Federal Disaster Mitigation Act. The Disaster Mitigation Act of 2000 provided a new set of mitigation plan requirements that encourage State and local jurisdictions to coordinate disaster mitigation planning and implementation. States are encouraged to complete a "Standard" or an "Enhanced" Natural Mitigation Plan. "Enhanced" plans demonstrate increased coordination of mitigation activities at the State level and, if completed and approved, increase the amount of funding through the Hazard Mitigation Grant Program. The State of California Multi-Hazard Mitigation Plan (SHMP) complies with this act.

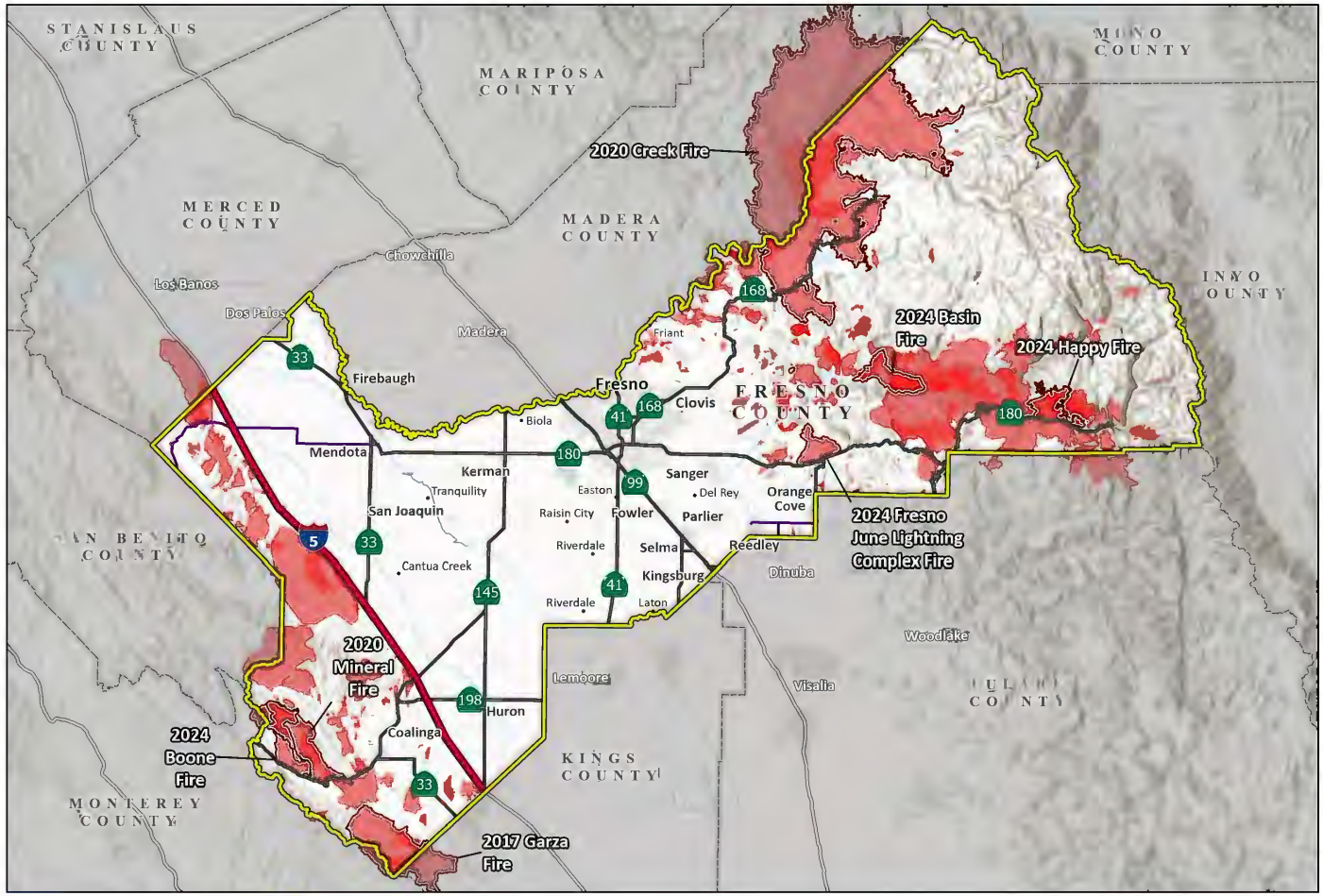
National Fire Plan. The National Fire Plan was developed in August 2000 with the intent of actively responding to severe wildland fires and their impacts to communities while ensuring sufficient firefighting capacity for the future. The NFP addresses five key points: Firefighting, Rehabilitation, Hazardous Fuels Reduction, Community Assistance, and Accountability. The plan provides technical, financial, and resource guidance and support for wildland fire management across the United States.

Wildland-Urban Interface Code. Section 202 of the International Code Council establishes a WUI and requires projects within WUI areas to develop project-specific Fire Protection Plans that describe ways to minimize and mitigate the fire problems created by the project or development, with the purpose of reducing impacts on the community's fire protection delivery system.

4.20.4.2 State Regulations

California Building Code Title 24. Title 24 of the California Code of Regulations (CCR), also known as the California Building Code (CBC or Title 24), contains the design standards that govern the construction of buildings in California to "safeguard life or limb, health, property, and public welfare by regulation and controlling the design, construction, quality of materials, use and occupancy, location and maintenance of all buildings and structures and certain equipment." The 2025 Edition of the CBC contains general building design and construction requirements relating to fire and life safety, structural safety, and access compliance. CBC provisions provide minimum standards to safeguard life

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LSA

Fresno COG Region

Maximum Fire Boundary
Note: Darker shades of red indicate overlapping fire boundaries.

FIGURE 4.20-2

N

0 9 18
Miles

SOURCE: Esri, USGS (2024), CDOC (2022); CAL FIRE (2026)

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or limb, health, property, and public welfare by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all buildings and structures and certain equipment. The 2025 CBC became effective January 1, 2026, and consists of 12 parts. Part 2 of the CBC outlines building design and construction requirements relating to fire, life safety, and structural safety.

California Fire Code. The California Fire Code (CFC) includes regulations for emergency planning, fire service features, fire protection systems, hazardous materials, fire flow requirements, and fire hydrant locations and distribution. Several fire safety requirements include the installation of sprinklers in all high-rise buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas. The currently applicable version of the CFC is the 2022 CFC.

California Code of Regulations Title 14: Natural Resources. CCR Title 14, Division 1.5 (Department of Forestry and Fire Protection), establishes the regulatory framework for CAL FIRE and details a variety of wildfire preparedness, prevention, and response regulations. Title 14 §1280 provides official definitions for LRA, SRA, and VHFHSZ.

California Code of Regulations Title 19: Public Safety. Title 19 of the CCR establishes a variety of emergency fire response, fire prevention, and construction/construction materials standards.

California Government Code. California Government Code §51178 defines VHFHSZs and designates lands considered by the State to be a very high fire hazard. California Government Code §51189 directs the Office of the State Fire Marshal to create building standards for wildland fire resistance. The California Government Code includes measures that increase the likelihood of a structure withstanding intrusion by fire (e.g., building design and construction requirements that use fire-resistant building materials) and provides measures for protection of structure projections (e.g., porches, decks, balconies, and eaves) and structure openings (e.g., attics, eave vents, and windows).

California Public Resources Code. The California Public Resource Code (PRC) includes fire safety regulations for forest, range, and forage lands that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on construction equipment that use an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided on-site for various types of work in fire-prone areas. These regulations include the following:

- On days when a burning permit is required, flammable materials shall be removed to a distance of 10 feet from any equipment that could produce a spark, fire, or flame, and fire suppression equipment shall be available in the immediate area (PRC Section 4427).

- During the highest fire danger period (April 1 to December 1), no person except for an emergency crew member or those under or contracted with a publicly or privately owned utility shall use tools powered by an internal combustion engine in any industrial operation located on or near any

forest, brush, or grass-covered land, and appropriate fire suppression equipment shall be made immediately available (PRC Section 4428).

- On days when a burning permit is required, portable tools powered by gasoline-fueled internal combustion engines shall not be used within 25 feet of any flammable materials (PRC Section 4431).

- Earthmoving and portable equipment with internal combustion engines must be equipped with a spark arrestor to reduce the potential for igniting a wildland fire (PRC Section 4442).

In addition, PRC Section 4290 establishes minimum wildfire protection standards in conjunction with building, construction, and development in SRAs and VHFHSZs in LRAs. Under PRC Section 4290, the design and construction of structures, subdivisions, and developments in SRAs must provide for basic emergency access and specified perimeter wildfire protection measures. These measures provide for road standards for emergency access, signing and building numbering, water supply reserves, and fuel breaks and greenbelts and are known as the State Minimum Fire Safe Regulations.

California Public Utilities Commission, General Order No. 95. General Order No. 95 of the California Public Utilities Commission (CPUC) sets forth rules for overhead electric line construction, maintenance, and operation within California. General Order No. 95 applies to utilities and other entities responsible for overhead electrical supply and communication lines and requires that such facilities be designed, constructed, and maintained to ensure public safety and system reliability. Specifically, General Order No. 95 establishes requirements for clearances, structural strength, inspection, and vegetation management, including provisions intended to reduce fire risk associated with electrical infrastructure, such as maintaining safe distances between conductors and surrounding vegetation and ensuring that "… all lines and equipment shall be constructed, installed, maintained, and operated in accordance with accepted good practice … for the safety of employees and the public" (General Order No. 95, Rule 31.1).

Executive Order N-05-19. On January 9, 2019, Governor Newsom also signed Executive Order (EO) N-05-19, which requires CAL FIRE and other State agencies to compile policy and regulatory recommendations concerning wildfire mitigation, emphasizing environmental sustainability and public health.

Office of Emergency Services. The State of California passed legislation authorizing the Office of Emergency Services (OES) to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. Noncompliance with SEMS could result in the State withholding disaster relief from the noncomplying jurisdiction in the event of an emergency disaster.

Senate Bill 1241. Senate Bill (SB) 1241 requires cities and counties to address fire risk in SRAs and VHFHSZs in the safety element of their general plans. The bill also amended CEQA to direct amendments to the *State CEQA Guidelines* Appendix G environmental checklist to include questions related to fire hazard impacts for projects located in or near lands classified as SRAs and VHFHSZs.

4.20.4.3 Regional Regulations

There are no regional regulations that apply to the proposed project with respect to wildfire.

4.20.4.4 Local Regulations

Local General Plans. The Fresno COG Region contains Fresno County and 15 incorporated cities, each with an individual general plan prepared pursuant to California Government Code Section 65300. Each general plan contains goals and policies related to wildfire within the particular jurisdiction. Although general plan element titles may vary, this information is typically found within the general plan safety element, or equivalent.

Local Municipal Codes. Fresno County and cities within the Fresno COG Region may have adopted local codes to address fire hazards and adopt the 2022 CFC. This information is typically found in the health and safety code, or equivalent.

Local Hazard Mitigation Plans. Fresno County and cities within the Fresno COG Region may have adopted Local Hazard Mitigation Plans to identify each jurisdiction's hazards, review and assess past disaster occurrences, estimate the probability of future occurrences, and set goals to mitigate potential risks and reduce or eliminate long-term risks to people and property from natural and man-made hazards, including wildfire. These plans are prepared pursuant to the requirements of the Disaster Mitigation Act of 2000 to achieve eligibility and potentially secure mitigation funding through the Federal Emergency Management Agency (FEMA) Flood Mitigation Assistance, Pre-Disaster Mitigation, and Hazard Mitigation Grant Programs.

4.20.5 Thresholds of Significance

The following thresholds of significance are based on Appendix G of the *State CEQA Guidelines*. Based on these thresholds, implementation of the proposed project would have a significant adverse impact with respect to wildfires if it is located in or near SRAs or lands classified as VHFHSZs and would:

Threshold 4.20.1: Would the project impair an adopted emergency response plan or emergency evacuation plan?

Threshold 4.20.2: Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;

Threshold 4.20.3: Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; or

Threshold 4.20.4: Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

4.20.6 Project Impacts

Threshold 4.20.1: Would the project impair an adopted emergency response plan or emergency evacuation plan?

Significant and Unavoidable Impact. As described in Section 4.20, Wildfire, emergency response and evacuation plans are prepared by the OES for Fresno COG Region. These plans outline evacuation procedures, which help prevent (or minimize) loss of life and property. In addition, cities in the Fresno COG Region generally provide procedures for coordinating with neighboring cities and other jurisdictions. This provides mutual assistance in the event of an emergency or natural disaster. Cities also establish disaster recovery programs. The proposed project would comply with OES and city policies/plans. This would minimize the potential for subsequent projects under this proposed project to interfere with adopted emergency response plans during construction and operation.

Section 4.15, Public Services, addresses the potential for the proposed project to result in substantial physical impacts associated with the construction of new fire stations or physically altering existing fire stations that would be required to maintain acceptable service ratios and response time for fire protective services. Additionally, each incorporated city within the Fresno COG Region contains general plans which include safety elements that discuss critical infrastructure systems and services to ensure adequate circulation, communications, and transportation services. The proposed project would be implemented in coordination with these general plans and safety elements, ensuring that future transportation and land use projects support emergency access, maintain fire service capacity, and minimize impacts to critical infrastructure and emergency response systems to the extent feasible.

Construction. Construction facilitated by the proposed project could require the temporary closure of traffic lanes or roadways adjacent to, or within, a specific project site. Depending on the timing, location, and duration of construction activities, temporary traffic congestion from lane restrictions and/or road closures could delay emergency vehicle response times or otherwise disrupt delivery of emergency response services. Detours could increase travel time and associated response times as well. Finally, emergency routes could be impaired. As such, individual projects with temporary roadway closures would be required to implement a Traffic Control Plan to maintain traffic flow; provide detours for vehicles, pedestrians, and bicycles; schedule truck trips outside peak hours; limit lane closures; and ensure access to sensitive facilities, pursuant to **Project-Specific Mitigation Measure (PMM) HAZ-4**. This would reduce temporary impacts to emergency response and evacuation plans to the extent feasible.

Operation. Implementation of the proposed project would facilitate a range of future transportation improvement and land use development projects that could result in substantial adverse effects on adopted emergency response and evacuation plans. Transportation network improvements and programs facilitated by the proposed project would provide a safe and reliable system of multimodal transportation. This would help facilitate emergency response and movement of people during emergencies.

As discussed in Section 4.14, Population and Housing, urbanization and associated population growth in the Fresno COG Region are anticipated to increase significantly by the proposed project horizon year of 2049 regardless of whether the 2026 RTP/SCS is implemented. Scenario C

(Enhanced Transit and Smart Growth) emphasizes sustainable urban growth concentrated in existing urban centers and established areas, with higher-density, mixed-use development. As growth and development occurs under the proposed project, member agencies would review and approve projects for consistency with applicable plans, policies, and regulations. Under this scenario, growth within existing urbanized areas would result in denser and more intensive development compared to existing conditions. In the event of an emergency, such as wildfire, high-density development could increase the number of people using the same evacuation routes. Evacuation could be impaired if emergency response and evacuation plans are not updated to reflect changes in land use associated with the proposed project.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, this analysis represents a general characterization of reasonably foreseeable impacts that could occur under implementation of the proposed project. **PMM HAZ-4** requires the implementation of a Traffic Control Plan to maintain traffic flow, provide detours, schedule truck trips outside peak hours, limit lane closures, and ensure access to sensitive facilities. Adherence to this measure would reduce impacts to emergency response or evacuation plans to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts during construction and operation would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to the California Department of Transportation (Caltrans), local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with the impairment to an adopted emergency response plan or emergency evacuation plan are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.20.2: Would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Significant and Unavoidable Impact. As described in Section 4.20.3, Existing Environmental Setting, seasonal climatic conditions contribute to the curing and drying of vegetation during the late spring and summer months, increasing susceptibility to wildfire ignition and spread in the Fresno COG Region. Periodic drought conditions, elevated temperatures, and strong regional wind events further intensify wildfire risk, particularly in wildland and WUI areas. Climate trends observed throughout California, including increasing temperatures and more frequent extreme heat events, have the potential to lengthen the wildfire season and increase fire intensity.

Construction. Future projects would adhere to applicable policies and actions set forth in local plans within the Fresno COG Region. New development would be subject to the CFC, which includes measures to reduce fire risk such as ignition-resistant construction materials, and PRC Section 4427, which restricts the use of spark-generating equipment during fire-prone conditions and requires implementation of fire prevention measures, including vegetation clearance and the availability of fire suppression tools on site.

Operation. As discussed in Section 4.14, Population and Housing, urbanization and associated population growth in the Fresno COG Region are anticipated to increase significantly by the proposed project horizon year of 2049 regardless of whether the 2026 RTP/SCS is implemented. However, future transportation improvement and land use development projects under the proposed project have the potential to increase the overall population (e.g., residents, employees, or visitors) within each individual project site. Scenario C (Enhanced Transit and Smart Growth) emphasizes sustainable urban growth focused on existing urban centers and established areas, with higher-density growth and mixed-use development. These urban centers within the Fresno COG Region are generally located within LRAs and are typically not within MFHSZs, HFHSZs, and VHFHSZs. However, depending on the scale of each project, it is assumed that future development within urban fringe or rural areas could result in projects located along the Sierra Nevada foothills east of State Route (SR-)99 and in areas west of I-5 near Coalinga, within MFHSZs, HFHSZs, and VHFHSZs, and within SRAs or FRAs in the Fresno COG Region. Development of future projects in these high-fire-risk areas, particularly in forested or vegetation-rich locations or where slopes are steep and prevailing winds are strong, could increase ignition potential, influence wildfire behavior, and expose project occupants to wildfire-related hazards and smoke pollutants, including the risk of loss, injury, or death.

Future discretionary development would be required to comply with applicable local, State, and federal regulations, including CCR Title 24, the CFC, CCR Title 19, CCR Title 8, and the California Health and Safety Code. These regulations include measures to reduce wildfire risk, such as ember-resistant design, automatic fire sprinkler systems, adequate water supply, fire apparatus access, and defensible space. CCR Title 14 establishes minimum standards for emergency access, fuel modification, setbacks, signage, and water supply to reduce wildfire hazards. Beyond these requirements, **PMM WILD-1** requires a lead agency to incorporate measures to reduce wildfire risk, including designing and constructing structures in high-fire-hazard areas to meet applicable fire safety standards, improving roadway access and circulation for emergency response and evacuation, incorporating defensible space around structures, providing fire protection features, and incorporating fire-resistant features. Adherence to this measure would reduce the exposure of project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire to the extent feasible. Further, under **Fresno COG Mitigation Measure (FMM) WILD-1,** the Fresno COG would continue to provide a regional forum for collaboration in planning, communication, and information sharing on best practices around wildfire resilience.

Additionally, although transportation improvements generally improve circulation and emergency access, expanding or extending roads in or near high-fire-hazard areas (such as VHFHSZs, SRAs, FRAs, and urban fringe or rural locations) can increase the exposure of residents, occupants, structures, and travelers to wildfire hazards and smoke. Extending access into previously undeveloped or wildfire-prone areas, particularly where slopes are steep, vegetation is dense, and winds are strong, can also increase the likelihood of human-caused ignitions from vehicles or roadside incidents. These factors can therefore contribute to higher wildfire risk and greater potential for exposure to fire and smoke hazards.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown.

Therefore, this analysis represents a general characterization of reasonably foreseeable impacts that could occur under implementation of the proposed project. With adherence to **FMM WILD-1** and **PMM WILD-1**, and compliance with applicable local, State, and federal regulations, impacts associated with the exposure of project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with the exposure of project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire are considered significant and unavoidable for the purposes of this analysis.

Threshold 4.20.3: Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Significant and Unavoidable Impact. Future land development and transportation projects facilitated by the proposed project would require the installation and maintenance of infrastructure to support regional growth. Physical impacts to the environment as a result of water supply and other utility improvements (i.e., wastewater supply, natural gas, and telecommunications) are addressed in further detail in Section 4.19, Utilities and Service Systems. As discussed in Section 4.19, future projects implemented in accordance with the proposed project would be required to adhere to the local general plans, provide required development impact fees where necessary, and comply with applicable development regulations. Additionally, as a part of the development review process, all future projects would be required to demonstrate that existing public utilities would be sufficient to serve the future projects' needs and mitigate where feasible.

Construction. Construction of future individual projects facilitated under the proposed project would involve infrastructure that could exacerbate fire risk. Although the proposed project would focus on development in urbanized areas with available infrastructure such as roads, emergency water supplies and fire hydrants, electrical power lines, and other utilities, some future projects in undeveloped areas would require the installation of utility infrastructure. This infrastructure would located above or below ground and within private or public rights-of-way.

As discussed under Threshold 4.20.1, construction of future projects would be required to adhere to applicable policies and actions set forth in local plans within the Fresno COG Region. In addition, new development would be subject to the CFC, which includes measures to reduce fire risk, such as ignition-resistant construction materials, and PRC Section 4427, which restricts the use of spark-generating equipment during fire-prone conditions and requires implementation of fire prevention measures, including vegetation clearance and the availability of fire suppression tools on site. In addition, consistent with **PMM WILD-2**, future projects would be required to prepare a

Construction Fire Prevention Plan during construction if the project is located in a VHFHSZ or SRA, to reduce fire risks from construction to the extent feasible.

Operation. Future development and redevelopment in the Fresno COG Region could require installation and maintenance of infrastructure to support regional growth, including roadways, emergency water sources, power lines, and other utilities. These improvements could also introduce or concentrate potential ignition sources, particularly in areas with dry vegetation or rural undeveloped land, increasing the risk of wildfire during operation. Routine maintenance activities, such as landscaping, vegetation trimming, and equipment use, may generate sparks or flammable debris, further contributing to wildfire risk.

As discussed in Section 4.14, Population and Housing, urbanization and associated population growth in the Fresno COG Region are anticipated to increase significantly by the proposed project horizon year of 2049 regardless of whether the 2026 RTP/SCS is implemented. Scenario C (Enhanced Transit and Smart Growth) emphasizes sustainable urban growth concentrated in existing urban centers and established areas, with higher-density, mixed-use development. These areas would generally be served by existing infrastructure, including roadways, water supply, fire hydrants, and utilities. However, depending on the scale and location of each project, additional utility or facility installation and maintenance may be required, potentially extending into urban fringe or rural areas. Such activities could increase wildfire risk by introducing sparks or other ignition sources. While newer electrical infrastructure in fire-prone areas would be designed with fire-safe features, potential hazards would remain due to electrical equipment and typical ignition sources associated with human activity. In addition, where new infrastructure includes overhead electrical lines, projects would be subject to applicable fire prevention requirements, including CPUC General Order 95, which establishes inspection and maintenance requirements for electric distribution and transmission lines and protocols for system failures or hazardous conditions. Future utility infrastructure would also be required to comply with the provisions of the PRC, including Section 4292 (Clearance of Flammable Materials Around Poles and Towers) and Section 4293 (Minimum Clearances Around Conductors), as well as vegetation clearance requirements in CCR Title 14, Section 1104.1(d). Compliance with the CBC and applicable CFC requirements and implementation of **PMM WILD-1** and **PMM WILD-2,** which require designing structures in accordance with fire safety standards, incorporating defensible space and fire-resistant features, improving roadway access to support emergency response and evacuation, and implementing Construction Fire Prevention Plans for projects located in VHFHSZs or SRAs, would reduce impacts to the extent feasible.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, this represents a general characterization of reasonably foreseeable impacts that could occur under implementation of the proposed project. With adherence to **FMM WILD-1** and **PMMs WILD-1** and **WILD-2,** impacts associated with the exacerbation of wildfire risks from the installation of project infrastructure would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility

of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with the exacerbation of wildfire risks from the installation of project infrastructure are considered **significant and unavoidable** for the purposes of this analysis.

Threshold 4.20.4: Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff post-fire slope instability, or drainage changes?

Significant and Unavoidable Impact. Severe wildfires can damage the forest or shrub canopy, underlying vegetation, and soils, resulting in increased runoff during intense rainfall events. This can place structures downslope of burned areas at risk of localized flooding and landslides. As described under Threshold 4.20.1, areas along the Sierra Nevada foothills east of SR-99 are designated as SRA MFHSZ to VHFHSZ, and areas west of I-5 near Coalinga are designated as SRA MFHSZ to HFHSZ. Although future projects facilitated by the proposed project would focus growth within existing urban areas, some projects could still occur in rural or forested areas that are prone to wildfire. Development within fire-prone areas could expose people and property to wildfire and related secondary hazards, including flooding and landslides. Intense rainfall during winter months, particularly on burned or saturated soils, can generate flooding conditions and debris flows along waterways. Debris flows can occur rapidly with little warning and have the potential to damage structures, block drainage infrastructure, and remove vegetation, resulting in unstable post-fire slope conditions. These events represent one of the most hazardous post-fire conditions due to their speed and destructive capacity. Loss of vegetation and increased soil erosion can further contribute to risks to life and property, disrupt drainage patterns, and affect roadways and other infrastructure.

If debris flows occur within 100-year floodplain areas, existing flow conditions could be altered or new flooding hazards created (refer to Section 4.7, Geology and Soils, and Section 4.10, Hydrology and Water Quality). This could affect both upstream and downstream areas by altering peak flow conditions. Debris flows from fire-affected areas are typically driven by intense rainfall, as burned soils can generate higher runoff rates, particularly in steeper, higher-elevation areas with limited drainage capacity. As a result, debris flows could affect transportation networks, utilities, and new development. While the proposed project would encourage infill development within existing urban areas, some development is expected to occur in areas subject to wildfire hazards, which would pose risks to people and structures.

As described in Chapter 3.0, Project Description, the design of each transportation improvement and land use development project facilitated by the proposed project is currently unknown. Therefore, this analysis represents a general characterization of reasonably foreseeable impacts that could occur under implementation of the proposed project. **PMMs WILD-1** and **WILD-2** require designing structures in accordance with fire safety standards, incorporating defensible space and fire-resistant features, improving roadway access to support emergency response and evacuation, and implementing Construction Fire Prevention Plans for projects located in VHFHSZs or SRAs. Adherence to these measures would ensure impacts associated with the exposure of people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff post-fire slope instability, or drainage changes would be reduced to the extent feasible. However, given the

programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with the exposure of people or structures to significant risks, as a result of runoff post-fire slope instability, or drainage changes are considered **significant and unavoidable** for the purposes of this analysis.

4.20.7 Level of Significance Prior to Mitigation

Prior to mitigation, implementation of the proposed project would have potentially significant impacts related to wildfire.

4.20.8 Mitigation Measures

4.20.8.1 Fresno COG Measures

The following mitigation measures would be applied on a regional scale by the Fresno COG to reduce potentially significant impacts related to wildfire to the extent feasible:

FMM WILD-1 The Fresno COG shall continue to provide a regional forum for collaboration in planning, communication, and information sharing on best practices around wildfire resilience.

4.20.8.2 Project-Specific Measures

The following measures shall be applied to future transportation improvement and land use development projects to reduce potentially significant impacts related to wildfire to the extent feasible:

In addition to the measures outlined in this section, **PMM HAZ-4** (provided in Section 4.9, Hazards and Hazardous Materials) is applicable.

PMM WILD-1 Implementing agencies shall consider the following mitigation measures to reduce wildfire risk, as applicable and feasible:

- Structures proposed in high-fire-hazard areas shall be designed and constructed in accordance with applicable State and federal fire safety standards to improve survivability and allow for shelter-in-place, where appropriate.
- During project design, improvements to roadway access and circulation shall be considered to support emergency response and safe evacuation.
- During project design, defensible space requirements shall be incorporated to reduce flammable vegetation, debris, and combustible materials near structures.

- Fire protection features, such as exterior sprinkler systems with independent water sources, shall be incorporated during project design.
- Where feasible, distributed energy resources (e.g., solar with battery storage) shall be incorporated during project design to reduce reliance on overhead electrical infrastructure.
- Project design shall comply with any existing fire protection plans in high-fire-hazard areas.
- Fire-resistant features shall be incorporated into the design of development project proposed in fire-prone areas, including ember-resistant vents and fire-resistant roofing materials.

PMM WILD-2 Implementing agencies shall consider the following mitigation measures to reduce fire risk related to the installation or maintenance of associated infrastructure, as applicable and feasible:

Individual RTP/SCS projects located within Very High Fire Hazard Severity Zones or State Responsibility Areas (SRAs) shall prepare a Construction Fire Prevention Plan prior to initiation of construction. A draft copy of the plan shall be provided to the California Public Utilities Commission (CPUC) and State and local fire agencies at least 90 days before the start of any construction activities in areas designated as Very High or High Fire Hazard Severity Zones. The plan shall also include federal, State, or local agencies with jurisdiction over areas where the project is located. The final plan shall be approved by the CPUC at least 30 days prior to the initiation of construction activities. The plan shall be fully implemented throughout the construction period and include the following:

- The purpose and applicability of the plan.
- Responsibilities and duties.
- Preparedness training and drills.
- Procedures for fire reporting, response, and prevention that include:
    - Identification of daily site-specific risk conditions
    - The tools and equipment needed on vehicles and to be on hand at sites
    - Reiteration of fire prevention and safety considerations during tailboard meetings
    - Daily monitoring of the red-flag warning system with appropriate restrictions on types and levels of permissible activity

- Coordination procedures with federal and local fire officials
- Crew training, including fire safety practices and restrictions
- Method(s) for verifying that all plan protocols and requirements are being followed

- A project Fire Marshal or similar qualified position shall be established to enforce all provisions of the Construction Fire Prevention Plan as well as to perform other duties related to fire detection, prevention, and suppression for the project. Construction activities shall be monitored to ensure implementation and effectiveness of the plan.

4.20.9 Level of Significance After Mitigation

Implementation of **FMM WILD-1, PMMs WILD-1** through **WILD-2,** and **PMM HAZ-4** would assist the Fresno COG and lead agencies of future transportation improvement and land use development projects in reducing impacts related to wildfire to the extent feasible. However, the analysis presented in this section is general in nature, and given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future transportation improvement and land use development projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. As appropriate and feasible, the Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified. Nevertheless, impacts related to wildfire are considered **significant and unavoidable** for the purposes of this analysis.

4.20.10 Cumulative Impacts

As defined in Section 15130 of the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for wildfire.

The geographic scope for cumulative wildfire impacts is the Fresno COG Region. As shown on Figure 4.20-1, the majority of the Fresno COG Region is not considered high risk for wildfires. Only areas along the Sierra Nevada foothills east of SR-99 and areas of the Coast Ranges directly west of I-5 near Coalinga are designated as MFHSZ to VHFHSZ, and MFHSZ to HFHSZ, respectively. Within this cumulative impact area, wildfire-related impacts could be significant if future projects facilitated by the proposed project, in combination with all reasonably foreseeable projects within the Fresno COG Region, occur in mountainous or HFHSZ/VHFHSZ areas, potentially exacerbating wildfire risk.

Construction of future projects facilitated by the proposed project could temporarily increase human activity and potential ignition sources, including construction equipment, vehicles, and the use or storage of flammable materials. Temporary lane closures, at-grade crossing interruptions, and other construction-related disruptions could delay emergency vehicle response times or impair evacuation

routes. Construction in wildfire-prone or rural areas, particularly within VHFHSZs or SRAs, could increase the likelihood of ignition. These effects, combined with other regional construction and development activities, contribute cumulatively to increased wildfire risk.

Operationally, the proposed project would increase population and density in urbanized areas and potentially in WUI-adjacent areas. This would expose additional people and structures to wildfire hazards. Expansion of transportation networks, utilities, and infrastructure into undeveloped or wildfire-prone areas could introduce new ignition sources, which, when combined with regional development, would increase the potential for cumulative exposure. In addition, post-fire conditions from nearby or regional wildfires could create secondary hazards, including drainage changes, debris flows, flooding, and slope instability, potentially affecting both existing and new development.

Future projects would likely require installation and maintenance of infrastructure, such as roads, utilities, overhead electrical lines, and emergency water sources. In undeveloped areas, these activities could increase wildfire risk through equipment use or sparks. Such infrastructure would be subject to applicable fire prevention requirements, including CPUC General Order 95 inspection and maintenance for electrical lines, PRC Sections 4292 and 4293, CCR Title 14 vegetation clearance standards, and compliance with the CBC and CFC. In addition, implementation of **PMMs WILD-1** and **WILD-2** would also be required to reduce impacts to the extent feasible.

Accordingly, future transportation improvement and land use development projects, as with all foreseeable projects within the Fresno COG Region, would be required to comply with the applicable federal, State, and local requirements, including the CFC, CBC, and adopted local building codes in effect at the time of proposed development. Future projects would also be required to implement **PMMs HAZ-4, WILD-1,** and **WILD-2** to reduce impacts the extent feasible.

As stated above, impacts of the proposed project related to wildfire are considered significant and unavoidable given the programmatic nature of the proposed project, the scale of the Fresno COG Region, and the inability of the Fresno COG to enforce project-specific mitigation or make land use approvals. Because the proposed project would result in significant adverse environmental impacts with respect to wildfire. these impacts would represent an incremental contribution to the environmental impacts of other cumulative or related projects, including other regional-scale plans, ultimately leading to **a cumulatively considerable impact** to wildfire in the cumulative impact area.

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5.0 ALTERNATIVES

5.1 INTRODUCTION

In accordance with the California Environmental Quality Act (CEQA) and the *State CEQA Guidelines* (Section 15126.6), an Environmental Impact Report (EIR) must describe a reasonable range of alternatives to the project, or to the location of the project, that could feasibly attain most of the project's basic objectives while avoiding or substantially lessening any of the significantly adverse environmental effects of the project and evaluate the comparable merits of the alternatives. An EIR does not need to consider every conceivable alternative to a project; rather, it must consider a reasonable range of potentially feasible alternatives to support informed decision making and public participation. An EIR is not required to consider alternatives that are infeasible.

An EIR identifies ways to mitigate or avoid significant effects that a project may have on the environment, the discussion of alternatives should focus on alternatives to the project or its location that are capable of avoiding or substantially lessening significant effects of the project. The EIR needs to include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the project. If an alternative would cause one or more significant effects in addition to those that would be caused by the project, the significant effects of the alternative should be discussed, but in less detail than the significant effects of the project. The range of alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. CEQA states that an EIR should not consider alternatives "whose effect cannot be ascertained and whose implementation is remote and speculative" (*State CEQA Guidelines* Section 15126.6).

In selecting project alternatives for analysis, the alternatives must be feasible. *State CEQA Guidelines* Section 15126.6(f)(1) indicates that among the factors that may be considered when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site. The alternatives for the proposed project consist of different Sustainable Communities Strategy (SCS) scenarios. Each scenario was defined by the Fresno Council of Governments (COG) Regional Transportation Plan (RTP)/SCS Roundtable Committee, which consisted of a number of diverse stakeholders representing constituents from throughout the Fresno COG Region. The RTP Roundtable approved the formation of the Scenario Development Subcommittee composed of any members of the Roundtable who were interested in influencing the development of the scenarios to be included in the SCS. This subcommittee was responsible for determining transportation priorities and co-benefits[1] and establishing land use strategies for each scenario.

This chapter begins with an overview of the proposed 2026 RTP/SCS (proposed project) and its significant and unavoidable effects, followed by a summary of the alternatives considered for evaluation, including one potential alternative that was considered but rejected from further

[1] Co-benefits are the additional, positive outcomes—such as economic growth, improved public health, or biodiversity conservation—that occur as a result of a policy or project designed for a different primary purpose.

analysis. Each alternative selected for analysis is then fully described and evaluated for potential environmental effects as compared to the proposed project. The chapter concludes with identification of the environmentally superior alternative. Table 5.C: Comparison of the Environmental Impacts of the Proposed Project to the Project Alternatives, provided at the end of this chapter, provides a comparison between the proposed project's impacts and each of the identified alternatives fully evaluated in this chapter.

5.2 PROPOSED PROJECT

As described in Section 3.0, Project Description, the proposed project is the 2026 RTP/SCS reflective of Alternative Scenario C: Enhanced Transit and Smart Growth. This scenario combines efficient mobility with smart, sustainable urban growth focused on existing centers and established areas. Strategies and priorities identified under this scenario include the following:

- Focus on transit system upgrades/improvements;
- Moderate investment in road maintenance and operation;
- Supporting higher-density growth with mixed-use development;
- Additional growth in urban centers and established areas; and
- Considering preservation of resource land.

5.2.1 Project Objectives

Section 15124(b) of the *State CEQA Guidelines* requires that a Project Description disclose the objectives of a proposed project. For the purposes of this Program Environmental Impact Report (PEIR), the project objectives are the goals included in Chapter 4 of the 2026 RTP/SCS titled "Implementing the Plan." These goals will aid decision makers in the review of the proposed project and associated environmental impacts. The 2026 RTP/SCS goals, also considered the proposed project's objectives, are described below:

- **Goal #1: Improved Mobility and Accessibility for All.** The Fresno COG Region's population includes large segments that are likely to be transportation disadvantaged due to circumstances such as: low income, limited English proficiency, not having a vehicle, or being young, elderly, or disabled. While partnerships throughout the region provide an array of mobility services, addressing rural and disadvantaged communities' transportation needs is no simple task. In addition to enhancing existing transit services, local transit providers are exploring alternatives to traditional fixed-route service, such as on-demand microtransit. Equally important is improving active transportation and ridesharing options. Expanding resources for meaningful outreach and clearly communicating available mobility options in multilingual and accessible formats to transportation-disadvantaged populations are essential.

- **Goal #2: Vibrant Communities That are Accessible by Sustainable Transportation Options.** Creating built environments with integrated land use and transportation is needed in the near term to create more walkable communities, support multimodal mobility, and improve air quality. Residents continue to identify local air quality as one of their top concerns across various outreach efforts. Additionally, promoting complete streets that are human-scale and transit-oriented development will help reduce dependence on single-occupancy vehicle trips.

Neighborhood design and amenities can impact public health outcomes by affecting the likelihood that people will walk or bike to nearby destinations, have access to healthy foods, and have opportunities for physical activity. Improving walkability in existing and new neighborhoods is particularly important due to the aging population and the number of seniors who are choosing to age in place. Obesity rates in the Fresno COG Region are also relatively high compared to other regions in the State, both in adults and children, increasing the need for more physical activity opportunities. Additionally, employing smart growth principles will help to conserve farmland, open space, and other natural resources and improve local air quality.

Housing plays an important role in the region's ability to meet its GHG reduction targets. Funding for transportation improvements that support housing, such as increased transit and active transportation opportunities, will help to reduce dependency on single-occupancy vehicles. Financial resources and technical assistance will be necessary to meet State goals and address local needs.

- **Goal #3: A Safe, Well-Maintained, Efficient, and Climate-Resilient Multimodal Transportation Network.** Improved safety for all road users continues to be one of the highest priorities in the region. The Fresno COG Region's traffic fatality rate is approximately 50 percent higher than in California overall. Traffic safety has become a growing concern across the State in recent years.

  Maintaining existing transportation infrastructure is fundamental to preserving the existing transportation network upon which so many residents and industries rely. Maintenance continues to be a top concern at both the State and regional levels. Strategic investment in improving the existing network is underway, thanks in part to Senate Bill (SB) 1 and the County's Measure C sales tax.

  Additionally, it is important to invest in infrastructure improvements to increase transportation network resiliency. Hazards caused or exacerbated by climate change are becoming more frequent, such as wildfires, flooding, and drought conditions.

  As the region continues to grow, improving efficiencies on the existing system and reducing congestion help to improve air quality and provide a reliable transportation system for residents and goods movement. Transportation Demand Management (TDM) is a set of strategies that aim to reduce single-occupancy vehicle trips and reduce congestion. TDM strategies include telecommuting, alternative work schedules, and mode shifts to transit, bicycling, walking, or other micro-mobility options.

  Since the Moving Ahead for Progress in the 21st Century Act (MAP-21) became law in 2012, Metropolitan Planning Organizations (MPOs) are required to conduct performance-based planning and focus on achieving performance outcomes. Performance measures for safety, congestion, and infrastructure conditions are discussed in Chapter 4 of the 2026 RTP/SCS, which is incorporated by reference.

- **Goal #4: A Transportation Network That Supports a Sustainable and Vibrant Economy.** The San Joaquin Valley, and the Fresno COG Region specifically, have always been California's agricultural epicenter, generating more than $45 billion every year in agricultural products. The Fresno COG Region is also becoming a major player in the rapidly growing logistics and distribution industry. The State Route (SR) 99 and Interstate (I) 5 corridors provide the bulk of the capacity for this essential goods movement. The goods movement industry supports a significant portion of the State's economy and requires a reliable transportation network to function at its best.

  Providing residents with greater mobility increases their access to jobs, education, healthcare, etc. Greater mobility outside the region may be made possible by high-speed rail (HSR), which is currently under construction in the San Joaquin Valley. Should the initial operating segment be completed, residents of the Fresno COG Region will have expanded access to other parts of the State, and additional employers and residents are expected to be attracted to the region.

- **Goal #5: A Region Embracing Clean Transportation, Technology, and Innovation.** New technologies are rapidly transforming the transportation sector. In the near term, additional outreach, planning, and infrastructure are needed for electric vehicles (EVs) to ensure residents are aware of the benefits, diminish range anxiety, and support the transition to electric fleets. In addition, the Fresno COG Region will need to prepare for: additional micro-mobility options; autonomous vehicles; sustainable and efficient freight movement; and broadband internet to support telework.

  The COVID-19 pandemic substantially impacted travel in the short term, and increased telework options may have long-term impacts on vehicle miles traveled (VMT) as well. Most substantial was VMT reduction during 2020 due to lockdowns, which—compared to an average 2019 level—decreased daily VMT by approximately 34 percent, from over 25 million daily VMT to barely 17 million. Based on the results of the Fresno COG's online telecommute survey, potentially one-third of the Fresno COG Region's employers and employees plan to telecommute at least a couple of days per week. However, not all communities in the Fresno COG Region have access to broadband internet, which is a barrier to telework opportunities, remote learning, and increased access to other resources. Expanding broadband internet across the region will further help reduce VMT.

  Deploying new technology in a thoughtful manner will help ensure its successful integration into the region. The existing transportation network, when integrated with more innovative solutions, can provide residents with more diverse and reliable travel choices.

5.2.2 Significant Adverse Unavoidable Impacts of the Proposed Project

As described throughout this PEIR, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to the California Department of Transportation (Caltrans), local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, as described in Chapter 4.0, Existing Environmental Setting,

Environmental Analysis, Impacts, and Mitigation Measures, of this PEIR, the proposed project would result in significant and unavoidable impacts with respect to all environmental topics analyzed in this PEIR, as follows:

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

5.2.3 Alternatives Considered But Not Evaluated Further

Section 15126.6(c) of the *State CEQA Guidelines* suggests that EIRs identify any alternatives that were considered by the Lead Agency but were rejected during the scoping process and briefly explain the reasons underlying the Lead Agency's determination.

SB 375, which went into effect in 2009, added statutes to the California Government Code to encourage planning practices that create sustainable communities. It calls for each MPO to prepare an SCS as an integrated component of the RTP. The 2026 RTP contains the SCS, which is intended to guide the Fresno COG Region toward a more sustainable future by coordinating land use, housing, and transportation planning to create communities that are more compact, walkable, and transit oriented. To achieve this aim, five SCS scenarios were developed during preparation of the SCS through an open and engaging public process. Each SCS scenario is described further in Section 5.3 below and in Appendix C, Transportation and Land Use Appendix, of the RTP/SCS document.

Each SCS scenario shows how future growth and development could be allocated to planned growth areas consistent with the general plans of the cities and the County. Pursuant to California Government Code Section 65080(b)(2)(B), each SCS scenario is required to:

1. Identify the general location of land uses, residential densities, and building intensities within the region;

2. Identify areas within the region sufficient to house all the population of the region over the plan horizon;

3. Identify areas within the region sufficient to house an 8-year projection of the regional housing need (per Government Code Section 65584.01(et al.);

4. Identify a transportation network to service the regional transportation needs;

5. Gather and consider the best practically available scientific information regarding resources areas and farmland in the region;

6. Consider the State housing goals;

7. Set forth a Forecasted Regional Development Pattern for the region; and

8. Allow the RTP to comply with the federal Clean Air Act (CAA) of 1970 (42 USC 7401 et seq.) such that when the SCS is integrated with the transportation network, and other transportation measures and policies, greenhouse gas (GHG) emissions from automobiles and light-duty trucks will achieve, if there is a reasonable way to do so, the GHG emission reduction targets approved by the California Air Resources Board (CARB). If the SCS does not achieve the GHG emission targets set by CARB, an Alternative Planning Strategy (APS) must be developed to demonstrate how the targets could be achieved.

Variables that are typically considered in determining feasible alternatives under CEQA include, but are not limited to, site suitability, economic viability, available infrastructure, general plan consistency, environmental impacts, and consistency with the project objectives. In addition, the Fresno COG considered variables specific to the RTP/SCS process, including climate protection, public health benefits, travel efficiency, resource land preservation, VMT per capita, and land use sustainability.

In evaluating an appropriate range of alternatives to the proposed project, each SCS scenario was considered and rejected for differing reasons by the Fresno COG. The 2026 RTP/SCS only recommends one preferred SCS scenario, which is the preferred project alternative. The Fresno COG's Policy Board adopted Scenario C as the preferred SCS scenario in March 2026.

5.2.4 Alternatives under Consideration

Section 21100 of the Public Resources Code (PRC) and Section 15126 of the *State CEQA Guidelines* require an EIR to identify and discuss a No Project Alternative (Alternative 1) and a reasonable range of alternatives to the proposed project that would feasibly attain most of the basic objectives of the project and would avoid or substantially lessen any of the significant environmental impacts. As previously stated, the alternatives for the proposed project consist of different SCS scenarios, Scenarios A, B, D, and E (Alternatives 2 through 5). Each scenario was identified and selected by the Fresno COG RTP/SCS Roundtable Committee. As part of the Fresno COG RTP/SCS Roundtable, the Fresno COG's Policy Board adopted Scenario C in March 2026 as the proposed project. Because Scenario C reflects the proposed 2026 RTP/SCS, which constitutes the proposed project, it is not evaluated as a project alternative in this Draft PEIR. Accordingly, Scenarios A, B, D, and E, together with the No Project Alternative, represent the reasonable range of alternatives to the proposed project and are evaluated in the alternatives analysis below.

5.2.4.1 Alternative 1: No Project Alternative

CEQA requires analysis of a "No Project" Alternative. The purpose of describing and analyzing a No Project Alternative is to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. According to *State CEQA Guidelines*

Section 15126.6(e)(3)(C), the lead agency should proceed to analyze the impacts of the No Project Alternative by projecting what would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.

The No Project Alternative, for the purposes of this PEIR, represents a scenario in which the proposed 2026 RTP/SCS is not approved and the 2022 RTP/SCS remains in place for the region. The No Project Alternative assumes that planned improvements to the future transportation system, as identified in the 2026 RTP, would not be made except those that would "reasonably" be expected to be constructed and open if the 2026 RTP/SCS is not approved. Therefore, those projects that could reasonably be expected to open to the public would be those projects programmed in the previously conformed Federal Transportation Improvement Program (FTIP) or projects currently underway that are scheduled for completion in 2026 and 2027.

The No Project Alternative assumes that growth and development (through the proposed 2026 RTP/SCS horizon year of 2049) would be consistent with the adopted general plans of each of its 16 local jurisdictions (15 cities and the County). This would include residential densities and unit types, minimal mixed-use development, residential persons-per-acre densities consistent with historical trends, transit-oriented development, and other continued suburban growth and development resulting in an increasing development footprint and continued farmland conversion.

As noted above, the No Project Alternative reflects all existing transportation systems and future project improvements contained in the most recently approved FTIP for which an air quality conformity package was also prepared and approved. As a result, those projects can reasonably be expected to move forward toward construction.

5.2.4.2 Alternative 2: SCS Scenario A (Connectivity and Mobility)

This scenario supports connectivity and community access through capacity enhancements while maintaining current growth patterns. Strategies and priorities identified under this scenario include the following:

- Highest investment in road capacity;
- Strong funding for road maintenance and operations;
- Providing a variety of housing options;
- Growth across urban centers and suburbs; and
- Maintaining current development trends.

In comparison to the proposed project (Scenario C), Alternative 2 would distribute investment costs to each of the six transportation modes/categories accordingly:

- Bike and Pedestrian: 11% (**no change** from the proposed project)
- Transit: 17% (6% **decrease** from the proposed project)
- Streets and Roads – Capacity: 27% (5% **increase** from the proposed project)
- Streets and Roads – Operations: 21% (1% **increase** from the proposed project)

- Streets and Roads – Maintenance: 23% (**no change** from the proposed project)
- Other: 1% (**no change** from the proposed project)

5.2.4.3 Alternative 3: SCS Scenario B (Resilient Roadways)

This scenario pairs maintaining and operating existing roads (with some capacity improvements) with maintaining urban density and some redevelopment. Strategies and priorities identified under this scenario include the following:

- Highest investment in maintenance and operation;
- Strong funding for capacity improvements;
- Considering redevelopment and efficient land use; and
- Growth distributed from centers to suburbs.

In comparison to the proposed project (Scenario C), Alternative 3 would distribute investment costs to each of the six transportation modes/categories accordingly:

- Bike and Pedestrian: 11% (**no change** from the proposed project)
- Transit: 23% (no change from the proposed project)
- Streets and Roads – Capacity: 24% (2% **increase** from the proposed project)
- Streets and Roads – Operations: 22% (2% **decrease** from the proposed project)
- Streets and Roads – Maintenance: 23% (**no change** from the proposed project)
- Other: 1% (**no change** from the proposed project)

5.2.4.4 Alternative 4: SCS Scenario D (Urban Rail and Transit-Oriented Growth)

This scenario links activity centers to the planned high-speed rail station and airport with light rail, targeting growth along transit corridors and infill areas. Strategies and priorities identified under this scenario include the following:

- Significant investment in transit improvements;
- Introduction of light rail connections between major corridors and centers;
- Prioritizing transit-oriented development and efficient land uses; and
- Promoting redevelopment for densification.

In comparison to the proposed project (Scenario C), Alternative 4 would distribute investment costs to each of the six transportation modes/categories accordingly:

- Bike and Pedestrian: 11% (**no change** from the proposed project)
- Transit: 27% (4% **increase** from the proposed project)
- Streets and Roads – Capacity: 18% (4% **decrease** from the proposed project)
- Streets and Roads – Operations: 20% (**no change** from the proposed project)
- Streets and Roads – Maintenance: 23% (**no change** from the proposed project)
- Other: 1% (**no change** from the proposed project)

5.2.4.5 Alternative 5: SCS Scenario E (Regional Rail and Connected Communities)

This scenario connects cities with commuter rail, encouraging infill development and strong regional connectivity. Strategies and priorities identified under this scenario include the following:

- Highest investment in transit;
- Least focus on road capacity expansion;
- Dense core growth by maximizing infill development; and
- High-density transit-oriented development.

In comparison to the proposed project (Scenario C), Alternative 5 would distribute investment costs to each of the six transportation modes/categories accordingly:

- Bike and Pedestrian: 11% (**no change** from the proposed project)
- Transit: 33% (10% **increase** from the proposed project)
- Streets and Roads – Capacity: 15% (7% **decrease** from the proposed project)
- Streets and Roads – Operations: 17% (3% **decrease** from the proposed project)
- Streets and Roads – Maintenance: 23% (**no change** from the proposed project)
- Other: 1% (**no change** from the proposed project)

5.3 ENVIRONMENTAL ANALYSIS OF NO PROJECT ALTERNATIVE (ALTERNATIVE 1)

As previously stated, CEQA requires analysis of a "No Project" Alternative. The purpose of describing and analyzing a No Project Alternative is to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. For each of the environmental topics analyzed in this PEIR, a general discussion applicable to the No Project Alternative is provided.

Compared to the proposed 2026 RTP/SCS, which focuses on efficient mobility and directing growth to existing centers through transit upgrades and moderate roadway investment, the No Project Alternative would retain the 2022 RTP/SCS as the governing plan for the Fresno COG Region. Under the 2022 RTP/SCS, transportation improvements would be limited to projects programmed in the adopted FTIP and those currently underway. Growth and development would occur consistent with adopted general plans, including typical densities, limited mixed-use development, and continued suburban growth.

5.3.1 Aesthetics

The proposed project would direct growth toward existing urban centers and established areas through coordinated land use and multimodal transportation strategies that support higher-density, mixed-use development. In comparison, the No Project Alternative would reflect existing development patterns and planned improvements, resulting in more land use development in rural and urban fringe areas. This pattern would increase the potential to degrade scenic vistas, damage scenic resources (including those along designated or eligible State scenic highways), and alter the visual character of public views through the introduction of urban elements into open space and agricultural landscapes.

The No Project Alternative would have fewer transportation projects than the 2026 RTP/SCS and, therefore, fewer opportunities for direct obstruction of scenic vistas. This would also equate to less roadway lighting and fewer vehicle-related sources of glare. However, the more dispersed development pattern under the 2022 RTP/SCS would extend urban uses into previously undeveloped areas. These new developments would introduce new sources of lighting and glare. As a result, overall light and glare impacts under the No Project Alternative would be similar to those under the proposed project.

Accordingly, impacts to aesthetics under the No Project Alternative would be **similar** to those identified for the proposed project and would remain significant and unavoidable.

5.3.2 Agricultural and Forestry Resources

Although the No Project Alternative would include fewer transportation improvement projects, and therefore fewer direct conversions of agricultural land associated with transportation infrastructure, land use development would be more likely to occur in rural, agricultural, and urban fringe areas. This development pattern would increase the potential for conversion of Prime Farmland, Unique Farmland, and Farmland of Statewide Importance, as well as conflicts with agricultural zoning and Williamson Act contracts. Increased development pressure could also result in more frequent Williamson Act contract non-renewals or cancellations and associated land use conflicts. While forest land and timberland are generally located outside existing urban centers, the lack of focused growth and resource preservation strategies could increase the potential for indirect impacts, including encroachment, parcel fragmentation, and conflicts with timberland zoning.

Overall, agricultural and forestry resource impacts under the No Project Alternative would be **greater** than those identified for the proposed project and would remain significant and unavoidable.

5.3.3 Air Quality

The No Project Alternative would include fewer transportation improvement projects than the proposed project, which would generally reduce construction-related emissions. However, regional construction activity would still occur, and emissions from individual projects or cumulative daily construction activity could still exceed CEQA significance thresholds established by local air districts (San Joaquin Valley Air Pollution Control District [SJVPCD]). Therefore, construction emissions would be **lower** than those identified for the proposed project but remain significant and unavoidable.

Operational emissions are a direct function of VMT and land use patterns. The No Project Alternative would reflect a less integrated land use and transportation strategy than the proposed project, which emphasizes infill, transit-oriented development, and VMT reduction strategies. In addition, many of the transportation projects included in the proposed project are designed to reduce the distances between destinations and increase accessibility for residents, correlating to a reduction in VMT. Because the VMT reduction strategies and transportation projects proposed under the 2026 RTP/SCS would not occur under the No Project Alternative, it is likely that VMT under the No Project Alternative would be slightly higher than under the proposed project. As a result, the No Project Alternative would not achieve the same degree of emissions reductions associated with compact, higher-density development patterns. Development under the No Project Alternative would also be more dispersed and less concentrated near transit and multimodal facilities, which could reduce

exposure to certain localized emissions near major corridors but increase reliance on automobile travel and associated emissions in outlying areas. Toxic air contaminant (TAC) exposure patterns would therefore differ, with some reductions in proximity to transit corridors but potentially broader dispersion of emissions across the region. Overall, air quality impacts under the No Project Alternative would be **greater** than those under the proposed project and would remain significant and unavoidable.

5.3.4 Biological Resources

The No Project Alternative would reflect existing development patterns and planned improvements. Although the No Project Alternative would include fewer transportation improvement projects, land use development projects would be more likely to occur in rural, agricultural, and urban fringe areas where sensitive biological resources are more prevalent. The Fresno COG Region contains numerous special-status plant species and special-status animal species, as well as federally designated critical habitat for several species, and sensitive natural communities (including vernal pools, riparian habitats, and valley grasslands), which may be subject to degradation or loss under the development pattern associated with the No Project Alternative. These resources are primarily associated with undeveloped valley floor habitat, foothill areas, and remaining natural land fragments.

While the No Project Alternative would implement fewer transportation projects that could introduce new barriers to wildlife movement, it would result in a more dispersed land use pattern that could increase the extent of habitat fragmentation and reduce regional habitat connectivity. Wetlands, riparian areas, and aquatic resources, including vernal pools and jurisdictional waters, would remain vulnerable to direct fill, hydrologic alteration, and degradation where development occurs in undeveloped areas. In addition, the broader spread of development would increase the likelihood of conflicts with biological resource protection policies and ordinances, including tree preservation requirements and local habitat protections, particularly in rural and unincorporated areas where biological resources are more intact.

Overall, impacts to biological resource policies would be **greater** under the No Project Alternative than under the proposed project and would remain significant and unavoidable.

5.3.5 Cultural Resources

The No Project Alternative would implement fewer transportation projects. As a result of less ground disturbance associated with roadway construction and expansion, this alternative would have lower potential to impact archaeological resources or human remains. Impacts to historic built environment resources would be reduced under the No Project Alternative, with reduced pressure to redevelop urban areas near existing historical properties.

However, the land use pattern under the No Project Alternative would be less compact and would accommodate more growth outside of existing urbanized areas. The increased development of open space would result in increased ground disturbance in previously undeveloped areas. This would increase the likelihood of encountering archaeological resources and human remains. This pattern of development could also adversely affect the significance of historic built environment resources where present.

Overall, impacts to cultural resources would be **similar** to those identified for the proposed project and would remain significant and unavoidable.

5.3.6 Energy

The No Project Alternative would result in less transportation infrastructure construction and lower construction-related energy consumption. However, it would not include many of the transit, active transportation, and infill-focused strategies in the proposed project intended to improve regional transportation efficiency and reduce energy demand. As a result, the more dispersed development pattern under the No Project Alternative would increase reliance on automobile travel and reduce the long-term energy-efficiency benefits associated with compact urban growth. Energy use would continue to increase over time due to regional population and employment growth, and the No Project Alternative would not achieve the same level of energy conservation and transportation efficiency as the proposed project.

Overall, impacts related to energy consumption under the No Project Alternative would be **greater** than those identified for the proposed project and would remain significant and unavoidable.

5.3.7 Geology and Soils

The No Project Alternative would increase the area of development exposed to geologic and seismic hazards because its development would be more dispersed. In addition, development would be more likely to occur in previously undeveloped areas with higher susceptibility to liquefaction, landslides, unstable soils, and erosion. Increased ground disturbance associated with this development pattern could also increase the potential for soil erosion, loss of topsoil, and impacts related to expansive soils or soils unsuitable for septic systems, despite compliance with applicable regulations and implementation of best management practices. In addition, greater disturbance of undeveloped areas would increase the likelihood of encountering and potentially damaging previously unknown paleontological resources.

Overall, geology and soils impacts under the No Project Alternative would be **greater** than those identified for the proposed project and would remain significant and unavoidable.

5.3.8 Greenhouse Gas Emissions

The No Project Alternative would not implement the coordinated land use and multimodal transportation strategies in the proposed project intended to reduce regional GHG emissions through compact, higher-density, mixed-use development and expanded transportation alternatives. The more dispersed development pattern associated with the No Project Alternative would increase reliance on automobile travel and associated emissions. Although the No Project Alternative would include fewer transportation improvement projects and have corresponding lower construction-related GHG emissions, its less constrained growth patterns would not achieve the long-term emissions reduction and sustainability benefits envisioned under the proposed project.

Overall, GHG emissions under the No Project Alternative would be **greater** than those identified for the proposed project and would remain significant and unavoidable.

5.3.9 Hazards and Hazardous Materials

The No Project Alternative would result in fewer infrastructure projects being constructed, thereby reducing hazardous materials use, storage, and transportation during construction of those projects. However, the transportation projects included in the proposed project are intended to improve safety, reduce congestion, and provide other transportation benefits in the Fresno COG Region that would contribute to reducing the potential for accidents resulting in the release of hazardous materials. Without these projects, the potential for such accidental releases may be slightly greater.

However, the volume of hazardous materials transported to support land use development in the region would remain similar, as development would continue under this alternative. Overall hazards and hazardous materials impacts would be similar under this alternative compared to the proposed project, and would remain significant and unavoidable.

5.3.10 Hydrology and Water Quality

The No Project Alternative would result in the construction of fewer transportation projects with their corresponding project-specific impacts to hydrology and water quality. However, the No Project Alternative would result in a greater land area affected by its dispersed development pattern. This would reduce natural areas and expand impervious surfaces across a broader geographic area. The increased impervious surface area would reduce groundwater recharge, increase stormwater runoff volumes, and potentially degrade water quality through increased pollutant loading, thereby increasing the potential to violate water quality standards or waste discharge requirements. In comparison, the development pattern in the proposed project would be generally focused on previously developed areas where stormwater runoff is currently managed.

The No Project Alternative would also alter drainage patterns, increasing the potential for erosion, siltation, and localized flooding compared to the proposed project. It could require greater storm drainage system capacity, which could further concentrate or redirect flood flows in certain areas. Overall hazards and hazardous materials impacts would be greater under the No Project Alternative compared to the proposed project.

5.3.11 Land Use and Planning

Under the No Project Alternative, growth and development would occur consistent with adopted general plans, including typical densities, limited mixed-use development, and continued suburban growth. This would result in a larger development footprint than under the proposed project. The No Project Alternative would not implement coordinated smart growth strategies intended to concentrate development in existing urbanized areas. Instead, development patterns would more closely reflect existing trends, with a greater proportion of growth occurring in suburban and urban fringe areas.

Future land use developments that would conflict with the relevant jurisdiction's general plan land use or zoning designation for the project site would generally require a general plan amendment, zoning code amendment, or related action. Such actions are typically subject to discretionary approval by an approving body (e.g., a local city council or the Fresno County Board of Supervisors) at the time the body considers action on the project as a whole. Therefore, any potential conflicts

with the relevant general plan or zoning code would be resolved through the amendment process, and all environmental impacts associated with this process would be evaluated and mitigated to the extent feasible in the related project-specific CEQA document. As such, potential land use and planning impacts related to land use developments would be anticipated to be similar to the proposed project.

In addition, future transportation improvement projects subject to discretionary approval by the appropriate lead agency are required to comply with CEQA to determine if a project would result in a conflict with an adopted land use plan. Each subsequent project-specific CEQA document would identify specific mitigation measures related to land use conflicts, if necessary. However, as previously described, there would be fewer transportation improvements under the No Project Alternative that could physically divide existing communities.

Overall, land use and planning impacts would be **similar** under No Project Alternative than under the proposed project and would remain significant and unavoidable.

5.3.12 Mineral Resources

Although the No Project Alternative would include fewer transportation improvement projects, and therefore fewer direct conversions of land associated with mineral resources, land use development would be more likely to occur in rural, agricultural, and urban fringe areas. As a result, the No Build Alternative would increase the potential for transportation and land use development projects on (or near) Mineral Resource Zone (MRZ) 2-designated lands, active mining operations, or locally important aggregate resource areas along the San Joaquin River and Kings River resource areas. Although individual projects would be required to comply with Surface Mining and Reclamation Act (SMARA) and applicable local general plans, the No Project Alternative could increase pressure on known mineral resource areas due to expanded infrastructure and continued outward growth patterns. Overall, impacts related to mineral resources under the No Project Alternative would be **greater** than those identified for the proposed project and would remain significant and unavoidable.

5.3.13 Noise

Under the No Project Alternative, fewer new transportation projects would be implemented beyond those already programmed in the 2022 RTP/SCS. As a result, fewer major transportation projects would be constructed, reducing both construction-related noise and operational noise associated with future roadway corridors.

Further, land use development would be more dispersed than under the proposed project. Construction and operation of projects would be distributed across a broader geographic area, including rural, agricultural, and urban fringe areas. Potential sensitive receptors are generally more dispersed within these areas rather than concentrated in specific areas (e.g., city centers). Therefore, it is less likely that these land uses would expose a greater number of sensitive receptors to noise impacts. While construction noise is generally temporary in nature, individual project sites could still exceed applicable noise thresholds depending on proximity to sensitive receptors, construction duration, and timing. Similarly, operational noise would be subject to applicable noise thresholds.

Overall, noise impacts under the No Project Alternative would be **less** than those under the proposed project and would remain significant and unavoidable.

5.3.14 Population and Housing

The No Project Alternative would place less pressure on existing urbanized areas to redevelop and could encourage additional residential and commercial development in suburban and rural areas where such growth may not have been anticipated. This alternative would generally result in less displacement than the 2026 RTP/SCS given reduced infill and transit-oriented development intensity.

Because transportation investments would be limited to programmed FTIP projects and existing RTP commitments, there would be a reduced potential for new large-scale transportation projects requiring substantial right-of-way acquisition and associated displacement of existing housing populations. While the more dispersed suburban growth pattern under this alternative could still result in displacement of people or existing housing that would require replacement housing elsewhere, this displacement would occur to a lesser degree than the proposed project.

Overall, population and housing impacts under the No Project Alternative would be **less** than those under the proposed project and would remain significant and unavoidable.

5.3.15 Public Services

Impacts to public services under the No Project Alternative are anticipated to be similar to those of the proposed project because the same total population, housing, and employment are assumed under both alternatives. Impacts to public services are generally population-driven. However, the more dispersed land use pattern under the No Project Alternative could reduce the ability of public service providers to maintain local service levels for fire, police, schools, and libraries. However, this reduced efficiency would not necessarily result in the need to construct new or expanded public facilities to meet acceptable service ratios or response times under the No Project Alternative.

Although implementation of planned transportation projects under the 2022 RTP/SCS could improve emergency access in some areas, traffic congestion in the Fresno COG Region would be greater than under the proposed project. This could adversely affect response times for emergency services and access to public facilities in some locations. The extent of this impact was assumed to be minor under the No Project Alternative for the purposes of this analysis.

Overall, impacts related to the provision of new or expanded fire, police, school, and library facilities would be **similar** to the proposed project and would remain significant and unavoidable.

5.3.16 Recreation

The No Project Alternative is anticipated to result in impacts to recreational resources similar to those under the proposed project. Both alternatives assume the same total population and housing, and impacts to recreational resources are generally population-driven. Under the No Project Alternative, potential impacts to parks and recreational facilities in urbanized areas would be reduced compared to the proposed project due to the dispersed development pattern under this alternative. Although there would be less demand on urban parks (which are often overburdened),

the No Project Alternative could result in more demand on large regional parks due to its more dispersed land use pattern. This could lead to increased deterioration of those affected facilities. In addition, the more dispersed development pattern could trigger the need to construct new local parks and recreational facilities in less urbanized suburban and rural areas.

Overall, impacts related to recreation would be **similar** to the proposed project and would remain significant and unavoidable.

5.3.17 Transportation

The No Project Alternative would reflect a less integrated land use and transportation strategy than the proposed 2026 RTP/SCS, which emphasizes infill, transit-oriented development, and VMT reduction strategies. In addition, many of the transportation projects included in the proposed project are designed to reduce the distances between destinations and increase accessibility for residents, correlating to a reduction in VMT. Because the VMT reduction strategies and transportation projects proposed under the 2026 RTP/SCS would not occur under the No Project Alternative, it is likely that VMT under the No Project Alternative would be slightly higher than under the proposed project.

In addition, fewer transportation improvements would be implemented under the No Project Alternative. This would further worsen traffic conditions throughout the Fresno COG Region, which could adversely affect emergency response efforts. Additionally, projects in the proposed project intended to ensure reliable alternative modes of transportation would also not be implemented. Without these improvements, public transit and other alternative modes may become less reliable or may not adequately meet established frequency and performance standards set by local transit operators. Further, under the No Project Alternative, the regional planning policies contained in the proposed project that support safety and security needs related to transportation systems would not be implemented, potentially resulting in increased potential for increased hazards due to a geometric design feature or incompatible uses.

Overall, impacts related to transportation would be **greater** than those of the proposed project and would remain significant and unavoidable.

5.3.18 Tribal Cultural Resources

The No Project Alternative would include fewer transportation improvement projects. Fewer projects would reduce the potential for disturbing tribal cultural resources. However, under this alternative, land use development would be more likely to occur in rural, agricultural, and urban fringe areas. This development pattern would increase the potential for disturbing tribal cultural resources, such as archaeological resources, sacred sites, or human remains.

Overall, impacts related to tribal cultural resources would be greater under the No Project Alternative and impacts would remain significant and unavoidable.

5.3.19 Utilities and Service Systems

The No Project Alternative would result in similar utility and service system demands to those under the proposed project because utility demands are largely driven by population, housing, and employment growth. However, the more dispersed development pattern under the No Project Alternative would require utilities and service infrastructure to serve a larger area. As a result, new or expanded water, wastewater, stormwater, electrical, natural gas, telecommunications, and solid waste facilities may be needed to accommodate future growth under this alternative. In addition, the less compact development pattern under the No Project Alternative could increase water demand due to less efficient service patterns and greater landscape irrigation associated with lower-density development.

Overall, impacts related to utilities and service systems would be greater than those of the proposed project and would remain significant and unavoidable.

5.3.20 Wildfire

Under the No Project Alternative, wildfire impacts would increase due to the larger geographic area associated with the dispersed development pattern. The No Project Alternative would result in more housing units being developed within, or adjacent to, natural areas as compared to the proposed project, increasing potential wildfire risk. Development within wildfire-prone areas would trigger the need for new or extended roads and utility infrastructure. These additional facilities would increase associated construction-related and operational wildfire risk. Additionally, the more dispersed development footprint under the No Project Alternative would increase potential secondary risks associated with downstream or downslope flooding or landslides due to post-wildfire conditions.

Construction of development and transportation projects can increase wildfire risk, especially in rural and underdeveloped parts of the Fresno COG Region. Future construction in such areas has the potential to result in construction equipment generating sparks or spills, leading to the start and spread of wildfires.

Overall, the wildfire impacts would be **greater** under the No Project Alternative and would remain significant and unavoidable.

5.4 ENVIRONMENTAL ANALYSIS OF SCS SCENARIO ALTERNATIVES

As described throughout this PEIR, the design of each transportation improvement project and land use development under implementation of the proposed project is currently unknown. Therefore, the analysis presented in this PEIR represents a general characterization of reasonably foreseeable impacts that could occur under implementation of the proposed project. Similarly, the analysis of each SCS scenario in this section represents a general characterization of reasonably foreseeable impacts that could occur based on each alternative's defining characteristics, investment cost breakdown, and performance indicator results as modeled by the Fresno COG.

Table 5.A, below, provides a comparison across each SCS scenario for each of the performance indicators modeled by the Fresno COG that are relevant to potential environmental impacts. The full list of performance indicators is provided in Appendix C, Transportation and Land Use Appendix, of

the RTP/SCS document. This data is also discussed, where appropriate, in the following analysis of potential environmental impacts under each alternative.

Table 5.A: SCS Scenario Performance Indicator Comparison (Year 2035)

Performance Indicator	Proposed Project: SCS Scenario C	Alternative 2: SCS Scenario A	Alternative 3: SCS Scenario B	Alternative 4: SCS Scenario D	Alternative 5: SCS Scenario E
Total Land Developed (ac)	6,200	6,871	6,681	6,200	6,200
Farmland Consumed (ac)	924	1,044	1,031	924	924
Important Farmland Consumed (ac)	23.2	23.3	23.3	23.2	23.2
% of Development as Infill	53.2	51.2	51.8	52.3	52.3
Residential Density (du/ac)	7.4	7.1	7.2	7.4	7.4
Total VMT	**24,083,320**	**24,127,037**	**24,127,926**	**24,088,137**	**24,092,794**
VMT per Capita	22.80	22.85	22.84	22.81	22.81

Source: Fresno Council of Governments. 2026. Regional Transportation Plan/Sustainable Communities Strategy; Appendix C: Transportation and Land Use Appendix.
ac = acres
du/ac = dwelling units per acre
VMT = vehicle miles traveled

Each SCS scenario was designed by the Fresno COG to guide the region toward a more sustainable future by coordinating land use, housing, and transportation planning to create communities that are more compact, walkable, and transit oriented. As such, there are many shared characteristics among the project alternatives. Therefore, for each of the environmental topics analyzed in this PEIR, a general discussion applicable to all alternatives is provided, followed by a discussion of alternative-specific characteristics that affect potential environmental impacts under each alternative.

5.4.1 Aesthetics

Given the programmatic nature of each alternative and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future projects under each scenario, evaluate the applicability and feasibility of project-specific mitigation, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts related to aesthetics would be significant and unavoidable under all SCS scenario alternatives, as with the proposed project.

5.4.1.1 Alternative 2 (Scenario A)

Compared to the proposed project (Scenario C), Alternative 2 would place greater emphasis on roadway capacity expansion consistent with continued auto-oriented development patterns. This would result in a more dispersed development pattern across the region, with continued expansion into the urban fringe compared to the more compact and resource-preserving growth strategy under Scenario C. As a result, Alternative 2 would be more likely to introduce new roadway infrastructure and incremental suburban expansion into areas with higher scenic sensitivity. As a result, visual character changes would be more geographically widespread, particularly in urban fringe and

transitioning rural areas, where existing scenic qualities are more sensitive to development. Overall, aesthetic impacts would be **greater** under Alternative 2 than those of the proposed project. Aesthetic impacts would remain significant and unavoidable.

5.4.1.2 Alternative 3 (Scenario B)

Compared to the proposed project (Scenario C), Alternative 3 would place a moderate emphasis on capacity improvements, resulting in a more dispersed development pattern than Scenario C. This would result in increased suburban expansion and incremental extension of infrastructure into previously less developed areas. As a result, visual character changes would be more geographically widespread, particularly in urban fringe and transitioning rural areas where existing scenic qualities are more sensitive to development. Overall, aesthetic impacts would be **greater** than those of the proposed project and would remain significant and unavoidable.

5.4.1.3 Alternative 4 (Scenario D)

Compared to the proposed project (Scenario C), Alternative 4 would place greater emphasis on transit investment and rail-based transportation improvements, resulting in a more compact and transit-oriented development pattern concentrated within urban centers and along transit corridors. This would include higher-density redevelopment, altered streetscapes, and the introduction of transit infrastructure such as rail stations and corridors. While this would reduce development pressure on rural and scenic lands relative to Scenario C, it would also result in changes to the visual character of existing urbanized areas. Further, Alternative 4 would place lower emphasis on transportation projects that would increase roadway capacity, therefore resulting in fewer expansions of roadways into potentially scenic areas. Overall, aesthetic impacts would be **less** than those of the proposed project but would remain significant and unavoidable.

5.4.1.4 Alternative 5 (Scenario E)

Compared to the proposed project (Scenario C), Alternative 5 would place the greatest emphasis on transit investment, particularly commuter rail, and high-density infill development concentrated within existing urbanized areas and along regional transportation corridors. This alternative would result in a highly compact development pattern within urban centers, while also introducing linear transportation infrastructure connecting cities across the region. Although this approach would reduce pressure for outward expansion into scenic rural areas compared to Scenario C, the introduction of commuter rail infrastructure could result in new visual elements in previously undeveloped or lightly developed corridors. As a result, changes to visual character may occur despite overall compact growth patterns, particularly along rail alignments. Overall, aesthetic impacts would be **greater** than those of the proposed project and would remain significant and unavoidable.

5.4.2 Agriculture and Forestry Resources

Given the programmatic nature of each alternative and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future projects under each scenario, evaluate the applicability and feasibility of project-specific mitigation, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other

responsible agencies with jurisdiction over each project site. Therefore, potential impacts related to agriculture and forestry resources would be significant and unavoidable under all SCS scenario alternatives, as with the proposed project.

5.4.2.1 Alternative 2 (Scenario A)

Compared to the proposed project (Scenario C), Alternative 2 would place greater emphasis on roadway capacity improvements, resulting in a more dispersed development pattern that continues existing growth trends rather than concentrating growth in urban centers. Performance indicator modeling conducted by the Fresno COG indicates that implementation of Alternative 2 would result in higher farmland conversion (approximately 1,044 acres total, compared to 924 acres under the proposed project) and would increase pressure on agricultural and forestry lands at the urban fringe as compared to the proposed project. This would increase the potential for conversion of Prime Farmland, Unique Farmland, and Farmland of Statewide Importance, as well as conflicts with Williamson Act lands. Additionally, roadway capacity improvements in the eastern portion of the Fresno COG Region could result in the loss of forestry resources where adjacent to existing forest or timber preserves. Overall, impacts under Alternative 2 would be **greater** than the proposed project and would remain significant and unavoidable.

5.4.2.2 Alternative 3 (Scenario B)

Compared to the proposed project (Scenario C), Alternative 3 would also place greater emphasis on roadway capacity investments, resulting in a moderately dispersed development pattern that extends growth from urban centers into surrounding suburban and fringe areas. Performance indicator modeling conducted by the Fresno COG indicates that implementation of Alternative 3 would result in higher farmland conversion (approximately 1,031 acres total, compared to 924 acres under the proposed project). This would increase the potential for conversion of Prime Farmland, Unique Farmland, and Farmland of Statewide Importance, as well as conflicts with agricultural zoning and Williamson Act contracts. Additionally, development within suburban and fringe areas could result in the loss of forestry resources where adjacent to existing forest or timber preserves. Overall, impacts to agricultural and forestry resources would be **greater** under Alternative 3 than those of the proposed project and would remain significant and unavoidable.

5.4.2.3 Alternative 4 (Scenario D)

Compared to the proposed project (Scenario C), Alternative 4 would place greater emphasis on transit investment and urban rail expansion, resulting in a more compact and transit-oriented development pattern focused on infill and transit corridors. Performance indicator modeling conducted by the Fresno COG indicates that implementation of Alternative 4 would result in the same amount of total farmland conversion (approximately 924 acres, compared to 924 acres under the proposed project) as the proposed project. In addition, impacts to existing forest or timber preserves are anticipated to be similar under Alternative 4 based on the similar land use pattern. Overall, impacts to agricultural and forestry resources would be **similar** under Alternative 4 to the proposed project and would remain significant and unavoidable.

5.4.2.4 Alternative 5 (Scenario E)

Compared to the proposed project (Scenario C), Alternative 5 would place the greatest emphasis on transit investment and commuter rail connections, resulting in a highly compact infill development pattern concentrated within existing urbanized areas. Performance indicator modeling conducted by the Fresno COG indicates that implementation of Alternative 5 would result in the same amount of total farmland conversion (approximately 924 acres, compared to 924 acres under the proposed project) as the proposed project. In addition, impacts to existing forest or timber preserves are anticipated to be similar under Alternative 4 based on the similar land use pattern. Overall, impacts to agricultural and forestry resources under Alternative 5 would be **similar** to those of the proposed project and would remain significant and unavoidable.

5.4.3 Air Quality

Given the programmatic nature of each alternative and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future projects under each scenario, evaluate the applicability and feasibility of project-specific mitigation, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts related to air quality would be significant and unavoidable under all SCS scenario alternatives, as with the proposed project.

5.4.3.1 Alternative 2 (Scenario A)

Alternative 2 would have a higher investment in roadway capacity improvements compared to the proposed project (Scenario C). It would also have lower investment in transit. This alternative would maintain existing development trends by distributing growth across both urban centers and suburban areas. In addition, as stated under Section 5.3, Alternatives Under Consideration, Alternative 2 would include slightly increased funding for street and road capacity projects and street and road operations compared to the proposed project. The more dispersed growth pattern would reduce transit use and increase reliance on personal vehicles. Alternative 2 would generate approximately 23,770,613 total daily VMT in 2049, compared to 23,725,605 total daily VMT under the proposed project. This represents an increase of 45,008 daily VMT, or approximately 0.19 percent. In addition, Alternative 2 would result in increased mobile-source emissions compared to Scenario C, along with greater reliance on automobile travel due to lower investment in transit. While the Fresno COG would ensure consistency with applicable State Implementation Plans (SIPs) and federal transportation conformity requirements under the United States Environmental Protection Agency (EPA) Transportation Conformity Rule, individual projects could still exceed project-level thresholds. Overall, impacts under Alternative 2 would be **greater** than the proposed project and would remain significant and unavoidable.

5.4.3.2 Alternative 3 (Scenario B)

Compared to the proposed project (Scenario C), Alternative 3 would also include moderate funding for capacity improvements, resulting in a moderately dispersed development pattern that extends growth from urban centers into surrounding suburban and fringe areas. In addition, as stated above under Section 5.3, Alternatives Under Consideration, Alternative 3 would result in slightly decreased

funding for street and road capacity projects compared to the proposed project. As a result, Alternative 3 would promote a more dispersed land use pattern and a less compact development footprint. The more dispersed growth pattern would be expected to reduce transit use and increase reliance on personal vehicles. Alternative 3 would generate approximately 23,749,452 total daily VMT in 2049, compared to 23,725,605 total daily VMT under the proposed project. This represents an increase of 23,847 daily VMT, or approximately 0.10 percent. Alternative 3 would also result in increased mobile-source emissions compared to Scenario C, along with greater reliance on automobile travel. While the Fresno COG would ensure consistency with applicable SIPs and federal transportation conformity requirements under the EPA Transportation Conformity Rule, individual projects could still exceed project-level thresholds. Overall, impacts under Alternative 3 would be **greater** than the proposed project and would remain significant and unavoidable.

5.4.3.3 Alternative 4 (Scenario D)

Compared to the proposed project, Alternative 4 would include higher investments in transit improvements, including light rail connections between major corridors and centers. This alternative would also prioritize transit-oriented development, redevelopment, and increased urban density along transit corridors and infill areas. In addition, as stated above under Section 5.3, Alternatives Under Consideration, Alternative 4 would result in slightly decreased funding in street and road capacity projects compared to the proposed project. Alternative 4 would incorporate a less dispersed land use development and a more compact growth footprint, with an increase in the use of transit service, which would in turn decrease mobile-source emissions associated with vehicle trips. However, Alternative 4 would generate approximately 23,736,612 total daily VMT in 2049, compared to 23,725,605 total daily VMT under the proposed project. This represents an increase of 11,007 daily VMT, or approximately 0.05 percent. While the Fresno COG would ensure consistency with applicable SIPs and federal transportation conformity requirements under the EPA Transportation Conformity Rule, individual projects could still exceed project-level thresholds. Overall, impacts under Alternative 4 would be **similar** to the proposed project and would remain significant and unavoidable.

5.4.3.4 Alternative 5 (Scenario E)

Compared to the proposed project, Alternative 5 would have higher investment in transit and would emphasize dense infill development within built-out portions of the Fresno COG Region near transit opportunities. This alternative would also support commuter rail connections between cities. In addition, as stated above under Section 5.3, Alternatives Under Consideration, Alternative 5 would result in decreased funding for street and road capacity projects and street and road operations projects compared to the proposed project. Alternative 5 would generate approximately 23,729,323 total daily VMT in the 2049 horizon year, compared to 23,725,605 total daily VMT under the proposed project. This represents an increase of 3,718 daily VMT, or approximately 0.02 percent. However, the investments in transit improvements would encourage the use of alternative modes of transportation to the automobile, thereby reducing mobile-source emissions compared to Scenario C due to reduced automobile reliance and more compact growth pattern. While the Fresno COG would ensure consistency with applicable SIPs and federal transportation conformity requirements under the EPA Transportation Conformity Rule, individual projects could still exceed project-level

thresholds. Overall, impacts under Alternative 5 would be **similar** to the proposed project and would remain significant and unavoidable.

5.4.4 Biological Resources

Given the programmatic nature of each alternative and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future projects under each scenario, evaluate the applicability and feasibility of project-specific mitigation, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts related to biological resources would be significant and unavoidable under all SCS scenario alternatives, as with the proposed project except for impacts related to conflicts with the provisions of an adopted Habitat Conservation Plan (HCP)/Natural Community Conservation Plan (NCCP).

5.4.4.1 Alternative 2 (Scenario A)

Compared to the proposed project (Scenario C), Alternative 2 would have higher investment in road capacity and lower investment in transit. This would maintain current development trends and supporting growth across urban centers and suburbs, resulting in a more dispersed growth pattern compared to Scenario C. As a result, Alternative 2 would increase the potential for roadway expansion and associated development to extend into undeveloped or semi-rural areas where natural habitats, sensitive natural communities, and special-status species are more likely to occur. This would increase the potential for habitat conversion, fragmentation, and direct and indirect biological impacts compared to the proposed project. Overall, impacts under Alternative 2 would be **greater** than the proposed project and would remain significant and unavoidable.

5.4.4.2 Alternative 3 (Scenario B)

Compared to the proposed project (Scenario C), Alternative 3 would have a higher investment in roadway capacity improvements and the same level of investment in transit, resulting in a moderately dispersed development pattern that extends growth from urban centers into surrounding suburban and fringe areas. As a result, Alternative 3 would increase the likelihood of development pressure in urban fringe areas where remnant habitats, wildlife movement corridors, and sensitive biological resources may be present. This would could increase the potential for habitat fragmentation, edge effects, and disturbance to special-status species compared to the proposed project. Overall, impacts under Alternative 3 would be **greater** than the proposed project and would remain significant and unavoidable.

5.4.4.3 Alternative 4 (Scenario D)

Compared to the proposed project (Scenario C), Alternative 4 would include a higher investment in transit improvements, including light rail connections between major corridors and centers. This alternative would prioritize transit-oriented development and efficient land uses with redevelopment and increased urban density. This approach would concentrate growth in urban centers and along transit corridors, consistent with Scenario C but with a higher intensity of transit investment and corridor-based infrastructure development. While overall development pressure on undeveloped lands would generally be reduced, construction of transit corridors and related

infrastructure could still impact sensitive habitats and special-status species. Overall, impacts under Alternative 4 would be **similar** compared to the proposed project and would remain significant and unavoidable.

5.4.4.4 Alternative 5 (Scenario E)

Compared to the proposed project (Scenario C), Alternative 5 would have higher investment in transit and place a lower emphasis on road capacity expansion. This alternative would support dense core growth by maximizing infill and high-density transit-oriented development. It would also support commuter rail connections between cities. Under Alternative 5, high-density infill development would primarily occur within already urbanized areas characterized by compact development and ornamental landscaping, where natural habitats and sensitive biological resources are generally limited or absent. As such, impacts to biological resources associated with urban infill development would generally be similar to the proposed project. However, commuter rail infrastructure would extend into rural and semi-rural areas outside incorporated cities, where natural habitats are more likely to occur. This would increase the potential for habitat loss, fragmentation, and direct and indirect impacts to special-status plant and animal species, as well as sensitive natural communities such as vernal pools, riparian habitats, and valley grasslands. Overall, impacts to biological resources under Alternative 5 would be **greater** than those identified for the proposed project and would remain significant and unavoidable.

5.4.5 Cultural Resources

Given the programmatic nature of each alternative and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future projects under each scenario, evaluate the applicability and feasibility of project-specific mitigation, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts related to cultural resources would be significant and unavoidable under all SCS scenario alternatives, as with the proposed project.

5.4.5.1 Alternative 2 (Scenario A)

Compared to the proposed project (Scenario C), Alternative 2 would have higher investment in roadway capacity and lower investment in transit. This would maintain current development trends and growth across urban centers and suburbs, resulting in a more dispersed development pattern compared to the proposed project. As a result, Alternative 2 would also increase the extent of ground-disturbing activities across a broader geographic area, including rural and previously undisturbed areas which may contain subsurface cultural deposits. Ground-disturbing activities in these areas could encounter unknown archaeological resources or human remains, including those associated with Native American tribes. Overall, impacts to cultural resources under Alternative 2 would be **greater** than those under the proposed project and would remain significant and unavoidable.

5.4.5.2 Alternative 3 (Scenario B)

Compared to the proposed project (Scenario C), Alternative 3 would have a higher investment in roadway capacity improvements and the same level of investment in transit. This would support a moderately dispersed development pattern that extends growth from urban centers into surrounding suburban and fringe areas. As a result, Alternative 3 would also increase the extent of ground-disturbing activities across a broader geographic area, including rural and previously undisturbed areas, which may contain subsurface cultural deposits. Ground-disturbing activities in these areas could encounter unknown archaeological resources or human remains, including those associated with Native American tribes. Overall, impacts to cultural resources under Alternative 3 would be **greater** than those under the proposed project and would remain significant and unavoidable.

5.4.5.3 Alternative 4 (Scenario D)

Compared to the proposed project (Scenario C), Alternative 4 would have a higher investment in transit improvements, including light rail connections between major corridors and centers. This alternative would prioritize transit-oriented development and increase urban density along transit corridors and infill areas. As a result, Alternative 4 would focus growth along established urban centers and transit corridors, with less emphasis on outward expansion compared to the proposed project. Increased development in urban areas, where historic buildings tend to be located, could result in greater impacts to historic resources, including effects to the character of settings that contribute to the significance of historic built environments. However, impacts to archaeological resources and human remains would likely be less under Alternative 4 compared to the proposed project. This alternative's projected land use pattern would be more compact and would include fewer acres of rural and agricultural development within the same transportation network, resulting in reduced ground disturbance and a lower likelihood of encountering unknown subsurface archaeological resources or human remains. Overall, impacts to cultural resources under Alternative 4 would be **similar** to those under the proposed project and would remain significant and unavoidable.

5.4.5.4 Alternative 5 (Scenario E)

Compared to the proposed project (Scenario C), Alternative 5 would have higher investment in transit, place lesser emphasis on roadway capacity expansion, and support dense core growth through maximizing infill and high-density transit-oriented development. This alternative would also support commuter rail connections between cities. As a result, Alternative 5 would focus growth along established urban centers and transit corridors, with less emphasis on outward expansion compared to the proposed project. This increased development in urban areas, where historic buildings tend to be located, could result in greater impacts to historic resources, including effects to the character of settings that contribute to the significance of historic built environments, as pressure to redevelop historic buildings increases. However, impacts to archaeological resources and human remains would likely be less under Alternative 5 compared to the proposed project because its projected land use pattern would be more compact and would include fewer acres of rural and agricultural development. However, investments in commuter rail connections between cities in the Fresno COG Region would involve construction of transit infrastructure in areas outside of incorporated cities, which are generally rural in nature and may contain undisturbed surface

sediments. As such, transit projects under Alternative 5 involving excavation activities in undisturbed surface sediments may encounter unknown, unrecorded cultural resources or human remains, including those associated with Native American tribes. Overall, impacts to cultural resources under Alternative 5 would be **similar** to those under the proposed project and would remain significant and unavoidable.

5.4.6 Energy

Given the programmatic nature of each alternative and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future projects under each scenario, evaluate the applicability and feasibility of project-specific mitigation, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts related to energy would be significant and unavoidable under all SCS scenario alternatives, as with the proposed project.

5.4.6.1 Alternative 2 (Scenario A)

Compared to the proposed project (Scenario C), Alternative 2 would include higher investment in roadway capacity and lower investment in transit. This alternative would maintain current development trends and growth across urban centers and suburbs. As a result, Alternative 2 would result in a more dispersed growth pattern and have greater reliance on automobile travel compared to the proposed project. While Alternative 2 would continue to support a mix of housing types and community connectivity, its less compact development pattern may reduce opportunities for walking, bicycling, and transit use relative to the proposed project. As a result, transportation energy demand and VMT would be higher under Alternative 2, although overall energy impacts would likely remain **similar** in nature to those of the proposed project. Energy impacts under Alternative 2 would remain significant and unavoidable.

5.4.6.2 Alternative 3 (Scenario B)

Compared to the proposed project (Scenario C), Alternative 3 would have a higher investment in roadway capacity improvements and the same level of investment in transit. It would have a similar level of funding for transit projects. The alternative would result in a moderately dispersed development pattern that extends growth from urban centers into surrounding suburban and fringe areas. As a result, Alternative 3 would result in more dispersed growth pattern and greater reliance on automobile travel compared to the proposed project. While Alternative 3 would continue to support a mix of housing types and community connectivity, the less compact development pattern may reduce opportunities for walking, bicycling, and transit use relative to the proposed project. Overall travel behavior would still reflect reliance on automobiles. As a result, transportation energy demand and VMT could be slightly higher under Alternative 3, although overall energy impacts would remain **similar** in nature to those of the proposed project. Energy impacts under Alternative 3 would remain significant and unavoidable.

5.4.6.3 Alternative 4 (Scenario D)

Compared to the proposed project (Scenario C), Alternative 4 would include a higher investment in transit improvements, including light rail connections between major corridors and centers. This alternative would prioritize transit-oriented development and increased urban density along transit corridors and infill areas. As a result, Alternative 4 would focus development along established urban centers and transit corridors, with less emphasis on outward expansion compared to the proposed project. This compact pattern of development under Alternative 4 could accommodate a higher proportion of growth in more energy-efficient housing types like townhomes, apartments, and smaller single-family homes, as well as more compact commercial building types. In addition, this growth pattern would contribute to a reduction in transportation energy demand by locating land uses within walking or biking distance to community resources, including grocery stores. Transit would be more accessible within urban centers as stations/stops are typically located in busier areas. As such, potential energy impacts related to land use developments would be anticipated to be less than the proposed project due to higher energy savings associated with transit use. Specifically, transit development would encourage the use of alternative modes of transportation to the automobile, thereby reducing the demand for petroleum fuel (transportation energy) resources. While transit services generally utilize electricity (train, light rail, etc.) and petroleum or diesel (bus) for operations and maintenance, this energy use is more efficient and serves a higher volume of passengers than single-occupancy vehicles. Overall, energy impacts under Alternative 4 would be **less** than those under the proposed project and would remain significant and unavoidable.

5.4.6.4 Alternative 5 (Scenario E)

Compared to the proposed project (Scenario C), Alternative 5 would have a higher investment in transit. This alternative would be less emphasis on roadway capacity expansion, and support dense core growth through maximizing infill and high-density transit-oriented development. It would also support commuter rail connections between cities. As a result, Alternative 5 would concentrate growth within existing urbanized areas and transit-accessible locations to a greater degree than the proposed project. This growth pattern would contribute to a reduction in transportation energy demand by locating land uses within walking or biking distance to community resources, including grocery stores. Transit would also be more accessible within urban centers as stations/stops are typically located in busier areas. Transit development under Alternative 5, including improvements related to commuter rail between Fresno COG cities, would encourage the use of alternative modes of transportation to the automobile. This would reduce the demand for petroleum fuel (transportation energy) resources. While transit services generally utilize electricity (train, light rail, etc.) and petroleum or diesel (bus) for operations and maintenance, this energy use is more efficient and serves a higher volume of passengers than single-occupancy vehicles. Overall, energy impacts under Alternative 5 would be **less** to those under the proposed project and would remain significant and unavoidable.

5.4.7 Geology and Soils

Given the programmatic nature of each alternative and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future projects under each scenario, evaluate the applicability and feasibility of project-specific mitigation, and ensure implementation of mitigation

deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts related to geology and soils would be significant and unavoidable under all SCS scenario alternatives, as with the proposed project.

5.4.7.1 Alternative 2 (Scenario A)

Compared to the proposed project (Scenario C), Alternative 2 would have higher investment in roadway capacity and lower investment in transit. This alternative would maintain current development trends and growth across urban centers and suburbs. As a result, Alternative 2 would result in a more dispersed growth pattern compared to the proposed project. This growth pattern could increase the extent of development occurring in areas with variable geologic conditions, including seismic hazard zones and areas with moderate to high soil constraints, compared to the more compact development pattern of the proposed project. As with the proposed project, Alternative 2 would be subject to compliance with the California Building Code, Caltrans design criteria, and other applicable regulatory requirements intended to address geologic and soil hazards, including seismic conditions, soil stability, and expansive soils. Despite this, potential geology and soils impacts associated with Alternative 2 would be **greater** than those of the proposed project. Overall, impacts to geology and soils under Alternative 2 would remain significant and unavoidable.

5.4.7.2 Alternative 3 (Scenario B)

Compared to the proposed project (Scenario C), Alternative 3 would have a higher investment in roadway capacity improvements and the same level of funding for transit. This would result in a moderately dispersed development pattern that extends growth from urban centers into surrounding suburban and fringe areas. As a result, Alternative 3 would continue existing development patterns with a greater degree of suburban and urban fringe growth compared to the proposed project. However, land development projects under Alternative 3 could occur to a greater extent in urban fringe areas, potentially resulting in increased exposure to geologic and soil constraints compared to the proposed project. As with the proposed project, Alternative 3 would be subject to compliance with the California Building Code, Caltrans design criteria, and applicable regulatory requirements intended to reduce risks associated with seismic hazards, expansive soils, and other geologic constraints. Overall, potential geology and soils impacts related to land use developments under Alternative 2 would be **greater** than those of the proposed project. Overall, impacts to geology and soils under would remain significant and unavoidable.

5.4.7.3 Alternative 4 (Scenario D)

Compared to the proposed project, Alternative 4 would emphasize investment in transit improvements, including light rail connections between major corridors and centers, and would prioritize transit-oriented development and increased urban density along transit corridors and infill areas. As a result, Alternative 4 would focus growth within established urban centers and along transit corridors, resulting in a more compact development pattern compared to the proposed project. Concentration of development within already urbanized areas would generally reduce the potential for exposure to undeveloped geologic conditions; however, transportation improvements associated with transit and rail infrastructure could involve excavation and construction activities in areas with variable soil conditions and potential geologic constraints. As with the proposed project,

Alternative 4 would be subject to compliance with the California Building Code, Caltrans design criteria, and applicable regulatory requirements to address geologic hazards, including seismic risks and soil stability conditions. Overall, potential geology and soils impacts under Alternative 4 would be **similar** to those of the proposed project and would remain significant and unavoidable.

5.4.7.4 Alternative 5 (Scenario E)

Compared to the proposed project (Scenario C), Alternative 5 would have higher investment in transit, place less emphasis on roadway capacity expansion, and support dense core growth through maximizing infill and high-density transit-oriented development. This alternative would also support commuter rail connections between cities. As a result, Alternative 5 would concentrate growth within existing urbanized and transit-accessible areas to a greater degree than the proposed project, resulting in a more compact development pattern overall. While infill development within urbanized areas generally occurs in already disturbed and engineered environments with lower susceptibility to natural geologic hazards, the proposed commuter rail infrastructure under this alternative could extend into less developed areas where geologic and soil conditions may be more variable. As with the proposed project, Alternative 5 would be subject to compliance with the California Building Code, Caltrans design criteria, and applicable regulatory requirements intended to reduce geologic and soils-related hazards. Overall, potential geology and soils impacts under Alternative 5 would be **similar** to those of the proposed project and would remain significant and unavoidable.

5.4.8 Greenhouse Gas Emissions

Given the programmatic nature of each alternative and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future projects under each scenario, evaluate the applicability and feasibility of project-specific mitigation, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts related to greenhouse gas emissions would be significant and unavoidable under all SCS scenario alternatives, as with the proposed project.

5.4.8.1 Alternative 2 (Scenario A)

Compared to the proposed project (Scenario C), Alternative 2 would have higher investment in roadway capacity and lower investment in transit. This alternative would maintain current development trends and growth across urban centers and suburbs. As a result, Alternative 2 would result in a more dispersed growth pattern compared to the proposed project. This dispersed development pattern would reduce efficiency in transportation systems and increase reliance on automobile travel, resulting in higher VMT and associated mobile-source GHG emissions compared to the proposed project.

Transportation improvement projects included in Alternative 2 could generate operational GHG emissions associated with mobile sources (e.g., vehicle trips). Mobile-source GHG emissions would include project-generated vehicle trips supported by each project. Performance indicator modeling conducted by the Fresno COG indicates that Alternative 2 would result in a VMT per capita of 22.85, compared to 22.80 under the proposed 2026 RTP/SCS in 2035. This represents an increase of

approximately 0.05 VMT per capita, or 0.22 percent. Although this increase is negligible (less than 1 percent), it indicates that Alternative 2 would result in slightly higher VMT per capita and, therefore, slightly higher transportation-related GHG emissions than the proposed 2026 RTP/SCS. GHG reduction modeling conducted by the Fresno COG indicates that Alternative 2 would provide a slightly lower reduction in GHG emissions (13.41 percent reduction) from the reduction in per-capita passenger vehicle-generated GHG emissions when compared to the proposed project (13.58 percent reduction). Accordingly, GHG emissions impacts under Alternative 2 would be slightly **greater** than those identified for the proposed project and would remain significant and unavoidable.

5.4.8.2 Alternative 3 (Scenario B)

Compared to the proposed project (Scenario C), Alternative 3 would have a higher investment in roadway capacity improvements and the same level of investment in transit. This would result in a moderately dispersed development pattern that extends growth from urban centers into surrounding suburban and fringe areas. As a result, Alternative 3 would support development occurring to a greater extent in suburban and urban fringe areas compared to the proposed project. This development pattern would result in a more dispersed growth form relative to the proposed project, and could reduce overall efficiency in the transportation system by increasing reliance on automobile travel compared to more compact development patterns.

Transportation improvement projects under Alternative 3 could generate operational GHG emissions associated with mobile sources (e.g., vehicle trips). Mobile-source GHG emissions would include project-generated vehicle trips supported by each project. Performance indicator modeling conducted by the Fresno COG indicates Alternative 3 would result in a VMT per capita of 22.84, compared to 22.80 under the proposed project in 2035. This represents an increase of approximately 0.05 VMT per capita, or 0.22 percent. Although this increase is negligible (less than 1 percent), it indicates that Alternative 3 would result in slightly higher VMT per capita and, therefore, slightly higher transportation-related GHG emissions than the proposed 2026 RTP/SCS. GHG reduction modeling conducted by the Fresno COG indicates that Alternative 3 would provide a slightly lower reduction in GHG emissions (13.40 percent reduction) from reduction in per-capita passenger vehicle-generated GHG emissions when compared to the proposed project (13.58 percent reduction). Accordingly, GHG emissions impacts under Alternative 3 would be slightly **greater** than those identified for the proposed project and would remain significant and unavoidable.

5.4.8.3 Alternative 4 (Scenario D)

Compared to the proposed project (Scenario C), Alternative 4 would emphasize investment in transit improvements, including light rail connections between major corridors and centers. This alternative would prioritize transit-oriented development and increased urban density along transit corridors and infill areas. As a result, Alternative 4 would focus growth along established urban centers and transit corridors, resulting in a more compact and transit-oriented development pattern compared to the proposed project, which would contribute to reductions in VMT and associated mobile-source GHG emissions from existing conditions by improving access to alternative modes of transportation (e.g., walking, biking, transit). This would also contribute to reductions in area-source GHG emissions through promoting more compact, dense development that allows for more efficient maintenance. As such, potential GHG emissions impacts related to land use developments would be anticipated to be similar to the proposed project.

Transportation improvement projects under Alternative 4 could generate operational GHG emissions associated with mobile sources (e.g., vehicle trips). Mobile-source GHG emissions would include project-generated vehicle trips supported by each project. Performance indicator modeling conducted by the Fresno COG indicates that implementation of Alternative 4 would result in a VMT per capita of 22.81, compared to 22.80 under the proposed project in 2035. This represents an increase of approximately 0.01 VMT per capita, or 0.04 percent. Although this increase is negligible (less than 1 percent), it indicates Alternative 4 would result in slightly higher VMT per capita and, therefore, slightly higher transportation-related GHG emissions than the proposed project. GHG reduction modeling conducted by the Fresno COG indicates that Alternative 4 would provide a slightly lower reduction in GHG emissions (13.56 percent reduction) from reduction in per-capita passenger vehicle-generated GHG emissions when compared to the proposed project (13.58 percent reduction). Based on these slight quantitative differences, GHG emissions impacts under Alternative 4 would be **similar** to those identified for the proposed project and would remain significant and unavoidable.

5.4.8.4 Alternative 5 (Scenario E)

Compared to the proposed project, Alternative 5 would have higher investment in transit and lower focus on roadway capacity expansion. This alternative would support dense core growth through maximizing infill development and high-density transit-oriented development supported by commuter rail connections between cities. As a result, Alternative 5 would concentrate growth within existing urbanized areas and transit-accessible locations to a greater degree than the proposed project, resulting in a highly compact and transit-oriented regional development pattern. Alternative 5 would contribute to reductions in VMT and associated mobile-source GHG emissions from existing conditions by improving access to alternative modes of transportation (e.g., walking, biking, transit). This would also contribute to reductions in area-source GHG emissions through promoting more compact, dense development that allows for more efficient maintenance. As such, potential GHG emissions impacts related to land use developments would be anticipated to be similar to the proposed project.

Transportation improvement projects included in Alternative 5 could generate operational GHG emissions associated with mobile sources (e.g., vehicle trips). Mobile-source GHG emissions would include project-generated vehicle trips supported by each project. Despite promoting the development of commuter rail, performance indicator modeling conducted by the Fresno COG indicates that implementation of Alternative 5 would result in a VMT per capita of 22.81, compared to 22.80 under the proposed project in 2035. This represents an increase of approximately 0.01 VMT per capita, or 0.04 percent. Although this increase is negligible (less than 1 percent), it indicates Alternative 5 would result in slightly higher VMT per capita and, therefore, slightly higher transportation-related GHG emissions than the proposed project. GHG reduction modeling conducted by the Fresno COG indicates that Alternative 5 would provide a slightly lower reduction in GHG emissions (13.41 percent reduction) from reduction in per-capita passenger vehicle-generated GHG emissions when compared to the proposed project (13.52 percent reduction). Based on these slight quantitative differences, GHG emissions impacts under Alternative 5 would be **similar** to those identified for the proposed project and would remain significant and unavoidable.

5.4.9 Hazards and Hazardous Materials

Given the programmatic nature of each alternative and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future projects under each scenario, evaluate the applicability and feasibility of project-specific mitigation, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts related to hazards and hazardous materials would be significant and unavoidable under all SCS scenario alternatives, as with the proposed project.

5.4.9.1 Alternative 2 (Scenario A)

Compared to the proposed project (Scenario C), Alternative 2 would include higher investment in roadway capacity, resulting in a more dispersed development pattern that continues existing growth trends rather than concentrating growth in urban centers. Land uses known to involve the routine handling of hazardous materials (e.g., industrial uses) are typically located in more urban portions of the Fresno COG Region due to infrastructure and employment requirements. Because Alternative 2 would result in a more dispersed development pattern and increase the likelihood that transportation improvement and land use development projects would occur in suburban and urban fringe areas, it is less likely that such projects would result in the release of hazardous materials. As such, hazardous materials may be encountered during construction activities to a lesser degree compared to the proposed project. Further, hazardous materials impacts to the public or the environment resulting from transportation improvement projects under Alternative 2 would continue to be subject to federal, State, and local requirements and regulations that minimize the creation of significant hazards through the routine transport, use, or disposal of hazardous materials, as well as through reasonably foreseeable upset and accident conditions involving releases of hazardous materials. Overall, hazards and hazardous materials impacts under Alternative 2 would be **lesser** than those identified for the proposed project and would remain significant and unavoidable.

5.4.9.2 Alternative 3 (Scenario B)

Compared to the proposed project (Scenario C), Alternative 3 would have a higher investment in roadway capacity improvements with a similar level of investment in transit. This alternative would result in a moderately dispersed development pattern that extends growth from urban centers into surrounding suburban and fringe areas. As a result, Alternative 3 would increase the potential for transportation improvement and land use development projects to occur in less-developed areas. Land uses known to involve the routine handling of hazardous materials (e.g., industrial uses) are typically located in more urban portions of the Fresno COG Region due to infrastructure and employment requirements. Because Alternative 3 would result in a more dispersed development pattern and increase the likelihood that transportation improvement and land use development projects would occur in suburban and urban fringe areas, it is less likely that such projects would result in the release of hazardous materials. As such, hazardous materials may be encountered during construction activities to a lesser degree compared to the proposed project. Further, as with the proposed project, all projects under Alternative 3 would be subject to federal, State, and local requirements and regulations that minimize the creation of significant hazards to the public or the environment through hazardous materials handling and disposal. Overall, hazards and hazardous

materials impacts under Alternative 3 would be **greater** than those identified for the proposed project and would remain significant and unavoidable.

5.4.9.3 Alternative 4 (Scenario D)

Compared to the proposed project (Scenario C), Alternative 4 would emphasize investment in transit improvements, including light rail connections between major corridors and centers. This alternative would prioritize transit-oriented development and increased urban density along transit corridors and infill areas. As a result, Alternative 4 would focus development along established urban centers and transit corridors to a greater degree than the proposed project. This more compact development pattern would reduce the extent of development in suburban and urban fringe areas where hazardous materials may be present in soils or groundwater. However, transportation improvement projects under Alternative 4, including transit and rail infrastructure, could still encounter hazardous materials in urban settings, such as those associated with industrial operations. As with the proposed project, all projects would be subject to federal, State, and local requirements and regulations that minimize the creation of significant hazards through hazardous materials use, transport, and disposal. Overall, hazards and hazardous materials impacts under Alternative 4 would be **similar** to those identified for the proposed project and would remain significant and unavoidable.

5.4.9.4 Alternative 5 (Scenario E)

Compared to the proposed project (Scenario C), Alternative 5 would include higher investment in transit and a lower focus on roadway capacity expansion. This alternative would support dense core growth through maximizing infill development and high-density transit-oriented development. It would also support commuter rail connections between cities. Alternative 5 would focus development within existing urbanized areas and transit-accessible locations to a greater degree than the proposed project, resulting in a highly compact development pattern. This compact development pattern would reduce the extent of development in suburban and urban fringe areas where hazardous materials may be present in soils or groundwater. However, transportation improvement projects under Alternative 5, including transit and rail infrastructure, could still encounter hazardous materials in urban settings, such as those associated with industrial operations. As with the proposed project, all projects would be subject to federal, State, and local requirements and regulations that minimize the creation of significant hazards through hazardous materials use, transport, and disposal. Overall, hazards and hazardous materials impacts under Alternative 5 would be **similar** to those identified for the proposed project and would remain significant and unavoidable.

5.4.10 Hydrology and Water Quality

Given the programmatic nature of each alternative and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future projects under each scenario, evaluate the applicability and feasibility of project-specific mitigation, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts related to

hydrology and water quality would be significant and unavoidable under all SCS scenario alternatives, as with the proposed project.

5.4.10.1 Alternative 2 (Scenario A)

Compared to the proposed project (Scenario C), Alternative 2 would include higher investment in roadway capacity and lower investment in transit. This alternative would maintain current development trends across urban centers and suburbs. Alternative 2 would result in more dispersed growth pattern that would increase impervious surface coverage. Increased impervious surfaces would reduce groundwater recharge and alter drainage patterns, contributing to higher runoff, erosion, siltation, and flooding risk. Therefore, impacts to hydrology and water quality under Alternative 2 would be **greater** than the proposed project and would remain significant and unavoidable.

5.4.10.2 Alternative 3 (Scenario B)

Compared to the proposed project (Scenario C), Alternative 3 would have a higher investment in roadway capacity improvements and a similar level of investment for transit. This alternative would result in a moderately dispersed development pattern that extends growth from urban centers into surrounding suburban and fringe areas. As a result, Alternative 3 would extend development further into suburban and fringe areas than the proposed project, increasing impervious surface coverage and disruption of natural drainage patterns. These changes would increase runoff, erosion, siltation, and localized flooding potential. Therefore, impacts to hydrology and water quality under Alternative 3 would be **greater** than the proposed project and would remain significant and unavoidable.

5.4.10.3 Alternative 4 (Scenario D)

Compared to the proposed project (Scenario C), Alternative 4 would have a higher investment in transit improvements. Under this alternative, transit-oriented development would be focused along corridors and infill areas. As a result, Alternative 4 would concentrate growth in existing urban areas to a greater degree than the proposed project, reducing outward expansion. This compact development pattern would reduce impervious surface increases and limit disruption to drainage and groundwater recharge. However, transportation improvements would still introduce localized stormwater and construction-related effects. Therefore, impacts to hydrology and water quality under Alternative 4 would be **less** than the proposed project but would remain significant and unavoidable.

5.4.10.4 Alternative 5 (Scenario E)

Compared to the proposed project (Scenario C), Alternative 5 would include higher investment in transit and focus on dense infill and commuter rail-supported development within urbanized areas. As a result, Alternative 5 would further concentrate growth within existing developed and transit-accessible areas, reducing outward expansion. This would generally reduce new impervious surface creation and limit impacts to drainage and groundwater recharge compared to more dispersed scenarios. However, commuter rail and transit infrastructure improvements could still affect hydrology and water quality in less developed areas. Therefore, impacts to hydrology and water quality under Alternative 5 would be **less** than the proposed project and would remain significant and unavoidable.

5.4.11 Land Use and Planning

Given the programmatic nature of each alternative and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future projects under each scenario, evaluate the applicability and feasibility of project-specific mitigation, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts related to land use and planning would be significant and unavoidable under all SCS scenario alternatives, as with the proposed project.

5.4.11.1 Alternative 2 (Scenario A)

Compared to the proposed project (Scenario C), Alternative 2 would include higher investment in roadway capacity and lower investment in transit. This alternative would maintain current development trends and growth across urban centers and suburbs. As a result, Alternative 2 would result in a more dispersed pattern of development. Roadway expansion could increase the potential for community division through the expansion of transportation infrastructure and development into less urbanized areas.

As under the proposed project, future land use developments and transportation improvement projects under Alternative 2 would still be required to demonstrate consistency with applicable general plan and zoning designations or obtain the necessary discretionary approvals and amendments by the applicable approving body (e.g., a local city council or the Fresno County Board of Supervisors). In addition, local jurisdictions would continue to regulate the type, scale, and location of future development through established planning and zoning processes.

Performance indicator modeling conducted by the Fresno COG indicates that implementation of Alternative 2 would result in the overall consumption of 6,871 acres of land by new residential and commercial development, compared to 6,200 acres under the proposed project in 2035. This represents an increase of approximately 671 acres, or 10.8 percent. As a result, Alternative 2 would result in a greater amount of land conversion than the proposed project. Overall, land use and planning impacts under Alternative 2 would be **greater** than those identified for the proposed project and would remain significant and unavoidable.

5.4.11.2 Alternative 3 (Scenario B)

Compared to the proposed project (Scenario C), Alternative 3 would have a higher investment in roadway capacity improvements and a similar level of investment in transit. This alternative would result in a moderately dispersed development pattern that extends growth from urban centers into surrounding suburban and fringe areas. As a result, Alternative 3 would promote a greater degree of suburban expansion compared to the proposed project, increasing the potential for community division. Although Alternative 3 would also support redevelopment and efficient land use within existing developed areas, transportation and land use improvements could still extend into suburban and urban fringe locations to a greater degree than the proposed project.

Future development under Alternative 3 would continue to be governed by applicable general plan and zoning designations, and projects that conflict with adopted land use plans would require discretionary approvals or amendments by the applicable approving body (e.g., a local city council or the Fresno County Board of Supervisors). In addition, future transportation improvement projects would be subject to CEQA review to evaluate and mitigate potential land use conflicts where feasible.

Performance indicator modeling conducted by the Fresno COG indicates that implementation of Alternative 3 would result in the overall consumption of 6,681 acres of land by new residential and commercial development, compared to 6,200 acres under the proposed 2026 RTP/SCS in 2035. This represents an increase of approximately 481 acres, or 7.8 percent. As a result, Alternative 3 would result in a greater amount of land conversion than the proposed 2026 RTP/SCS. Overall, land use and planning impacts under Alternative 3 would be **greater** than those identified for the proposed 2026 RTP/SCS and would remain significant and unavoidable.

5.4.11.3 Alternative 4 (Scenario D)

Compared to the proposed project (Scenario C), Alternative 4 would include a higher investment in transit improvements, including light rail connections between major corridors and centers, and would prioritize transit-oriented development and increased urban density along transit corridors and infill areas. As a result, Alternative 4 would concentrate growth within established urban centers and transit corridors to a greater degree than the proposed project and would reduce outward expansion. Redevelopment and higher-density development could increase the potential for localized community division within existing urbanized areas. For example, transit-oriented development and new transit infrastructure could introduce taller structures, expanded station areas, or transportation corridors that may alter neighborhood connectivity or create localized barriers between portions of communities.

Future land use developments under Alternative 4 would continue to be governed by applicable general plan and zoning designations, setbacks, and discretionary local review processes, including approvals by the applicable approving body (e.g., a local city council or the Fresno County Board of Supervisors), intended to address compatibility and community character concerns. In addition, future transportation improvement projects would be subject to CEQA review to evaluate and mitigate land use conflicts where feasible.

Performance indicator modeling conducted by the Fresno COG indicates that implementation of Alternative 4 would result in the overall conversion of 6,200 acres of land, the same amount as the proposed project in 2035. Overall, land use and planning impacts under Alternative 4 would be **similar** to those identified for the proposed project and would remain significant and unavoidable.

5.4.11.4 Alternative 5 (Scenario E)

Compared to the proposed project (Scenario C), Alternative 5 would include higher investment in transit and would emphasize dense infill development within built-out portions of the Fresno COG Region near transit opportunities. This alternative would also support commuter rail connections between cities. As a result, Alternative 5 would concentrate growth within existing urbanized areas to a greater degree than the proposed project. This growth would have potential for localized

community division associated with high-density infill and transit-oriented development. Infill development could divide communities through the introduction of taller or wider structures, or secure developments surrounded by fencing, which could create barriers between portions of existing neighborhoods. However, a site's general plan and zoning designations typically govern the type, scale, massing, height, and architectural features of new structures, and future developments would still be required to adhere to setbacks and other applicable development standards. Given the existing density and street layout of urban centers, it is unlikely that a stand-alone land use development project would create a barrier large enough to divide an established community

Future land use developments under Alternative 5 would still be required to demonstrate consistency with applicable general plan and zoning designations or obtain the appropriate discretionary approvals and amendments by the applicable approving body (e.g., a local city council or the Fresno County Board of Supervisors).

Performance indicator modeling conducted by the Fresno COG indicates that implementation of Alternative 5 would result in the overall conversion of 6,200 acres of land, the same amount as the proposed project in 2035. Overall, land use and planning impacts under Alternative 5 would be **similar** to those identified for the proposed project and would remain significant and unavoidable.

5.4.12 Mineral Resources

Given the programmatic nature of each alternative and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future projects under each scenario, evaluate the applicability and feasibility of project-specific mitigation, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts related to mineral resources would be significant and unavoidable under all SCS scenario alternatives, as with the proposed project.

5.4.12.1 Alternative 2 (Scenario A)

Compared to the proposed project (Scenario C), Alternative 2 would include higher investment in roadway capacity and lower investment in transit. This alternative would maintain current development trends and growth across urban centers and suburbs. As a result, Alternative 2 would support more dispersed growth patterns and roadway expansion in suburban and urban fringe areas. This could increase the potential for projects to occur near MRZ-2-designated lands, active mining operations, or locally important aggregate resource areas along the San Joaquin River and Kings River resource areas. Future projects facilitated under Alternative 2 could result in greater potential to limit access to mineral resource recovery sites or create land use conflicts with existing or future extraction activities, particularly in areas identified for aggregate, oil, and natural gas resources. Although individual projects would be required to comply with SMARA and applicable local general plans, implementation of Alternative 2 could increase pressure on known mineral resource areas due to expanded infrastructure and continued outward growth patterns. Overall, impacts related to mineral resources under Alternative 2 would be **greater** than those identified for the proposed project and would remain significant and unavoidable.

5.4.12.2 Alternative 3 (Scenario B)

Compared to the proposed project (Scenario C), Alternative 3 would have a higher investment in roadway capacity improvements and a similar level of investment in transit. In addition, Alternative 3 would result in a moderately dispersed development pattern that extends growth from urban centers into surrounding suburban and fringe areas. As such, Alternative 3 would continue to support roadway improvements and outward growth patterns that could increase the likelihood of transportation and land use development projects occurring near MRZ-2-designated mineral resource areas, existing mining operations, and locally important aggregate recovery sites. Although Alternative 3 would include some redevelopment and efficient land use strategies, continued roadway expansion and suburban growth could result in greater land use conflicts with mineral resource extraction areas and reduce long-term access to aggregate, oil, and natural gas resources within the Fresno COG Region. Individual projects would still be required to comply with SMARA and applicable local mineral resource protection policies; however, because the exact location and design of future projects are unknown, the potential for conflicts with mineral resource recovery sites would remain. Overall, impacts related to mineral resources under Alternative 3 would be **greater** than those identified for the proposed project and would remain significant and unavoidable.

5.4.12.3 Alternative 4 (Scenario D)

Compared to the proposed project (Scenario C), Alternative 4 would include a higher investment in transit improvements, including light rail connections between major corridors and centers. This alternative would prioritize transit-oriented development, redevelopment, and increased urban density along transit corridors and infill areas. As a result, Alternative 4 would concentrate more development within existing urbanized areas and established transportation corridors, reducing the likelihood of widespread encroachment into undeveloped mineral resource areas compared to more dispersed growth alternatives. Because Alternative 4 would focus development within built-out areas, future projects would generally be less likely to interfere with access to MRZ-2-designated aggregate resources or create conflicts with active mining operations and petroleum extraction areas. However, transportation improvements and redevelopment activities could still occur near locally important mineral resource recovery sites and existing oil and gas infrastructure within the Fresno COG Region. Overall, impacts related to mineral resources under Alternative 4 would be **less** than those identified for the proposed project and would remain significant and unavoidable.

5.4.12.4 Alternative 5 (Scenario E)

Compared to the proposed project (Scenario C), Alternative 5 would include higher investment in transit and would emphasize dense infill development within built-out portions of the Fresno COG Region near transit opportunities. This alternative would also support commuter rail connections between cities. As a result, Alternative 5 would concentrate most future growth within existing urbanized areas, reducing the potential for widespread conversion of undeveloped lands containing MRZ-2-designated mineral resources compared to more dispersed development patterns. Because Alternative 5 would prioritize infill and transit-oriented development, future land use projects would generally be less likely to interfere with aggregate resource recovery areas along the San Joaquin River and Kings River or conflict with petroleum extraction activities in western Fresno County. However, investments in commuter rail and regional transit infrastructure could still introduce transportation improvements into rural or undeveloped areas containing mineral resources or active

extraction operations. Overall, impacts related to mineral resources under Alternative 5 would be **similar** to those identified for the proposed project and would remain significant and unavoidable.

5.4.13 Noise

Given the programmatic nature of each alternative and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future projects under each scenario, evaluate the applicability and feasibility of project-specific mitigation, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts related to noise would be significant and unavoidable under all SCS scenario alternatives, as with the proposed project.

5.4.13.1 Alternative 2 (Scenario A)

Compared to the proposed project (Scenario C), Alternative 2 would include higher investment in roadway capacity and lower investment in transit. This alternative would maintain current development trends and growth across urban centers and suburbs. As a result, Alternative 2 would support a more dispersed growth pattern. Future projects in suburban and urban fringe areas could increase the public's exposure to locations where roadway traffic is the most pervasive source of noise in the Fresno COG Region. Roadway traffic noise would remain the dominant environmental noise source, particularly along major arterials, highways, and freeways, where noise levels are driven by traffic volumes, vehicle speeds, and higher percentages of medium and heavy trucks. As a result of expanded roadway capacity and continued reliance on automobile travel, Alternative 2 could increase exposure of noise-sensitive land uses to transportation-related noise, particularly in areas adjacent to high-volume corridors. Rail and airport-related noise sources could also influence localized conditions depending on proximity to existing infrastructure, particularly where development occurs near established transportation corridors. Construction activities associated with roadway improvements and new development would contribute temporary but localized increases in ambient noise levels. Overall, impacts related to noise under Alternative 2 would be **similar** to those identified for the proposed project and would remain significant and unavoidable.

5.4.13.2 Alternative 3 (Scenario B)

Compared to the proposed project (Scenario C), Alternative 3 would increase investment in roadway capacity improvements and have a similar level of investment in transit. This alternative would result in a moderately dispersed development pattern that extends growth from urban centers into surrounding suburban and fringe areas. As a result, Alternative 3 would support roadway improvements and more corridor-oriented and outward growth patterns that could increase the likelihood of transportation and land use development projects occurring near major arterials, highways, and freight corridors where roadway traffic is the most pervasive source of noise in the Fresno COG Region. Roadway traffic noise would remain the dominant environmental noise source, particularly along facilities such as I-5, SR-99, and other major expressways, where noise levels are driven by traffic volumes, vehicle speeds, and higher proportions of medium and heavy trucks, including nighttime traffic. Rail and airport-related noise sources could also influence localized conditions depending on proximity to existing infrastructure, particularly where development occurs

near established transportation corridors. As a result of this pattern of growth, Alternative 3 could increase exposure of noise-sensitive land uses to transportation-related noise in corridor-adjacent areas, while overall regional noise levels would generally remain similar to the proposed project. Overall, impacts related to noise under Alternative 3 would be **similar** to those identified for the proposed project and would remain significant and unavoidable.

5.4.13.3 Alternative 4 (Scenario D)

Compared to the proposed project (Scenario C), Alternative 4 would include higher investments in transit improvements, including light rail connections between major corridors and centers. This alternative would prioritize transit-oriented development, redevelopment, and increased urban density along transit corridors and infill areas. As a result, Alternative 4 would concentrate more development within existing urbanized areas and established transportation corridors, reducing the likelihood of outward expansion into suburban and rural areas where ambient noise levels are generally lower and primarily influenced by roadway traffic. Roadway traffic noise would remain the dominant environmental noise source in the Fresno COG Region, particularly along major arterials, highways, and freeways such as I-5 and SR-99, where noise levels are driven by traffic volumes, vehicle speeds, and higher percentages of medium and heavy trucks. However, increased infill development and transit-oriented growth could intensify localized exposure of noise-sensitive receptors to transportation-related noise and vibration in urban centers and along rail and transit corridors, including noise from train operations, station activity, and roadway congestion associated with higher-density land uses. Construction activities associated with transit infrastructure improvements and redevelopment projects could also result in temporary increases in ambient noise levels in already developed areas with noise-sensitive receptors. Overall, impacts related to noise under Alternative 4 would be **similar** to those identified for the proposed project and would remain significant and unavoidable.

5.4.13.4 Alternative 5 (Scenario E)

Compared to the proposed project (Scenario C), Alternative 5 would include higher investment in transit and would emphasize dense infill development within built-out portions of the Fresno COG Region near transit opportunities. This alternative would also support commuter rail connections between cities. As a result, Alternative 5 would concentrate most future growth within existing urbanized areas, reducing the potential for outward expansion into suburban and rural areas where baseline ambient noise levels are generally lower and roadway traffic is the primary noise source. Roadway traffic would remain the dominant environmental noise source in the region, particularly along major arterials, highways, and freeways such as I-5 and SR-99, while commuter rail and freight rail operations could introduce additional localized noise and vibration along existing and new rail corridors. Concentration of development within urban centers and transit corridors could increase localized exposure of noise-sensitive receptors to transportation-related noise, including traffic congestion, transit activity, and stationary sources associated with higher-density development. Construction activities associated with transit infrastructure expansion and infill redevelopment could also result in temporary noise increases in already developed areas with existing sensitive receptors. Overall, impacts related to noise under Alternative 5 would be **similar** to those identified for the proposed project and would remain significant and unavoidable.

5.4.14 Population and Housing

Given the programmatic nature of each alternative and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future projects under each scenario, evaluate the applicability and feasibility of project-specific mitigation, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts related to population and housing would be significant and unavoidable under all SCS scenario alternatives, as with the proposed project.

5.4.14.1 Alternative 2 (Scenario A)

Compared to the proposed project (Scenario C), Alternative 2 would include higher investment in road capacity projects and lower investment in transit. Alternative 2 would emphasize road capacity improvements to improve roadway connectivity and efficiency rather than supporting higher-density, transit-oriented redevelopment as with the proposed project. Alternative 2 would also distribute growth more broadly across urban and suburban areas and would place less emphasis on compact infill development. Although population growth under Alternative 2 would be similar to the proposed project because the same overall regional growth in population and housing is assumed, Alternative 2 would maintain existing development trends by distributing growth across both urban centers and suburban areas. As a result, Alternative 2 would result in a more dispersed growth pattern, which may result in less pressure to redevelop existing sites and instead encourage new residential and commercial development within more rural or suburban settings. Alternative 2 could indirectly induce unplanned growth in some areas of the Fresno COG Region, similar to the proposed project, due to urban redevelopment projects that could displace existing housing units and affected residents; however, this alternative could result in less displacement than under the proposed project given the less intense urban development compared to the proposed project. As with the proposed project, future transportation improvements under Alternative 2, including roadway expansions, could require permanent right-of-way (ROW) acquisition in some urban, suburban, and rural areas where alignments extend between cities. Therefore, Alternative 2 could still result in localized redevelopment and associated displacement, similar to the proposed project. Overall, impacts related to population and housing under Alternative 2 would be **similar** to those identified for the proposed project and would remain significant and unavoidable.

5.4.14.2 Alternative 3 (Scenario B)

Compared to the proposed project (Scenario C), Alternative 3 would have a higher investment in roadway capacity improvements and a similar level of funding for transit. Alternative 3 would result in a moderately dispersed development pattern that extends growth from urban centers into surrounding suburban and fringe areas. Although population growth under Alternative 3 would be similar to the proposed project because the same overall regional growth in population and housing is assumed, Alternative 3 would maintain existing development trends. As a result, this alternative would have a more dispersed growth pattern, which may result in less pressure to redevelop existing sites and instead encourage new residential and commercial development within more rural or suburban settings. Alternative 3 could indirectly induce unplanned growth in some areas of the Fresno COG Region, similar to the proposed project. Urban redevelopment projects could still

displace existing housing units and affected residents; however, this alternative could result in less displacement than under the proposed project given the less intense urban development compared to the proposed project. As with the proposed project, future transportation improvements under Alternative 3, including roadway expansions, could require permanent ROW acquisition in some urban, suburban, and rural areas where alignments extend between cities. Overall, impacts related to noise under Alternative 3 would be **similar** to those identified for the proposed project and would remain significant and unavoidable.

5.4.14.3 Alternative 4 (Scenario D)

Compared to the proposed project (Scenario C), Alternative 4 would include a higher investment in transit improvements, including light rail connections between major corridors and centers. This alternative would prioritize transit-oriented development, redevelopment, and increased urban density along transit corridors and infill areas, though population growth under Alternative 4 would be similar to the proposed project because the same overall regional growth in population and housing is assumed. As a result, Alternative 4 would concentrate growth within existing urbanized areas to a greater degree than the proposed project, which could result in infill development that could displace existing housing units and affected residents.

In addition, future transportation improvements, including transit improvements and light rail connections, could require permanent ROW acquisition in some urban, suburban, and rural areas where alignments extend between cities. In some cases, this could contribute to localized displacement of existing people or housing. Due to the more compact and higher-intensity transit-oriented development pattern, Alternative 4 could result in **greater** ROW acquisition and displacement than the proposed project, and impacts would remain significant and unavoidable.

5.4.14.4 Alternative 5 (Scenario E)

Compared to the proposed project (Scenario C), Alternative 5 would include higher investment in transit and would emphasize dense infill development within built-out portions of the Fresno COG Region near transit opportunities. This alternative would also support commuter rail connections between cities. Although population growth under Alternative 5 would be similar to the proposed project because the same overall regional growth in population and housing is assumed, Alternative 5 would concentrate growth within existing urbanized areas to a greater degree than the proposed project, which could result in infill development that could displace existing housing units and affected residents.

Future transportation improvements, including commuter rail connections, could require permanent ROW acquisition in some urban, suburban, and limited rural or unincorporated areas where alignments extend between cities. In some cases, this could contribute to localized displacement of existing people or housing. Due to the more compact and higher-intensity transit-oriented development pattern, Alternative 5 could result in **greater** ROW acquisition and displacement than the proposed project, and impacts would remain significant and unavoidable.

5.4.15 Public Services

Given the programmatic nature of each alternative and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future projects under each scenario, evaluate the applicability and feasibility of project-specific mitigation, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts related to public services would be significant and unavoidable under all SCS scenario alternatives, as with the proposed project.

5.4.15.1 Alternative 2 (Scenario A)

Compared to the proposed project (Scenario C), Alternative 2 has a higher investment in roadway operation projects and roadway capacity improvements. Alternative 2 would maintain existing development trends by distributing growth across both urban centers and suburban areas. While impacts to public services under Alternative 2 would be similar to those of the proposed project because the same total population, housing, and employment are assumed and impacts are generally population-driven, the more dispersed land use pattern could reduce the ability of public service providers to maintain local service levels for fire and police, as well as schools and libraries, by making service delivery less efficient. However, this reduced efficiency would not necessarily result in the need to construct new or expanded fire, police, school, or library facilities to meet acceptable service ratios or response times. Additionally, similar to the proposed project, future projects could improve emergency access in some areas and therefore reduce congestion in the Fresno COG Region, which could reduce response times and improve access to public facilities. Overall, impacts related to the provision of new or expanded fire, police, school, and library facilities under Alternative 2 would be **similar** to the proposed project and would remain significant and unavoidable.

5.4.15.2 Alternative 3 (Scenario B)

Compared to the proposed project (Scenario C), Alternative 3 would have a higher investment in roadway capacity improvements and a similar level of investment in transit. Alternative 3 would result in a moderately dispersed development pattern that extends growth from urban centers into surrounding suburban and fringe areas. Although population growth under Alternative 3 would be similar to the proposed project because the same overall regional growth in population and housing is assumed, Alternative 3 would maintain existing development trends resulting in a more dispersed growth pattern. This may result in less pressure to redevelop existing sites and induce direct population growth by encouraging new residential and commercial development within more rural or suburban settings. The more dispersed land use pattern could reduce the ability of public service providers to maintain local service levels for fire and police, as well as schools and libraries, by making service delivery less efficient. However, this reduced efficiency would not necessarily result in the need to construct new or expanded fire, police, school, or library facilities to meet acceptable service ratios or response times. Additionally, similar to the proposed project, projects could improve emergency access in some areas and therefore reduce congestion in the Fresno COG Region, which could beneficially affect response times and access to public facilities. Overall, impacts related to the provision of new or expanded fire, police, school, and library facilities under

Alternative 3 would be **similar** to the proposed project and would remain significant and unavoidable.

5.4.15.3 Alternative 4 (Scenario D)

Compared to the proposed project (Scenario C), Alternative 4 would include higher investments in transit improvements, including light rail connections between major corridors and centers. This alternative would prioritize transit-oriented development, redevelopment, and increased urban density along transit corridors and infill areas. While impacts to public services under Alternative 4 are anticipated to be similar to those of the proposed project because the same total population, housing, and employment are assumed, the more compact and transit-oriented land use pattern could increase localized demand for fire, police, schools, and libraries in higher-density areas. In some cases, this could result in the need for additional or expanded facilities to maintain service ratios. However, this more efficient land use pattern would also allow public services to be delivered more efficiently overall compared to more dispersed growth scenarios. Similarly, the planned transit and rail improvements under Alternative 4 would improve regional connectivity and access, which could benefit emergency response travel times along major corridors. Overall, public service impacts under Alternative 4 would be **similar** to the proposed project and would remain significant and unavoidable.

5.4.15.4 Alternative 5 (Scenario E)

Compared to the proposed project (Scenario C), Alternative 5 would include higher investment in transit and would emphasize dense infill development within built-out portions of the Fresno COG Region near transit opportunities. This alternative would also support commuter rail connections between cities. While impacts to public services under Alternative 5 are anticipated to be similar to those of the proposed project because the same total population, housing, and employment are assumed, the more compact and transit-oriented land use pattern could increase localized demand for fire, police, schools, and libraries in higher-density areas. In some cases, this could result in the need for additional or expanded facilities to maintain service ratios. However, this more efficient land use pattern would allow public services to be delivered more efficiently overall compared to more dispersed growth scenarios. In addition, the planned transit improvements and commuter rail connections under Alternative 4 would improve regional connectivity and access, which could benefit emergency response travel times along major corridors. Overall, public service impacts under Alternative 5 would be **similar** to the proposed project and would remain significant and unavoidable.

5.4.16 Recreation

Given the programmatic nature of each alternative and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future projects under each scenario, evaluate the applicability and feasibility of project-specific mitigation, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts related to recreation would be significant and unavoidable under all SCS scenario alternatives, as with the proposed project.

5.4.16.1 Alternative 2 (Scenario A)

Compared to the proposed project (Scenario C), Alternative 2 would have a higher investment in roadway capacity improvements and a lower investment in transit. Although overall growth under Alternative 2 would generally be similar to the proposed 2026 RTP/SCS, Alternative 2 would maintain existing development trends by distributing growth across both urban centers and suburban areas. While impacts to recreation under Alternative 2 are anticipated to be similar to those of the proposed project because the same total population, housing, and employment are assumed, the more dispersed land use pattern could reduce pressure on urban parks (which are often overburdened) while increasing demand for neighborhood and community parks in suburban areas. However, this increased demand would not necessarily result in the need to construct new or expanded regional recreational facilities. Overall, impacts related to the provision of new or expanded parks and recreational facilities under Alternative 2 would be **similar** to the proposed project and would remain significant and unavoidable.

5.4.16.2 Alternative 3 (Scenario B)

Compared to the proposed project (Scenario C), Alternative 3 would have a higher investment in roadway capacity improvements and the same level of investment in transit. This alternative would result in a moderately dispersed development pattern that extends growth from urban centers into surrounding suburban and fringe areas. Although overall growth under Alternative 3 would be similar to the proposed project because the same overall regional growth in population and housing is assumed, Alternative 3 would maintain existing development trends, resulting in a more dispersed growth pattern. This may reduce pressure on urban parks (which are often overburdened) and recreational facilities while increasing demand for neighborhood and community parks in suburban and developing areas, where such facilities may not be adequately provided. However, this would not necessarily result in the need to construct new or expanded regional recreational facilities. Overall, impacts related to parks and recreational facilities under Alternative 3 would be **similar** to the proposed project and would remain significant and unavoidable.

5.4.16.3 Alternative 4 (Scenario D)

Compared to the proposed project (Scenario C), Alternative 4 would include higher investments in transit improvements, including light rail connections between major corridors and centers. This alternative would prioritize transit-oriented development, redevelopment, and increased urban density along transit corridors and infill areas. While impacts to recreation under Alternative 4 are anticipated to be similar to those of the proposed project because the same total population, housing, and employment are assumed, potential impacts to parks and recreational facilities in urbanized areas would be increased compared to the proposed project. Although there would be increased demand on urban parks (which are often overburdened), there could be reduced demand on large regional parks given the development focus in urban centers, which could reduce potential deterioration of regional facilities. The more compact development pattern could trigger the need to construct new local parks and recreational facilities in urbanized areas. Overall, impacts related to parks and recreational facilities under Alternative 4 would be **similar** to the proposed project and would remain significant and unavoidable.

5.4.16.4 Alternative 5 (Scenario E)

Compared to the proposed project (Scenario C), Alternative 5 would include higher investment in transit and would emphasize dense infill development within built-out portions of the Fresno COG Region near transit opportunities. This alternative would support commuter rail connections between cities. While impacts to recreation under Alternative 5 are anticipated to be similar to those of the proposed project because the same total population, housing, and employment are assumed, potential impacts to parks and recreational facilities in urbanized areas would be increased compared to the proposed project, given its more compact development pattern. Although there would be increased demand on urban parks (which are often overburdened), there could be reduced demand on large regional parks given the development focus in urban centers, which could reduce potential deterioration of regional facilities. The more compact development pattern could trigger the need to construct new local parks and recreational facilities in urbanized areas under this alternative. Overall, impacts related to parks and recreational facilities under Alternative 5 would be **similar** to the proposed project and would remain significant and unavoidable.

5.4.17 Tribal Cultural Resources

Given the programmatic nature of each alternative and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future projects under each scenario, evaluate the applicability and feasibility of project-specific mitigation, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts related to tribal cultural resources would be significant and unavoidable under all SCS scenario alternatives, as with the proposed project.

5.4.17.1 Alternative 2 (Scenario A)

Compared to the proposed project (Scenario C), Alternative 2 would include higher investment in roadway capacity and a lower investment in transit. This alternative would maintain current development trends and growth across urban centers and suburbs, resulting in a more dispersed development pattern compared to the proposed project. As a result, Alternative 2 would also increase the extent of ground-disturbing activities across a broader geographic area, including rural and previously undisturbed areas. These areas may contain undiscovered tribal cultural resources, such as archaeological resources, sacred sites, or human remains. Given the presence of known cultural resources in the Fresno COG Region, ground-disturbing activities in these areas could encounter unknown archaeological resources or human remains, including those associated with Native American tribes. Overall, impacts to tribal cultural resources under Alternative 2 would be **greater** than under the project and would remain significant and unavoidable.

5.4.17.2 Alternative 3 (Scenario B)

Compared to the proposed project (Scenario C), Alternative 3 would have a higher investment in roadway capacity improvements and the same level of investment for transit. This alternative would result in a moderately dispersed development pattern that extends growth from urban centers into surrounding suburban and fringe areas. As such, Alternative 3 would result in a moderately dispersed development pattern with continued suburban expansion compared to the proposed

project. This would increase the extent of ground-disturbing activities across a broader geographic area, including rural and previously undisturbed areas, which may contain undiscovered tribal cultural resources (archaeological resources, sacred sites, or human remains). Given the presence of known cultural resources in the Fresno COG Region, ground-disturbing activities in these areas could encounter unknown archaeological resources or human remains, including those associated with Native American tribes. Overall, impacts to tribal cultural resources under Alternative 3 would be **greater** than under the proposed project and would remain significant and unavoidable.

5.4.17.3 Alternative 4 (Scenario D)

Compared to the proposed project (Scenario C), Alternative 4 would have a higher investment in transit improvements, including light rail connections between major corridors and centers. This alternative would prioritize transit-oriented development and increased urban density along transit corridors and infill areas. As a result, Alternative 4 would focus growth along established urban centers and transit corridors, with less emphasis on outward expansion compared to the proposed project. Impacts to archaeological resources and human remains would likely be less under Alternative 4 compared to the proposed project, as this alternative's projected land use pattern would be more compact and would include fewer acres of rural and agricultural development within the same transportation network. This would result in reduced ground disturbance and a lower likelihood of encountering undiscovered tribal cultural resources (archaeological resources, sacred sites, or human remains). Overall, impacts to cultural resources under Alternative 4 would be **less** than under the proposed project and would remain significant and unavoidable.

5.4.17.4 Alternative 5 (Scenario E)

Compared to the proposed project (Scenario C), Alternative 5 would have higher investment in transit, place less emphasis on roadway capacity expansion, and support dense core growth through maximizing infill and high-density transit-oriented development. This alternative would also support commuter rail connections between cities. As a result, Alternative 5 would focus growth along established urban centers and transit corridors, with less emphasis on outward expansion compared to the proposed project. Impacts to archaeological resources and human remains would likely be less under Alternative 5 compared to the proposed project because its projected land use pattern would include fewer acres of rural and agricultural development. However, investments in commuter rail connections between cities in the Fresno COG Region would involve construction of transit infrastructure in areas outside of incorporated cities, which are generally rural in nature and may contain undisturbed surface sediments. As such, transportation improvement projects under Alternative 5 involving excavation activities in undisturbed surface sediments may have the potential to encounter undiscovered tribal cultural resources (archaeological resources, sacred sites, or human remains). Overall, impacts to cultural resources under Alternative 5 would be **similar** to those under the proposed project and would remain significant and unavoidable.

5.4.18 Transportation

Given the programmatic nature of each alternative and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future projects under each scenario, evaluate the applicability and feasibility of project-specific mitigation, and ensure implementation of mitigation

deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts related to VMT, hazards due to a geometric design feature or incompatible land uses, and emergency access would be significant and unavoidable under all SCS scenario alternatives, as with the proposed project. However, it should be noted that the proposed 2026 RTP/SCS approach would be aligned with other regional programs, plans, and policies, as well as the general plans of each of the 15 incorporated cities and the County in the Fresno COG Region. Therefore, the proposed project would result in a less than significant impact related to conflicts with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

5.4.18.1 Alternative 2 (Scenario A)

Compared to the proposed project (Scenario C), Alternative 2 would have higher investment in roadway capacity improvements and a lower investment in transit. Although overall growth under Alternative 2 would generally be similar to the proposed project, Alternative 2 would maintain existing development trends by distributing growth across both urban centers and suburban areas. Although the increased emphasis on roadway capacity projects could improve transportation system performance, the more dispersed growth pattern and decreased emphasis on transit use would likely increase reliance on personal vehicles. It could also increase the potential for incompatible land uses (e.g., farm equipment) to substantially increase transportation hazards. In addition, with more dispersed growth, emergency response personnel may be located farther from their service populations, and response times may increase.

Because the transportation improvement projects included in Alternative 2 were derived from submissions by local governments, transit operators, and Caltrans, these projects collectively represent the short- or long-term vision of the partner agencies' plans for their transportation system/services. Therefore, as with the proposed project, Alternative 2 would result in a less than significant impact related to conflicts with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Alternative 2 would generate approximately 23,770,613 total daily VMT in 2049, compared to 23,725,605 total daily VMT under the proposed project. This represents an increase of 45,008 daily VMT, or approximately 0.19 percent. This increase is negligible (less than a 1 percent change), indicating that VMT under Alternative 2 would be slightly greater than that of the proposed 2026 RTP/SCS. Consequently, neither Alternative 2 nor the proposed project would reduce VMT per capita to 25 percent below 2019 levels by 2030 or 30 percent below 2019 levels by 2045. These reductions are identified in the 2022 Scoping Plan as necessary to support the State's long-term climate goals, including reducing GHG emissions to 80 percent below 1990 levels by 2050 pursuant to Executive Order S-03-05. Overall, impacts related to transportation under Alternative 2 would be **greater** than those of the proposed project and would remain significant and unavoidable.

5.4.18.2 Alternative 3 (Scenario B)

Compared to the proposed project (Scenario C), Alternative 3 would have a higher investment in roadway capacity improvements and the same level of investment for transit. This alternative would result in a moderately dispersed development pattern that extends growth from urban centers into surrounding suburban and fringe areas. As a result, Alternative 3 would promote a more dispersed

land use pattern and a less compact development footprint. Although the increased emphasis on roadway capacity could improve transportation system performance, the more dispersed growth pattern would be expected increase reliance on personal vehicles. It could also increase the potential for incompatible land uses (e.g., farm equipment) to substantially increase transportation hazards. In addition, with more dispersed growth, emergency response personnel may be located farther from their service populations, and response times may increase.

Because the transportation improvement projects included in Alternative 3 were derived from submissions by local governments, transit operators, and Caltrans, these projects collectively represent the short- or long-term vision of the partner agencies' plans for their transportation system/services. Therefore, as with the proposed project, Alternative 3 would result in a less than significant impact related to conflicts with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Alternative 3 would generate approximately 23,749,452 total daily VMT in 2049, compared to 23,725,605 total daily VMT under the proposed project. This represents an increase of 23,847 daily VMT, or approximately 0.10 percent. This increase is negligible (less than a 1 percent change), indicating that VMT under Alternative 3 would be slightly greater than that of the proposed project. Consequently, neither Alternative 3 nor the proposed project would reduce VMT per capita to 25 percent below 2019 levels by 2030 or 30 percent below 2019 levels by 2045. These reductions are identified in the 2022 Scoping Plan as necessary to support the State's long-term climate goals, including reducing GHG emissions to 80 percent below 1990 levels by 2050 pursuant to Executive Order S-03-05. Overall, impacts related to transportation under Alternative 3 would be **greater** than those of the proposed project and would remain significant and unavoidable.

5.4.18.3 Alternative 4 (Scenario D)

Compared to the proposed project (Scenario C), Alternative 4 would have a higher investment in transit improvements, including light rail connections between major corridors and centers. This alternative would prioritize transit-oriented development, redevelopment, and increased urban density along transit corridors and infill areas. As a result, Alternative 4 would incorporate a less dispersed land use development and a more compact growth footprint. As with the proposed project, this growth pattern would result in denser and more intensive development compared to existing conditions. In the event of an emergency, this could increase the number of people using the same evacuation routes and place additional demand on emergency access corridors. In addition, localized increases in travel demand and congestion associated with future development could reduce roadway operating conditions for emergency response vehicles, particularly in areas with limited networks. Further, similar to the proposed project, implementation of transportation and land use projects under Alternative 4 could result in hazards associated with design features or incompatible uses.

Because the transportation improvement projects included in Alternative 4 were derived from submissions by local governments, transit operators, and Caltrans, these projects collectively represent the short- or long-term vision of the partner agencies' plans for their transportation system/services. Therefore, as with the proposed project, Alternative 4 would result in a less than

significant impact related to conflicts with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

The increase in the use of transit facilities under Alternative 4 would have a corresponding increase in VMT. Alternative 4 would generate approximately 23,736,612 total daily VMT in 2049, compared to 23,725,605 total daily VMT under the proposed project. This represents an increase of 11,007 daily VMT, or approximately 0.05 percent. This increase is negligible (less than a 1 percent change), indicating that VMT impacts under Alternative 4 would be slightly greater than those of the proposed project. Consequently, neither Alternative 4 nor the proposed project would reduce VMT per capita to 25 percent below 2019 levels by 2030 or 30 percent below 2019 levels by 2045. These reductions are identified in the 2022 Scoping Plan as necessary to support the State's long-term climate goals, including reducing GHG emissions to 80 percent below 1990 levels by 2050 pursuant to Executive Order S-03-05. Overall, impacts related to transportation under Alternative 4 would be **greater** than those of the proposed project and would remain significant and unavoidable.

5.4.18.4 Alternative 5 (Scenario E)

Compared to the proposed project (Scenario C), Alternative 5 would have higher investment in transit and would emphasize dense infill development within built-out portions of the Fresno COG Region near transit opportunities. This alternative would include commuter rail connections between cities. As with the proposed project, the growth pattern under Alternative 5 would result in denser and more intensive development compared to existing conditions. In the event of an emergency, this could increase the number of people using the same evacuation routes and place additional demand on emergency access corridors. In addition, localized increases in travel demand and congestion associated with future development could reduce roadway operating conditions for emergency response vehicles, particularly in areas with limited networks. Further, similar to the proposed project, implementation of transportation and land use projects under Alternative 4 could result in hazards associated with design features or incompatible uses.

Because the transportation improvement projects included in Alternative 5 were derived from submissions by local governments, transit operators, and Caltrans, these projects collectively represent the short- or long-term vision of the partner agencies' plans for their transportation system/services. Therefore, as with the proposed project, Alternative 5 would result in a less than significant impact related to conflicts with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Alternative 5 would generate approximately 23,729,323 total daily VMT in the 2049 horizon year, compared to 23,725,605 total daily VMT under the proposed project. This represents an increase of 3,718 daily VMT, or approximately 0.02 percent. This increase is negligible (less than a 1 percent change), indicating that VMT under Alternative 5 would be slightly greater than that of the proposed project. Consequently, neither Alternative 5 nor the proposed project would reduce VMT per capita to 25 percent below 2019 levels by 2030 or 30 percent below 2019 levels by 2045. These reductions are identified in the 2022 Scoping Plan as necessary to support the State's long-term climate goals, including reducing GHG emissions to 80 percent below 1990 levels by 2050 pursuant to Executive Order S-03-05. Overall, impacts related to transportation under Alternative 5 would be **greater** than those of the proposed project and would remain significant and unavoidable.

5.4.19 Utilities and Service Systems

Given the programmatic nature of each alternative and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future projects under each scenario, evaluate the applicability and feasibility of project-specific mitigation, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts related to utilities and service systems would be significant and unavoidable under all SCS scenario alternatives, as with the proposed project.

5.4.19.1 Alternative 2 (Scenario A)

Compared to the proposed project (Scenario C), Alternative 2 would have higher investment in roadway capacity improvements and lower investment in transit. Although overall population, housing, and employment growth under Alternative 2 would be similar to the proposed project, Alternative 2 would maintain existing development trends by distributing growth across both urban centers and suburban areas. As a result, demand for utilities and service systems under Alternative 2 may require new or expanded water, wastewater, stormwater, electrical, natural gas, telecommunications, and solid waste facilities to accommodate future growth. The more dispersed development pattern under Alternative 2 would require infrastructure and service systems to serve a broader geographic area. Overall, environmental impacts associated with the construction or expansion of utilities and service systems under Alternative 2 would be **greater** than those under the proposed project and would remain significant and unavoidable.

5.4.19.2 Alternative 3 (Scenario B)

Compared to the proposed project (Scenario C), Alternative 3 would have a higher investment in roadway capacity improvements and the same investment in transit. This alternative would result in a moderately dispersed development pattern that extends growth from urban centers into surrounding suburban and fringe areas. Although overall growth under Alternative 3 would be similar to the proposed project because the same overall regional growth in population and housing is assumed, Alternative 3 (in comparison) may require new or expanded water, wastewater, stormwater, electrical, natural gas, telecommunications, and solid waste facilities to accommodate future growth in the more dispersed development pattern serving a broader geographic area. Overall, environmental impacts associated with the construction or expansion of utilities and service systems under Alternative 3 would be **greater** than those under the proposed project and would remain significant and unavoidable.

5.4.19.3 Alternative 4 (Scenario D)

Compared to the proposed project (Scenario C), Alternative 4 would include higher investments in transit improvements, including light rail connections between major corridors and centers. This alternative would prioritize transit-oriented development, redevelopment, and increased urban density along transit corridors and infill areas. While impacts to utilities and service systems under Alternative 4 are anticipated to be similar to those of the proposed project because the same population, housing, and employment growth are assumed, the more compact development pattern would concentrate demand for utilities within existing urbanized areas. Demand for electricity,

natural gas, water, wastewater, stormwater, telecommunications, and solid waste services would be less dispersed and more focused in established communities. This could slightly reduce the need for new or expanded utility infrastructure compared to the proposed project. However, expansion of existing facilities and, in some cases, construction of new facilities, would still be necessary to accommodate future growth. Similar to the proposed project, wastewater treatment, solid waste disposal, and utility service demands would increase as population and employment growth occurs throughout the Fresno COG Region. Therefore, impacts to utilities and service systems under Alternative 4 would be **similar** to the proposed project and would remain significant and unavoidable.

5.4.19.4 Alternative 5 (Scenario E)

Compared to the proposed project (Scenario C), Alternative 5 would have higher investment in transit and would emphasize dense infill development within built-out portions of the Fresno COG Region near transit opportunities. This alternative would support commuter rail connections between cities. While impacts to utilities and service systems under Alternative 5 are anticipated to be similar to those of the proposed project because the same population, housing, and employment growth are assumed, the more compact development pattern would concentrate demand for utilities and public services within existing urbanized areas. Demand for electricity, natural gas, water, wastewater, stormwater, telecommunications, and solid waste services would be less dispersed and more focused in established communities, potentially reducing the need for utility infrastructure expansion across undeveloped areas compared to the proposed project. However, expansion of existing facilities and, in some cases, construction of new facilities, would still be necessary to accommodate future growth. Similar to the proposed project, regional demands on water supplies, wastewater treatment facilities, utility providers, and solid waste management systems would increase as population and employment growth occurs throughout the Fresno COG Region. Therefore, impacts to utilities and service systems under Alternative 5 would be **similar** to the proposed project and would remain significant and unavoidable.

5.4.20 Wildfire

Given the programmatic nature of each alternative and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve future projects under each scenario, evaluate the applicability and feasibility of project-specific mitigation, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each project site. Therefore, potential impacts related to wildfire would be significant and unavoidable under all SCS scenario alternatives, as with the proposed project.

5.4.20.1 Alternative 2 (Scenario A)

Compared to the proposed project (Scenario C), Alternative 2 would have higher investment in roadway capacity and lower investment in transit. This alternative would maintain current development trends and growth across urban centers and suburbs. As a result, Alternative 2 would support more dispersed growth patterns including expansion in suburban and urban fringe areas. This could increase wildfire impacts due to the increased potential for development along the

wildland interface. This includes additional future housing units being developed within or adjacent to natural areas as compared to the proposed project, resulting in greater potential wildfire risk. In addition, performance indicator modeling conducted by the Fresno COG indicates that implementation of Alternative 2 would result in the overall conversion of 6,871 acres of land, compared to 6,200 acres under the proposed project in 2035. This represents an increase of approximately 671 acres, or 10.8 percent. As a result, Alternative 2 would result in a greater amount of land conversion than the proposed project. Future roadway and development construction in such areas has the potential to result in elevated wildfire risks from construction equipment generating sparks or spills leading to the start and spread of wildfires. Additional development within wildfire-prone areas would also trigger the need for new or extended roads and utility infrastructure to serve proposed uses in areas not currently served by existing infrastructure. These additional facilities would increase associated construction-related and operational impacts in the region. Overall, impacts related to wildfire under Alternative 2 would be **greater** than those identified for the proposed project and would remain significant and unavoidable.

5.4.20.2 Alternative 3 (Scenario B)

Compared to the proposed project (Scenario C), Alternative 3 would have a higher investment in roadway capacity improvements and the same level of transit investment. This alternative would result in a moderately dispersed development pattern that extends growth from urban centers into surrounding suburban and fringe areas. As a result, Alternative 3 would support more dispersed growth patterns and expansion in suburban and urban fringe areas. This expansion could increase wildfire impacts due to the increased potential for development along the wildland interface. This includes additional future housing units being developed within, or adjacent to, natural areas as compared to the 2026 RTP/SCS, resulting in elevated wildfire risk. In addition, performance indicator modeling conducted by the Fresno COG indicates that implementation of Alternative 3 would result in the overall conversion of 6,681 acres of land, compared to 6,200 acres under the proposed project in 2035. This represents an increase of approximately 481 acres, or 7.8 percent. Alternative 3 would result in a greater amount of land conversion than the proposed project. Future roadway and development construction in such areas has the potential to result in impacts from construction equipment generating sparks or oil spill and other combustible materials leading to the start and spread of wildfires. Additional development within wildfire-prone areas would also trigger the need for new or extended roads and utility infrastructure to serve proposed uses in areas not currently served by existing infrastructure. These additional facilities would increase associated construction-related and operational impacts in the region. Overall, impacts related to wildfire under Alternative 3 would be **greater** than those identified for the proposed project and would remain significant and unavoidable.

5.4.20.3 Alternative 4 (Scenario D)

Compared to the proposed project (Scenario C), Alternative 4 would have a higher investment in transit improvements, including light rail connections between major corridors and centers. This alternative would prioritize transit-oriented development and increase urban density along transit corridors and infill areas. As a result, Alternative 4 would concentrate growth within established urban centers and transit corridors to a greater degree than the proposed project and would have less outward expansion into undeveloped and wildfire-prone areas. By directing future growth

toward existing urbanized areas and redevelopment opportunities, Alternative 4 would reduce the potential for future housing and employment growth within (or adjacent to) natural areas and the wildland-urban interface. Performance indicator modeling conducted by the Fresno COG indicates that implementation of Alternative 4 (Scenario D) would result in the overall conversion of 6,200 acres of land, the same amount as the proposed project in 2035. Although overall land conversion would be comparable to the proposed project, Alternative 4 would focus a greater share of growth within existing urbanized areas and transit corridors, reducing development pressure in wildfire-prone fringe areas. Future construction activities associated with transit improvements and redevelopment projects could still result in wildfire ignition risks from construction equipment and related activities. However, these activities would generally occur within or adjacent to existing developed areas and would be less likely to require substantial expansion of roads and utility infrastructure into wildfire-prone locations. Overall, impacts related to wildfire under Alternative 4 would be **similar** to those identified for the proposed project and would remain significant and unavoidable.

5.4.20.4 Alternative 5 (Scenario E)

Compared to the proposed project (Scenario C), Alternative 5 would have higher investment in transit and would emphasize dense infill development within built-out portions of the Fresno COG Region near transit opportunities. This alternative would support commuter rail connections between cities. As a result, Alternative 5 would concentrate growth within existing urbanized areas to a greater degree than the proposed project. Because Alternative 5 would promote high-density infill development within built-out portions of the Fresno COG Region near transit opportunities, it would direct a greater share of future housing and employment growth toward existing urbanized areas and redevelopment opportunities. In addition, performance indicator modeling conducted by Fresno COG indicates that implementation of Alternative 5 (Scenario E) would result in the overall conversion of 6,200 acres of land, the same amount as the proposed project in 2035. Although overall land conversion would be comparable to the proposed project, Alternative 5 would focus a greater share of growth within existing urbanized areas and transit-oriented development areas, reducing development pressure in rural, undeveloped, and wildfire-prone fringe areas. Future construction activities associated with transit improvements, commuter rail facilities, and infill development projects could still result in wildfire ignition risks from construction equipment and related activities. However, these activities would generally occur within or adjacent to existing developed areas and would be less likely to require substantial expansion of roads and utility infrastructure into wildfire-prone locations. Overall, impacts related to wildfire under Alternative 5 would be **similar** those identified for the proposed project and would remain significant and unavoidable.

5.5 ATTAINMENT OF PROJECT OBJECTIVES

The impact analysis presented in Chapter 4 of this Draft PEIR focuses on the proposed project, Scenario C). Five additional alternatives were developed and discussed in this Chapter (5.0) of the Draft PEIR to ensure that a reasonable range of alternatives to the proposed project is provided.

The project objectives, as referenced in Table 5.B, below, and in Section 5.2.1, Project Objectives, of this section, have been established for the proposed project and will aid decision makers in the

review of the proposed project and associated environmental impacts. The 2026 RTP policy element chapter seeks to identify the transportation goals, objectives, and policies that meet the regional needs. Table 5.B provides a comparison of the project alternatives and focuses on how well the project objectives of the proposed project have been met by each alternative, including the proposed project (Scenario C) and the No Project Alternative.

As described below in Table 5.B, the No Project Alternative did not meet any of the project objectives. Alternatives 1 and 2 partially met these objectives, while Scenario C and Alternatives 4 and 5 would fully meet the project objectives.

5.6 IDENTIFICATION OF THE ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA Guidelines Section 15126.6 requires that an "environmentally superior" alternative be selected among the alternatives that are evaluated in the EIR. In general, the environmentally superior alternative is the alternative that would be expected to generate the fewest adverse impacts. If the No Project Alternative is identified as environmentally superior, then another environmentally superior alternative shall be identified among the other alternatives.

As indicated by the comparative analysis in Table 5.C, below, the No Project Alternative (Alternative 1), four SCS scenarios (Alternatives 2 through 5), are evaluated relative to the proposed project to provide a summary comparison of environmental impacts. The table summarizes the relative level of environmental impacts associated with each alternative as compared to the proposed project, based on the CEQA Guidelines Appendix G significance thresholds used in Chapter 4 of this 2026 PEIR. For each resource area evaluated, Table 5.C identifies whether impacts of the alternatives would generally be greater than, lesser than, or similar to those of the proposed project. As noted throughout this PEIR, impacts were determined to be significant and unavoidable across all resource topics for both the proposed project and all alternatives evaluated. In addition, as Alternative Scenario C reflects the proposed 2026 RTP/SCS, which constitutes the proposed project, it is not evaluated as a project alternative in this Draft PEIR. Accordingly, Alternatives 2 through 5, together with the No Project Alternative, represent the reasonable range of alternatives to the proposed project that are evaluated in the alternatives analysis above.

Table 5.B: Comparison of SCS Scenario Alternatives by Project Objective

Project Objective	Proposed Project (Scenario C)	Alt 1: No Project Alternative	Alt 2: SCS Scenario A	Alt 3: SCS Scenario B	Alt 4: SCS Scenario D	Alt 5: SCS Scenario E	Justification
Improved mobility and accessibility for all	Fully met	Not met	Partially met	Partially met	Fully met	Fully met	The No Project Alternative would not meet this objective because it would only implement currently programmed and reasonably foreseeable projects and would not include the multimodal investments or integrated land use strategy contained in the 2026 RTP/SCS, resulting in fewer multimodal travel opportunities and reduced accessibility benefits. Alternatives 2 and 3 would partially meet this objective because they improve regional mobility through roadway investments and maintain regional accessibility. These improvements primarily benefit motorists. Because they would place less emphasis on transit investments and transit-oriented development, these alternatives would not fully address accessibility needs for other users. Scenario C and Alternatives 4 and 5 would fully meet this objective because they would support higher levels of transit investment, transit-oriented development, and multimodal connectivity between housing, employment, and activity centers.
Vibrant communities that are accessible by sustainable transportation options	Fully met	Not met	Partially met	Partially met	Fully met	Fully met	The No Project Alternative would not meet this objective because it would continue existing growth patterns that consume more land and support less compact development. Alternatives 2 and 3 would partially meet this objective because they incorporate moderate infill and redevelopment but continue to support auto-oriented development patterns. These alternatives would also have a larger area of land conversion, lower transit-oriented development, and higher VMT per capita compared to Scenario C and Alternatives 4 and 5.

Table 5.B: Comparison of SCS Scenario Alternatives by Project Objective

Project Objective	Proposed Project (Scenario C)	Alt 1: No Project Alternative	Alt 2: SCS Scenario A	Alt 3: SCS Scenario B	Alt 4: SCS Scenario D	Alt 5: SCS Scenario E	Justification
							Scenario C and Alternatives 4 and 5 would fully meet this objective because they would support more compact development patterns, reduced land conversion, and higher levels of transit-oriented development.
A safe, well maintained, efficient, and climate-resilient multimodal transportation network	Fully met	Not met	Partially met	Partially met	Partially met	Partially met	The No Project Alternative would not meet this objective because it would only implement currently programmed and reasonably foreseeable projects and would not implement the multimodal transportation investments or climate resilience strategies included in the 2026 RTP/SCS. Alternatives 2 and 3 would partially meet this objective because they emphasize roadway maintenance, operations, and capacity improvements that support transportation system reliability and efficiency but provide fewer benefits associated with multimodal transportation and compact development patterns. However, Alternatives 2 and 3 would allow more dispersed growth in rural areas, thereby increasing exposure to wildfire risk. Scenario C and Alternatives 4 and 5 would fully meet this objective because they would provide substantial investment in transportation infrastructure, specifically their higher-transit investments. Their compact development pattern would limit exposure to wildfire risk as well.
A transportation network that supports a sustainable and vibrant economy	Fully met	Not met	Partially met	Partially met	Fully met	Fully met	The No Project Alternative would not meet this objective because it would not provide the transportation and land use improvements needed to efficiently connect residents with employment centers, services, and regional economic opportunities. Alternatives 2 and 3 would partially meet this objective because they improve roadway connectivity and maintain

Table 5.B: Comparison of SCS Scenario Alternatives by Project Objective

Project Objective	Proposed Project (Scenario C)	Alt 1: No Project Alternative	Alt 2: SCS Scenario A	Alt 3: SCS Scenario B	Alt 4: SCS Scenario D	Alt 5: SCS Scenario E	Justification
							regional accessibility but continue to support more dispersed development patterns and greater land consumption. Scenario C and Alternatives 4 and 5 would fully meet this objective because they would support a more compact urban growth pattern, increased transit-oriented development, and higher levels of investment in disadvantaged communities.
A region embracing clean transportation, technology, and innovation	Fully met	Not met	Partially met	Partially met	Fully met	Fully met	The No Project Alternative would not meet this objective because it would not implement the transportation and land use strategies necessary to reduce automobile dependence and support cleaner transportation choices. Alternatives 2 and 3 would partially meet this objective because they include investments in transit and active transportation but continue to emphasize roadway expansion and lower-density growth patterns. Alternatives 4 and 5 would fully meet this objective because they would support transit-oriented development, compact urban growth patterns, and reduced agricultural land consumption.

Alt. = Alternative
RTP/SCS = Regional Transportation Plan/Sustainable Communities Strategy
VMT = vehicle miles traveled

Table 5.C: Comparison of the Environmental Impacts of the Proposed Project to the Project Alternatives

Environmental Topic	Proposed Project Level of Impacts After Mitigation	Alternative 1: No Project Alternative	Alternative 2: SCS Scenario A	Alternative 3: SCS Scenario B	Alternative 4: SCS Scenario D	Alternative 5: SCS Scenario E
Aesthetics	Significant and Unavoidable	S	G	G	L	G
Agriculture and Forestry Resources	Significant and Unavoidable	G	G	G	S	S
Air Quality	Significant and Unavoidable	G	G	G	S	S
Biological Resources	Significant and Unavoidable	G	G	S	S	G
Cultural Resources	Significant and Unavoidable	S	G	G	S	S
Energy	Significant and Unavoidable	G	S	S	L	L
Geology and Soils	Significant and Unavoidable	G	G	G	S	S
Greenhouse Gas Emissions	Significant and Unavoidable	G	G	G	S	G
Hazards and Hazardous Materials	Significant and Unavoidable	S	L	G	S	S
Hydrology and Water Quality	Significant and Unavoidable	G	G	G	L	L
Land Use and Planning	Significant and Unavoidable	S	G	G	S	S
Mineral Resources	Significant and Unavoidable	G	G	G	L	S
Noise	Significant and Unavoidable	L	S	S	S	S
Population and Housing	Significant and Unavoidable	L	S	S	G	G
Public Services	Significant and Unavoidable	S	S	S	S	S
Recreation	Significant and Unavoidable	S	S	S	S	S
Transportation	Significant and Unavoidable	G	G	G	G	G
Tribal Cultural Resources	Significant and Unavoidable	G	S	S	L	S
Utilities and Service Systems	Significant and Unavoidable	G	G	G	S	S
Wildfire	Significant and Unavoidable	G	G	G	S	S

Source: LSA (2026).
G = Greater impacts to the proposed project (Scenario C); does not eliminate significant and adverse impacts
L = Less impact than the proposed project (Scenario C); reduces or eliminates significant and adverse impacts
S = Similar impacts to the proposed project (Scenario C); does not eliminate significant and adverse impacts
SCS = Sustainable Communities Strategy

As shown in Table 5.C, Alternative 4 (Scenario D) would result in generally similar impacts for 13 of the 20 environmental topics analyzed. While most impacts would be comparable to those of the proposed project (Scenario C), Alternative 4 would result in lesser impacts for the following five environmental topics: Aesthetics, Energy, Hydrology and Water Quality, Mineral Resources, and Tribal Cultural Resources. As previously stated throughout this alternatives analysis, Alternative 4 would place greater emphasis on transit investment and rail-based transportation improvements, resulting in a more compact and transit-oriented development pattern concentrated within urban centers and along transit corridors. This alternative would place less emphasis on transportation projects that increase roadway capacity, thereby resulting in fewer roadway expansions into scenic and environmentally sensitive areas. Additionally, this alternative would result in reduced energy use due to its compact development pattern and reduced reliance on automobiles and petroleum fuels. The more compact development pattern would also result in less impervious surface area, which would contribute to reduced impacts on hydrology and water quality. However, Alternative 4 would result in slightly greater impacts for the topics of Population and Housing and Transportation, due to increased development intensity and infill concentration within existing urbanized areas, which could result in infill development that could displace existing housing units and affected residents to a greater degree than Scenario C. Additionally, Alternative 4 would generate a marginal increase in VMT compared to Scenario C. While Alternative 4 would be considered the environmentally superior alternative due to its more compact land use pattern and improved mode-share distribution, it would nonetheless require implementation of the same mitigation measures as the proposed project and would not eliminate any significant and unavoidable impacts of the proposed project.

Similarly, the No Project Alternative would not avoid the significant and unavoidable impacts of the proposed project and, in some respects, would result in more adverse impacts. As also shown in Table 5.C, the No Project Alternative would result in greater impacts for 10 of the 20 environmental topics analyzed, including Agriculture and Forestry Resources, Air Quality, Biological Resources, Energy, Geology and Soils, Greenhouse Gas Emissions, Hydrology and Water Quality, Mineral Resources, Tribal Cultural Resources, and Utilities and Service Systems. As previously discussed, the No Project Alternative represents a scenario in which the proposed 2026 RTP/SCS is not approved and the 2022 RTP/SCS remains in place for the region. The No Project Alternative also assumes growth consistent with adopted local general plans, with residential densities and development patterns reflecting historical trends that would continue suburban expansion, increase the development footprint, and result in ongoing farmland conversion. This less coordinated and more dispersed growth pattern would therefore result in greater impacts to incompatible land uses, the conversion of farmland, and the disturbance of environmentally sensitive areas. Additionally, the absence of planned transportation investments and strategies included in the proposed project could reduce the effectiveness and reliability of public transit and other alternative transportation modes and limit their ability to meet established service and performance standards. Accordingly, the No Project Alternative would fail to achieve the reductions in GHG emissions and VMT, as well as the more efficient use of land, agricultural, energy, and water resources, that would result from the policies and programs embedded in the proposed project. The No Project Alternative would also forgo the regional planning framework intended to promote more sustainable growth patterns, coordinated transportation investments, and improved resource efficiency.

6.0 OTHER CEQA CONSIDERATIONS

This chapter provides a discussion of the significant irreversible changes resulting from implementation of the Fresno Council of Governments (COG) 2026 Regional Transportation Plan (RTP) and the Sustainable Communities Strategy (SCS) (proposed project), and growth-inducing effects of the proposed project as required by the California Environmental Quality Act (CEQA). This chapter also evaluates whether the proposed project's energy use may result in significant environmental effects due to wasteful, inefficient, or unnecessary consumption use of energy, or wasteful use of energy resources, as required by CEQA Guidelines Section 15126.2(b). Pursuant to Section 15126 of the *CEQA Guidelines,* all aspects of a project must be considered when evaluating its impacts on the environment, including planning, acquisition, development, and operation. More specifically, *CEQA Guidelines* Section 15126 states that an Environmental Impact Report (EIR) must include a discussion of the following topics:

- Significant environmental effects that cannot be avoided if the proposed project is implemented.
- Significant irreversible environmental changes that would be involved in the proposed project should it be implemented.
- Growth-inducing effects of the proposed project.

Additionally, this chapter provides an analysis of the potential cumulative impacts that would result from implementation of the proposed project together with other past, present, and probable future projects.

6.1 SIGNIFICANT ENVIRONMENTAL EFFECTS OF PLAN IMPLEMENTATION THAT CANNOT BE AVOIDED

Section 15126.2(c) of the *State CEQA Guidelines* requires that an EIR describe any significant impacts that cannot be avoided. Specifically, Section 15126.2(c) states that an EIR shall:

> "Describe any significant impacts, including those which can be mitigated but not reduced to a level of insignificance. Where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the project is being proposed, notwithstanding their effect, should be described."

As described throughout Chapter 4.0, the design of each transportation improvement project and land use development facilitated by the proposed project is currently unknown. Therefore, the analysis presented in this Program Environmental Impact Report (PEIR) represents a general characterization of reasonably foreseeable impacts that could occur under implementation of the proposed project. With adherence to applicable regulatory requirements, Fresno COG Mitigation Measures (FMMs), and Project-Specific Mitigation Measures (PMMs), project impacts would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability

and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to the California Department of Transportation (Caltrans), local jurisdictions, and other responsible agencies with jurisdiction over each future project. Therefore, potential impacts associated with the following resource topics are considered significant and unavoidable for the purposes of this analysis:

- **Aesthetics:** Implementation of the proposed project may lead to the conversion of open space, recreational areas, wetlands, wooded areas, reservoirs, agricultural lands, or vacant lands to new uses. This conversion could block or obstruct publicly available views of the region's scenic vistas, resulting in a significant impact. Implementation of the proposed project would facilitate a range of future transportation improvements and land use developments that could obstruct or eliminate views of scenic features, including trees, rock outcroppings, and historic structures along Officially Designated State Scenic Highways in the Fresno COG Region, resulting in a significant impact. Further, these projects could modify existing visual character by adding urban elements to rural or open spaces, resulting in a significant impact. Implementation of the proposed project also has the potential to create new substantial sources of light or glare associated with operational lighting from vehicles, buildings, parking lots, streetlights, intersection control devices, reflective signage, and reflective roadway materials, resulting in a significant impact.

- **Agriculture and Forestry Resources:** Implementation of the proposed project could locate future transportation improvement projects and land use developments on or near Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. This would convert such land to non-agricultural use, which would represent a significant impact. Similarly, these projects could be located on or near land managed pursuant to Williamson Act contracts and existing zoning for forest land, timberland, or timberland zoned Timberland Production, resulting in potential conflicts and significant impacts. Implementation of the proposed project could also result in significant impacts related to the loss of forest land or conversion of forest land to non-forest use, as well as the conversion of farmland to non-agricultural use.

- **Air Quality:** The Fresno COG is responsible for ensuring the proposed 2026 RTP/SCS and related programs are in conformity with State air quality plans, meaning they would not create new National Ambient Air Quality Standards (NAAQS) violations, increase the frequency or severity of existing NAAQS violations, or delay attainment of the NAAQS. According to the Fresno COG Air Quality Conformity Analysis, the conformity tests for all criteria pollutants are satisfied, and the proposed project conforms to the applicable State Implementation Plan (SIP) and all applicable sections of the United States Environmental Protection Agency's (EPA) Transportation Conformity Rule. However, implementation of the proposed project could result in individual project emissions that may result in significant construction and/or operational emissions as compared to thresholds of significance identified by the San Joaquin Valley Air Pollution Control District (SJVAPCD). This would result in conflicts with (or obstruction of) implementation of the applicable air quality plan, a cumulatively considerable net increase of criteria pollutants for which the project region is non-attainment under an applicable federal or State ambient air quality standard, or the exposure of sensitive receptors to substantial pollutant concentrations. As a result, these impacts are considered significant.

- **Biological Resources:** Implementation of the proposed project could have a significant impact related to special-status species, including injury or mortality of special-status plants and wildlife; entrapment of wildlife; removal or conversion of vegetation and habitat necessary for breeding, feeding, dispersal, or sheltering; and general disturbance from noise and human presence. Future projects in rural areas could result in habitat loss, degradation, and fragmentation that would result in significant impacts to riparian habitat or other sensitive natural communities. Implementation of the proposed project could also result in the loss and degradation of aquatic resources and disruption of hydrology supporting these features, leading to a significant impact. Because implementation of the proposed project could allow for development in previously undisturbed or natural areas, impacts to wildlife movement and habitat functions were determined to be significant. Lastly, implementation of the proposed project could result in conflicts with local policies and ordinances intended to protect biological resources (e.g., tree protection ordinances, riparian setback requirements, and sensitive habitat protections), resulting in a significant impact.

- **Cultural Resources:** Implementation of the proposed project may require demolition of buildings with potential historical significance, which could cause a substantial adverse change in the significance of a historical resource, resulting in a significant impact. Further, implementation of the proposed project may involve excavation activities in undisturbed subsurface sediments, which could cause a substantial adverse change in the significance of previously unknown archaeological resources, resulting in a significant impact. In addition, there is potential for ground-disturbing activities associated with construction of future projects to unearth previously undocumented human remains, resulting in a significant impact.

- **Energy:** Implementation of the proposed project could increase the demand for energy in a manner that could cause wasteful, inefficient, or unnecessary consumption of energy resources, resulting in a significant impact. Similarly, implementation of the proposed project has the potential to conflict with (or obstruct) a State or local plan for renewable energy or energy efficiency.

- **Geology and Soils:** Implementation of the proposed project has the potential to directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure including liquefaction, and landslides. Implementation of the proposed project could also result in significant impacts related to the loss of topsoil, unstable soils, expansive soils, and soils incapable of adequately supporting the use of septic tanks. Lastly, excavation activities associated with construction of future projects could result in significant impacts to known and/or unknown paleontological resources, as construction activities would have the possibility to damage or destroy fossils in the underlying rock units.

- **Greenhouse Gas Emissions:** Consistent with the requirements of Senate Bill (SB) 375, the Fresno COG modeled greenhouse gas (GHG) reductions from each potential SCS strategy, including Scenario C. This analysis concluded that implementation of Scenario C would result in a 13.56 percent reduction in carbon dioxide (CO_2) emissions from 2005 levels in 2035. Therefore, the Fresno COG would be able to meet the target set by the California Air Resources Board (CARB) of

a 13 percent reduction of GHG emissions by 2035. Nevertheless, future projects would have the potential to generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment or conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs. As a result, these impacts are considered significant.

- **Hazards and Hazardous Materials:** Implementation of the proposed project could require the routine transport, use, or disposal of hazardous materials, and could 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. As a result, these impacts are considered significant. Future projects facilitated by the proposed project could be located near schools or airports, potentially emitting hazardous emissions or handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. This could result in a safety hazard or excessive noise for people residing or working in the project area. As a result, these impacts are considered significant. Future projects have the potential to be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment. Implementation of the proposed project also has the potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan and expose people or structures to a significant risk of loss, injury, or death involving wildland fires. As a result, these impacts are considered significant.

- **Hydrology and Water Quality:** Implementation of the proposed project would involve pollutants of concern during construction and operation that could violate water quality standards or waste discharge requirements, or otherwise substantially degrade surface or ground water quality, resulting in a significant impact. Implementation of the proposed project could potentially substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin, resulting in a significant impact. Implementation of the proposed project could also substantially alter the existing drainage pattern of future project sites in a manner that would result in substantial erosion or siltation on or off site, substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site, create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, or impede or redirect flood flows. Therefore, these impacts are considered significant. Depending on future project site locations, implementation of the proposed project could potentially risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones, resulting in a significant impact. Lastly, implementation of the proposed project could conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan, resulting in a significant impact.

- **Land Use and Planning:** Although the proposed project would generally aim to enhance circulation and accessibility within the Fresno COG Region, future projects may acquire permanent right-of-way or may introduce new structures that could result in community division. As a result, this impact is considered significant. Although the proposed RTP/SCS has been prepared collaboratively with input from the member agencies in order to establish consistency with each

agency's land use and planning documents, member-agency general plan updates do not necessarily correspond with RTP/SCS updates, meaning updates in one document may not be reflected in the other until its next planned update. Further, while jurisdictions typically design their planning documents for consistency with the current RTP/SCS in effect, SB 375 does not technically require this consistency from jurisdictions. Therefore, although it is anticipated that any potential land use conflicts would be resolved in the next update of each jurisdiction's general plan, it is possible that the proposed project could result in a conflict with an adopted land use document, which would result in a significant impact.

- **Mineral Resources:** Implementation of the proposed project would likely require the use of aggregate or other mineral resources that may be extracted from existing or future deposits, which could reduce the availability of designated mineral resources by making certain deposits inaccessible for future extraction. Given that the Fresno COG Region does not have a sufficient supply of aggregate to meet the current demand, this could further the strain on the region's aggregate supply, resulting in a significant impact. Growth and development facilitated by the proposed project could occur near Mineral Resource Zone (MRZ) 2 designated lands, active or planned mineral resource recovery sites, or locally important aggregate resource areas identified in land use plans, which could create land use conflicts by limiting access to, or otherwise interfering with, the recovery of aggregate resources along the San Joaquin and Kings rivers. Therefore, a significant impact could occur related to the loss of availability of a locally important mineral resource recovery site delineated in a plan.

- **Noise:** Implementation of the proposed project would facilitate future transportation improvements and land use developments that could result in a substantial increase in temporary or permanent ambient noise levels in excess of standards established in the applicable local general plan, noise ordinance, or other relevant agency standard, thereby resulting in a significant impact. Implementation of the proposed project could also result in the generation of excessive groundborne vibration or groundborne noise levels, resulting in a significant impact. Future projects facilitated by the proposed project could be located within 2 miles of a public airport or public use airport, which could expose people residing or working in the project area to excessive noise levels and result in a significant impact.

- **Population and Housing:** Rather than inducing new growth, the proposed project identifies strategies for directing this identified future growth toward existing urban centers and established areas, as well as supporting higher-density growth with mixed-use development. These areas are generally already anticipated to experience the greatest degree of growth given their availability of infrastructure and employment opportunities. Although the proposed RTP/SCS has been prepared collaboratively with input from the member agencies, member-agency general plan updates do not necessarily correspond with RTP/SCS updates, meaning updates in one document may not be reflected in the other until its next planned update and unplanned growth may occur. As a result, this impact is considered significant. There is potential for construction and operation of future projects to result in temporary or permanent right-of-way impacts affecting properties that are owned by public entities or private property owners, which could displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. As a result, this impact is considered significant.

- **Public Services:** Implementation of the proposed project could affect the need for construction of new or physically altered fire protection, police protection, schools, parks, and other facilities to maintain acceptable service ratios and performance objectives, the construction of which could cause significant environmental impacts. While some jurisdictions in the Fresno COG Region have established development impact fee (DIF) requirements, these impacts are considered significant.

- **Recreation:** Implementation of the proposed project has the potential to increase access to, and therefore the use of, existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility could occur (or be accelerated). As a result, this impact is considered significant. Infill redevelopment of properties facilitated by the proposed project, including recreational facilities, could result in the full or partial removal of such facilities. Similarly, transportation improvement projects that include new or expanded corridor alignments could impact recreational facilities, including pedestrian and bicycle trails, reducing their functionality. Therefore, potential impacts related to including recreational facilities or requiring the construction or expansion of recreational facilities that might have an adverse physical effect on the environment are considered significant.

- **Transportation:** The proposed 2026 RTP/SCS approach would be aligned with other regional programs, plans, and policies, as well as the general plans of each of the 15 incorporated cities and the County in the Fresno COG Region. As a result, the proposed project would have a less than significant impact related to conflicts with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. While the State acknowledged that the VMT reduction goals set forth in the Scoping Plan cannot be met without the collaboration of and additional contribution from the State, it is uncertain at the time this PEIR was prepared whether sufficient State programs or policies are in place that, in combination with local and regional efforts, would fully achieve the State's VMT reduction targets. The gap between projected VMT performance and the State's targets therefore remains. As a result, future land use development and transportation improvements facilitated by the proposed project and planned in the 2026 RTP/SCS could result in impacts that are significant and unavoidable with respect to consistency with the VMT reduction goals set forth in the CARB 2022 Scoping Plan. Given the size of the region, the number of transportation and land use projects expected through the 2049 horizon year, the variety of potential safety-related conditions, and the potential for variability in the application of appropriate design measures affecting vehicle, bicycle, and pedestrian safety, implementation of the proposed project could result in hazards associated with design features or incompatible uses and therefore is considered a significant and unavoidable impact. Lastly, the growth patterns encouraged by the proposed project would result in denser and more intensive development compared to existing conditions, which could adversely affect emergency response conditions and result in a significant and unavoidable impact.

- **Tribal Cultural Resources:** Future transportation improvement projects and future land use developments involving excavation activities in undisturbed subsurface sediments may encounter unknown, unrecorded tribal cultural resources. Therefore, potential impacts related to causing a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources or in a local register of historical

resources as defined in Public Resources Code (PRC) Section 5020.1(k), or determined significant by the lead agency, are considered significant.

- **Utilities and Service Systems:** Implementation of the proposed project may result in increased service populations as well as increased demand for utility and service systems, including water supply, wastewater treatment, stormwater drainage, electric power, natural gas, and telecommunications systems. Depending on the scale of each project, this infrastructure could require expansion and/or construction of new facilities where existing infrastructure is limited (especially in urban fringe or rural areas). Therefore, the proposed project would potentially require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects, and impacts are considered significant. Implementation of the proposed project could also result in significant impacts with respect to water supply, wastewater treatment, and solid waste.

- **Wildfire:** Implementation of the proposed project would facilitate a range of future transportation improvement and land use development projects that could result in substantial adverse effects on adopted emergency response and evacuation plans, resulting in a significant impact. It is assumed that future development within urban fringe or rural areas could result in projects within Moderate Fire Hazard Severity Zones (FHSZs), High FHSZs, and Very High FHSZs, and within State Responsibility Areas or Federal Responsibility Areas in the Fresno COG Region. Development of future projects in these high-fire-risk areas, particularly in forested or vegetation-rich locations or where slopes are steep and prevailing winds are strong, could increase ignition potential, influence wildfire behavior, and expose project occupants to wildfire-related hazards and smoke pollutants, including the risk of loss, injury, or death, resulting in a significant impact. Future land development and transportation projects facilitated by the proposed project could require the installation and maintenance of infrastructure to support regional growth that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment, resulting in a significant impact. Development of future projects within fire-prone areas could expose people and property to wildfire and related secondary hazards, including flooding and landslides, resulting in a significant impact.

Also refer to Table 1.A in Chapter 1.0, Executive Summary, for a description of each significant and unavoidable impact by threshold. The only threshold for which a significant and unavoidable impact was not identified was Threshold 4.4.6 (refer to Section 4.4, Biological Resources), which reads:

> *"Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?"*

As described in Section 4.4, no impacts would occur related to this threshold because there are no adopted regional HCPs or NCCPs in the Fresno COG Region. However, all other thresholds under the Biological Resources topic are considered to have significant and unavoidable impacts.

Because impacts related to each resource topic are considered significant and unavoidable, these impacts would represent an incremental contribution to the environmental impacts of other

cumulative or related projects, including other regional-scale plans. This ultimately leads to a cumulatively considerable significant and unavoidable impact in the defined cumulative impact area for each resource topic.

6.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Section 15126.2(d) of the *State CEQA Guidelines* requires that an EIR consider and discuss significant irreversible changes that would be caused by implementation of a proposed project. The *State CEQA Guidelines* specify that the use of nonrenewable resources during the initial and continued phases of a project should be discussed because a large commitment of such resources makes removal or non-use thereafter unlikely. Primary and secondary impacts (e.g., a highway improvement that provides access to a previously inaccessible area) should also be discussed because such changes generally commit future generations to similar uses. Irreversible damage can also result from environmental accidents associated with a project and should be discussed. Accordingly, for purposes of this analysis, the proposed project would result in significant irreversible environmental changes if it:

- Involves a large commitment of nonrenewable resources that would commit future generations;
- Results in irreversible damage from environmental accidents; or
- Results in irretrievable commitments of nonrenewable resources to justify current consumption.

6.2.1 Large Commitment of Nonrenewable Resources that Would Commit Future Generations

The types and level of development associated with implementation of the proposed project would consume limited, slowly renewable, and nonrenewable resources. This consumption would occur during construction of each future transportation improvement project and land use development and would continue throughout the operational lifetime each project. Buildout of the proposed project would require a commitment of resources that would include (1) building materials, (2) fuel and operational materials/resources, and (3) fuel for the transportation of goods and people to and from each project site once operational.

Construction of each project would require consumption of resources that are not replenishable or that may renew so slowly as to be considered nonrenewable. These resources would include certain types of lumber and other forest products (e.g., hardwood lumber), aggregate materials used in concrete and asphalt (e.g., sand, gravel, and stone), metals (e.g., steel, copper, and lead), petrochemical construction materials (e.g., plastics), and water. Fossil fuels (e.g., gasoline and oil) would also be consumed by construction vehicles and equipment. Lumber, aggregate materials, metals, and petrochemical construction materials would be used to construct transportation improvement infrastructure or land use developments. However, once construction is complete, the proposed project would not require additional consumption of these materials and, should these structures be demolished in the future, some of these materials may be recycled or salvaged for future uses as required by the California Green Building Standards Code (CALGreen) and SB 1374. Water, which is a limited, slowly renewable resource, would also be consumed during construction of each project. However, given the temporary nature and short duration of construction activities, water

consumption during the construction of each project is not anticipated to substantially decrease water supplies. Furthermore, the use of construction vehicles and equipment would require the consumption of nonrenewable fossil fuels such as natural gas and oil. As with other resources consumed during construction, the consumption of nonrenewable fossil fuels for energy use would occur on a temporary basis during construction of each project. As described in Section 4.6, Energy, of this Draft EIR, each project would comply with existing requirements for fuel efficiency and use of renewable energy sources pursuant to the PRC and CALGreen, which would minimize the consumption of non-renewable resources during construction to the maximum extent feasible. Further, **PMM EN-1** would require implementing agencies to incorporate best practices and technological improvements to reduce the consumption of fossil fuels during construction. Additionally, under **PMM EN-2**, construction bids issued by project sponsors would be required to identify a preference for alternative formulations of cement and asphalt with reduced GHG emissions, which are less energy-intensive to produce, as well as a preference for recycling of construction waste and debris, as market conditions permit at the time construction is proposed.

Operation of each transportation improvement project and land use development would continue to expend non-renewable. These include energy resources such as electricity, petroleum-based fuels, fossil fuels, and water. Energy resources associated with future land use development and transportation infrastructure would be used for building heating, cooling, lighting, and other functions. Fossil fuels are anticipated to be primary energy sources during operation of future projects. These existing, finite energy sources would thus be incrementally reduced. However, future projects would incorporate strategies and mitigation measures that would encourage renewable energy, alternative fuels, active transportation, green building standards, and energy efficiency. Further, the proposed project would comply with existing requirements for energy efficiency and use of renewable energy sources as required by Title 24, Part 6, of the California Code of Regulations (CCR) and CALGreen, which would minimize the consumption of non-renewable resources during operation to the maximum extent feasible.

Construction and operation of future projects may result in the use or handling of hazardous materials depending on what types of activities that would occur on the project site. Construction activities such as demolition, excavation, grading, and renovation could encounter contaminated soil or groundwater, as well as hazardous building materials in older structures. Operation of future projects could include storage and use of hazardous materials and generation of hazardous waste. In addition, equipment installed at a project site, such as hydraulic elevator systems, backup generators, and electrical equipment, may involve the use and storage of hydraulic fluid, fuels, and other hazardous materials. Such materials would be used, handled, stored, and disposed of in accordance with applicable government regulations and standards that would serve to protect against a significant and irreversible environmental change resulting from the accidental release of hazardous materials, including Occupational Safety and Health Administration (OSHA) and California Occupational Safety and Health Administration (Cal/OSHA) regulations; the California Fire Code; California Health and Safety Code Division 20, Chapter 6.5; the United States Department of Transportation (USDOT) Regulations; and the Resource Conservation and Recovery Act (RCRA).

In summary, construction and operation of future transportation improvement projects and land use developments would commit the use of slowly renewable and non-renewable resources and would

limit the availability of these resources in the Fresno COG Region for future generations or for other uses. As described in Chapter 3.0, Project Description, the design of each transportation improvement project and land use development facilitated by the proposed project is currently unknown. Therefore, this analysis represents a general characterization of reasonably foreseeable impacts that could occur under implementation of the proposed project. The continued use of nonrenewable resources would be conducted in a manner consistent with all State and local policies and regulations referenced above aimed at minimizing the inefficient use of non-renewable resources. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, the use of non-renewable resources under implementation of the proposed project is considered to result in significant irreversible changes to the environment for the purposes of this analysis.

6.2.2 Irreversible Damage from Environmental Accidents

Any growth in the Fresno COG Region includes the potential for irreversible damage from natural disasters or environmental accidents. For example, greater densities expose more people in the same area to unexpected environmental events such as fire, flood, and/or earthquake. Also, urban environments generally experience higher levels of noise, higher pollutant emissions, increased traffic, and increased people-to-people interactions. In addition, irreversible changes to the physical environment could occur from the accidental release of hazardous materials as more of these materials are transported through the region and/or people are in closer proximity to hazardous materials threats. However, this exposure would exist under any growth scenario proposed by the 2026 RTP/SCS. Federal and State regulations would require the proposed project to accommodate expected growth in the region based on market-based forecasts. The proposed 2026 RTP/SCS would also minimize the footprint of that growth particularly in rural and agricultural areas while focusing growth on existing centers and established areas. Implementation of the proposed project does not, in and of itself, result in greater potential of irreversible damage from an environmental accident.

6.2.3 Irretrievable Commitments of Nonrenewable Resources to Justify Current Consumption

As discussed in the *Fresno County 2023–2060 Growth Projections*[1] and summarized in Section 4.14, Population and Housing, the population of the Fresno COG Region is anticipated to increase to 1,128,530 individuals by 2060. Although urbanization in the region is anticipated to increase significantly by the horizon year of 2049, regardless of whether or not the 2026 RTP/SCS is implemented, the proposed project would convert undeveloped lands that could contain nonrenewable resources as described below.

The Fresno COG Region contains multiple nonrenewable resources including agricultural lands, open space, habitat areas, and mineral resources areas that contain aggregates, oil, and natural gas. Increased levels of development outside of already developed areas could result in permanent loss or

[1] Fresno Council of Governments (COG). 2024. *Fresno County 2023–2060 Growth Projections.* October 17.

other adverse impacts to these resource areas. In addition, increased levels of development throughout the region could result in greater use of nonrenewable resources during construction, including nonrenewable aggregates, or increased use of glass, plastic, and other petroleum products. As described in Section 3.0, Project Description, the Fresno COG selected Scenario C (Enhanced Transit and Smart Growth) as the preferred project scenario. One of the focal points of this scenario is the preservation of resource land, including agricultural land. Other focal points of this scenario are sustainable urban growth focused on existing urban centers and established urban areas, and supporting higher-density growth with mixed-use development. Under this approach, new land use development would be prioritized within urban centers via infill, mixed-use development, and other strategies, which would help avoid conversion of active agricultural uses or other lands containing nonrenewable resources. However, the proposed project does not preclude future transportation improvement projects and land use developments facilitated by the proposed project from being located on or near agricultural land in urban fringe or rural areas, which could result in the conversion of nonrenewable resources to urbanized uses.

New growth generally results in additional demand for energy (electricity, natural gas, propane, petroleum, diesel, etc.) supplies and distribution. However, as described in Section 4.6, Energy, of this Draft PEIR, each project would comply with existing requirements for fuel efficiency and use of renewable energy sources pursuant to the PRC and CALGreen, which would minimize the consumption of non-renewable resources during construction to the maximum extent feasible. Further, **PMM EN-1** would require implementing agencies to incorporate best practices and technological improvements to reduce the consumption of fossil fuels during construction. Additionally, under **PMM EN-2**, construction bids issued by project sponsors would be required to identify a preference for alternative formulations of cement and asphalt with reduced GHG emissions, which are less energy-intensive to produce, as well as a preference for recycling of construction waste and debris, as market conditions permit at the time construction is proposed. In addition, energy resources associated with future growth-inducing projects would incorporate strategies and mitigation measures that would encourage renewable energy, alternative fuels, active transportation, green building standards, and energy efficiency. Further, the proposed project would comply with existing requirements for energy efficiency and use of renewable energy sources as required by Title 24, Part 6, of the CCR and CALGreen, which would minimize the consumption of non-renewable resources during operation to the maximum extent feasible. Furthermore, the proposed project will result in lower per-capita VMT through the horizon year (2049) as detailed in Section 4.8, Greenhouse Gas Emissions, through promoting alternative forms of transportation (e.g., walking and cycling) and encouraging the use of alternative modes of transportation.

Any growth in the region could result in significant irreversible resource commitments. In evaluating the significance of a project's irreversible resource commitments, CEQA requires a lead agency to consider whether such commitments are "justified" pursuant to *CEQA Guidelines* Section 15126.2(c). As discussed above, and consistent with the project objectives for the proposed project (Chapter 3.0, Project Description), the proposed project is designed to minimize irreversible resource commitments, thus maximizing opportunities for future generations. While the proposed project would result in irreversible resource commitments, by encouraging higher density, less-consumptive development, the commitments are justified and beneficial.

6.3 GROWTH-INDUCING IMPACTS

Sections 15126(d) and 15126.2(e) of the *State CEQA Guidelines* require that an EIR analyze growth-inducing impacts and discuss the ways in which a proposed project could foster economic or population growth or construction of additional housing, either directly or indirectly, in the surrounding environment. Section 15126.2(d) of the *State CEQA Guidelines* also requires a discussion of the characteristics of projects that may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. A project is typically considered growth inducing if it would: (1) foster economic or population growth or the construction of additional housing; (2) remove obstacles to population growth or tax community services to the extent that the construction of new facilities would be necessary; or (3) encourage or facilitate other activities that cause significant environmental effects.[1] Examples of projects likely to have significant growth-inducing impacts include extensions or expansions of infrastructure systems beyond what is needed to serve project-specific demand, and development of new residential subdivisions or industrial parks in areas that are currently only sparsely developed or are undeveloped.

6.3.1 Foster Economic Growth

The promotion of economic growth is the extent to which a proposed project could cause increased activity in the local or regional economy. A "multiplier effect" is an economic phrase that pertains to the interrelationships between various sectors of the economy. The multiplier effect is a quantitative description and can be described as how an increase in some economic activity starts a chain reaction that generates more activity than the original increase.

Construction of future transportation improvement projects and land use developments facilitated by the proposed project would create temporary employment opportunities and boost economic activity within the Fresno COG Region. In particular, this would be anticipated in the immediate surroundings of each future project where construction workers may patronize nearby establishments. However, the majority of construction-related employees would likely come from within the Fresno COG Region, and this economic activity would be limited to the duration of construction and therefore temporary in nature.

Operation of future transportation improvement projects and land use developments facilitated by the proposed project could result in increased economic activity through the creation of new permanent jobs (e.g., transit operator, building security). As with construction-related jobs, the majority of employees would likely come from within the Fresno COG Region. The employment generation potential of each individual project, though not known at this time, would be analyzed and mitigated as necessary in subsequent project-specific environmental analyses.

The proposed land use patterns and policies that would be implemented as part of the proposed project are designed in part to promote mixed-use development and high-density development in urban centers that would locate residential, commercial, and transportation uses in proximity to each other. This could result in increased commercial activity and improve overall economic development throughout the Fresno COG Region. It should be noted that, as described in Section 4.14, Population and Housing, the Fresno COG Region is projected to experience substantial growth in population, jobs,

[1] *State CEQA Guidelines*. 2023. Section 15126.2(d).

and housing by the project horizon year of 2049, regardless of whether or not the 2026 RTP/SCS is implemented. Rather than spur new growth not anticipated by the Fresno COG and its member agencies, the proposed project considers future growth estimates and potential development and land use patterns outlined in each of the adopted or draft general plans prepared by each member agency and shows how future growth and development could be allocated to planned growth areas consistent with these plans. Therefore, the proposed project would foster orderly, planned economic growth in the Fresno COG Region.

6.3.2 Remove Obstacles to or Otherwise Foster Growth (Construction or Extension of Infrastructure)

Eliminating physical or regulatory obstacles to growth can result in a growth-inducting impact because those obstacles are removed. An example of a physical obstacle to growth is the need for public service infrastructure (roadways, water mains, sewer lines etc.). Extending public service infrastructure into an area that lacks infrastructure would induce population growth because the infrastructure needed to serve the area would be available and the area would therefore have the capacity to allow population growth. Also, the addition, deletion, or alteration of a regulatory obstacle (such as a growth or development policy) could result in new growth because the regulatory obstacle would be altered such that new growth would subsequently not be hindered.

The regional growth strategy outlined in the proposed SCS would encourage dense, mixed-use growth in existing urban centers. Obstacles to growth in these areas are generally limited as these areas are typically equipped with the infrastructure necessary to support growth. However, under **FMM EN-2**, the Fresno COG would encourage member agencies to alter zoning to maximize homes near employment centers to further encourage active transportation. The alteration of zoning to achieve intended development represents the removal of a regulatory obstacle, thereby fostering growth in the Fresno COG Region.

Additionally, transportation improvement projects facilitated by the proposed project would improve accessibility and connectivity throughout the Fresno COG Region. This could indirectly induce growth outside of urban centers (i.e., unplanned growth). While the proposed 2026 RTP/SCS would facilitate future projects where planned growth is proposed in the Fresno COG Region (e.g., existing urban centers), it is possible that unplanned growth could still occur in areas not identified in local planning documents. This would represent the removal of an obstacle to growth in rural portions of the Fresno COG Region.

It should be noted that it will ultimately be the cities and the County that review and approve development proposals and determine consistency with their plans, programs, and policies. The Fresno COG has no land use authority to approve future growth development as it occurs through the horizon year of the RTP/SCS (2049).

6.3.3 Involve Characteristics That May Encourage and Facilitate Other Activities That Could Significantly Affect the Environment

Throughout this PEIR, FMMs have been identified that would require the Fresno COG to encourage member agencies to engage in certain actions. For example, as previously referenced, **FMM EN-2** would encourage member agencies to alter zoning to maximize homes near employment centers to

further encourage active transportation. Another example is **FMM AG-1**, which would encourage member agencies to pursue infill development in place of development in rural and environmentally sensitive areas. While provided in the PEIR with the intent to mitigate environmental impacts that could occur under the proposed project, it is possible that the activities encouraged in these measures (e.g., rezoning or infill development projects) could result in their own environmental impacts.

Additionally, as acknowledged throughout this PEIR, the design of each future transportation improvement project and land use development facilitated by the proposed project is currently unknown. While this PEIR presents a general characterization of reasonably foreseeable impacts that could occur under future projects, the analysis of project-specific impacts would depend on characteristics that are not available at this time. Accordingly, the PEIR acknowledges that subsequent project-specific CEQA documents may be required to further analyze the potential environmental impacts of each future project. While this PEIR prescribes PMMs intended to reduce potential environmental impacts to the extent feasible, it is possible that individual projects could result in significant impacts to the environment. Therefore, the proposed project does involve characteristics that may encourage and facilitate other activities that could significantly alter the environment.

6.4 ENERGY IMPACTS

According to Section 15126.2(b) of the *State CEQA Guidelines*, "[i]f analysis of the project's energy use reveals that the project may result in significant environmental effects due to wasteful, inefficient, or unnecessary consumption use of energy, or wasteful use of energy resources, the EIR shall mitigate that energy use."

As described in Section 4.6, Energy, of this Draft PEIR, the primary use of energy associated with construction and operation of future transportation improvement projects and land use developments facilitated by the proposed project would be the consumption of fuel (e.g., diesel and gasoline) for vehicle trips.

Construction of future land use developments facilitated by the proposed project would require energy associated with the manufacture and transportation of building materials, grading activities, building construction, and powering construction-related equipment. However, **PMM EN-1** would require implementing agencies to incorporate best practices and technological improvements to reduce the consumption of fossil fuels during construction, including reducing idling from construction equipment, modernizing older off-road engines and equipment, limiting use and developing fleet rules for construction equipment, and requiring zero-emission forklifts. Additionally, under **PMM EN-2**, construction bids issued by project sponsors would be required to identify a preference for alternative formulations of cement and asphalt with reduced GHG emissions, which are less energy-intensive to produce, as well as a preference for recycling of construction waste and debris, as market conditions permit at the time construction is proposed.

Operation of future land use developments facilitated by the proposed project would use electricity for building heating, cooling, lighting, and other functions. In addition, operation of future transportation improvement projects such as transit services would be expected to utilize electricity (train, light rail, etc.) and petroleum or diesel (bus) for operations and maintenance, but this energy use would serve a higher volume of passengers than single-occupancy vehicles. Further, under **PMM**

EN-3, future transportation improvement projects and land use developments facilitated by the proposed project would be required to incorporate energy-efficient lighting fixtures, traffic lights, and rail signals to reduce operational energy consumption.

In addition, other transportation improvements included in the proposed 2026 RTP/SCS that would improve energy efficiency and reduce transportation energy demand include improved solar lighting at bus stops, electric bus replacement, electric street sweeper replacement, bicycle lane installation, sidewalk/trail improvements, and electric vehicle (EV) charging for member-agency vehicle fleets. Further, under **FMM EN-1**, the Fresno COG would encourage member agencies to increase the number of alternative fuel vehicles within agency fleets, as feasible. The regional growth patterns outlined in the proposed SCS would also conserve energy through encouraging dense, mixed-use growth in existing urban centers, thereby promoting forms of active transportation. This would be furthered by **FMM EN-2**, which would require the Fresno COG to encourage member agencies to alter zoning to maximize homes near employment centers to further encourage active transportation.

Construction and operation of the proposed project would be required to comply with State and local policies and regulations, including the PRC, CALGreen, and Title 24, Part 6, of the CCR. Applicable regulatory policies and regulations are designed to promote efficient use of energy resources and minimize unnecessary and wasteful use to the maximum extent feasible. It is anticipated that each project would include conservation and sustainability features, as appropriate. Features could include bicycle parking racks, EV charging stations and EV-capable spaces, and passive solar design. Under **FMM EN-3**, the Fresno COG would encourage member agencies to streamline permitting and provide public information to facilitate accelerated construction of solar and wind power. Furthermore, under **FMM EN-4,** the Fresno COG would encourage member agencies to go beyond standard sustainability requirements by adopting their own “Green Building Programs” to promote green building standards beyond those established by Title 24. Each member agency’s green building standards may involve provisions for energy efficiency and usage of renewable resources.

Potential energy consumption during construction and operation of each future transportation improvement project and land use development cannot be meaningfully quantified at this time and would instead be modeled during future project-specific environmental reviews. Therefore, the analysis of energy impacts in this PEIR represents a general characterization of reasonably foreseeable impacts that could occur under implementation of the proposed project. With adherence to the regulatory requirements and mitigation measures described above, project impacts associated with the wasteful, inefficient, or unnecessary consumption of energy resources would be reduced to the extent feasible. However, given the programmatic nature of the proposed project and the scale of the Fresno COG Region, it cannot be definitively known whether all potential impacts would be mitigated to below levels of significance. The responsibility to approve these projects, evaluate the applicability and feasibility of project-specific mitigation prescribed in this PEIR, and ensure implementation of mitigation deemed applicable and feasible ultimately belongs to Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over each subsequent project. Therefore, potential impacts associated with the wasteful, inefficient, or unnecessary consumption of energy resources are considered significant and unavoidable for the purposes of this PEIR.

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7.0 MITIGATION MONITORING AND REPORTING PROGRAM

7.1 MITIGATION MONITORING REQUIREMENTS

This Mitigation Monitoring and Reporting Program (MMRP) is designed to comply with California Public Resources Code (PRC) Section 21081.6, which mandates that a public agency adopt a reporting or monitoring program for changes made to the project or conditions of project approval to mitigate or avoid significant effects on the environment. The reporting or monitoring program must be designed to ensure compliance during project implementation, and mitigation measures must be enforceable through permit conditions, agreements, or other measures. Conditions of project approval may be set forth in referenced documents that address required mitigation measures or, in the case of the adoption of a plan, policy, regulation, or other project, by incorporating the mitigation measures into the plan, policy, regulation, or project design.

The monitoring program contains the following elements:

1. The mitigation measures are recorded with the action and procedure necessary to ensure compliance. In some instances, one action may be used to verify implementation of several mitigation measures.

2. A procedure for compliance and verification has been outlined for each action necessary. This procedure designates who will take action, what action will be taken and when, and to whom and when compliance will be reported.

3. The program has been designed to be flexible. As monitoring progresses, changes to compliance procedures may be necessary based upon recommendations by those responsible for the program. As changes are made, new monitoring compliance procedures and records will be developed and incorporated into the program.

Table A lists each of the Project-Specific Mitigation Measures (PMMs) and Fresno Council of Governments (Fresno COG) Mitigation Measures (FMMs). PMMs are project-specific measures developed to reduce or avoid environmental impacts associated with implementation of the proposed project. FMMs are Fresno COG measures that provide guidance and recommendations for member agencies and implementing agencies to consider during planning, review, and implementation of future projects. Table A also identifies the party or parties responsible for implementation and monitoring of each measure.

7.2 MITIGATION MONITORING PROCEDURES

The MMRP has been prepared in compliance with PRC Section 21081.6. It describes the requirements and procedures to be followed by the Fresno COG to ensure that all mitigation measures adopted as part of the proposed 2026 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (proposed project) will be carried out as described in the Final EIR.

Table 7.A lists each of the PMMs and FMMs specified in the Draft EIR and identifies the party or parties responsible for implementation and monitoring of each measure.

Table 7.A Mitigation Monitoring and Reporting Program

Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs)	Timing	Responsible Party	Monitoring Agency	Date Completed and Initials
4.1: Aesthetics				
PMM AES-1: Implementing agencies shall consider mitigation measures to address potential aesthetic impacts that substantially degrade scenic vistas and visual character, as applicable and feasible: • During construction of individual Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) projects, the following measures shall be incorporated to minimize temporary and visual impacts: ○ Pre-construction clearing shall be limited to that necessary for construction. ○ Where feasible, existing vegetation, particularly vegetation along the edge of construction areas, shall be preserved to help screen views. ○ Existing trees shall be protected, where feasible, or replaced where removed to minimize visual impacts associated with clear-cutting. ○ After construction, areas disturbed by construction, staging, and storage shall be restored to original contours and revegetated with plant material similar in quantities and types to that which was removed and in compliance with local jurisdictional requirements. ○ To the extent feasible, construction staging shall not be located within the immediate foreground distance (~500 feet) of existing residential neighborhoods, recreational areas, or other land uses that include highly sensitive viewers. Where unavoidable, staging sites shall be screened from viewers using appropriate solid screening materials such as temporary fencing and walls. Fencing and walls shall be maintained, including removal of any graffiti. ○ Project design shall minimize contrasts in scale and massing between project elements and surrounding natural forms. This includes proposed grading that matches surrounding terrain in accordance with county and city hillside ordinances, where applicable. • During design and operation of individual RTP/SCS projects, the following measures shall be incorporated to minimize permanent visual impacts: ○ New development shall provide appropriate transitions in building height and bulk that are sensitive to the physical and visual character of adjoining neighborhoods that have lower development intensities and building heights. ○ During project design, comparable range of colors and textures for building materials shall be used. Projects shall specify graffiti-resistant materials and finishes, where feasible and appropriate. ○ Landscaping shall be replaced and renewed where existing vegetation is removed. Project design shall incorporate plant species that complement the surrounding landscape and proposed development.	During project construction, design, and operation	Project Sponsor/ Construction Contractor	Implementing Agency/ Construction Contractor	

Table 7.A Mitigation Monitoring and Reporting Program

Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs)	Timing	Responsible Party	Monitoring Agency	Date Completed and Initials
○ Project design shall incorporate see-through safety barrier designs (e.g., railings rather than walls), as appropriate. ○ Project design shall incorporate landscaping along highway corridors to introduce natural elements and visual interest that soften the hard-edged, linear character of the transportation corridors, while following local design guidelines (where feasible), to ensure visual compatibility with the existing setting and minimize changes in visual quality or character. Local design guidelines may include setback buffers, landscaping, color, texture, signage, and lighting criteria. ○ Where sound walls are proposed, visual impacts shall be accounted for during sound wall design and construction, as follows: ▪ Transparent panels shall be used, if feasible, to preserve views where proposed sound walls would block views from residences. ▪ Landscaped earth berms, or a combination of wall and berm, shall be used, if feasible, to minimize the apparent sound wall height. ▪ Sound walls of materials shall be designed with color and texture that complements the surrounding landscape and develops visual interest. ▪ Landscaping shall be incorporated near proposed sound walls to screen the wall, where feasible. Native vegetation shall be used where feasible.				
PMM AES-2: Implementing agencies shall consider mitigation measures to address potential aesthetic impacts from light and glare, as applicable and feasible: • During construction, light and glare during construction shall be minimized through the implementation of temporary lighting controls and construction best management practices (BMPs). These practices include: ○ Limiting nighttime construction lighting to the minimum necessary for safety and security; ○ Shielding and directing temporary lighting downward and away from sensitive receptors and roadways; ○ Positioning lighting to avoid glare to motorists; ○ Using non-reflective materials on temporary structures and equipment, where feasible; ○ Installing temporary screening where construction occurs adjacent to light-sensitive uses. • Glare from transportation projects shall be minimized through the adoption of project design features that reduce glare. These features include: ○ Planting trees along transportation corridors to reduce glare from the sun; ○ Landscaping off-street parking areas, loading areas, and service areas; ○ Shielding transportation lighting fixtures to minimize off-site light trespass; ○ Requiring lighting that illuminates parking areas to be hooded and arranged so as not to	During project design and construction	Project Sponsor/ Construction Contractor	Implementing Agency/ Construction Contractor	

Table 7.A Mitigation Monitoring and Reporting Program

Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs)	Timing	Responsible Party	Monitoring Agency	Date Completed and Initials
cause a nuisance to highway traffic or sensitive receptors. • Glare from land use projects shall be minimized through the adoption of project design features that reduce glare. These features include: ○ Limit the use of reflective materials, such as metal to the extent feasible. ○ Use non-reflective glass (or glass treated with a non-reflective coating) for all exterior windows and glass used on building surfaces. ○ Provide structural and/or vegetative screening from light-sensitive uses. ○ Direct architectural lighting onto building surfaces with low reflectivity to minimize glare, limit spillover onto adjacent properties, and reduce skyglow into the nighttime sky, thereby avoiding incidental light impacts on nearby private properties and undeveloped open space.				
4.2: Agricultural and Forestry Resources				
FMM AG-1: The Fresno Council of Governments (COG) shall encourage member agencies to pursue infill development in place of development in rural and environmentally sensitive areas. The Fresno COG shall encourage member agencies to seek funding to prepare specific plans and related environmental documents to facilitate mixed-use development, and to allow these areas to serve as receiver sites for transfer of development rights away from environmentally sensitive lands and rural areas outside established urban growth boundaries. The Fresno COG shall encourage member agencies to consider agricultural resources in all projects and avoid or minimize impacts on these areas.	Ongoing	Fresno COG	Fresno COG	N/A
PMM AG-1: Implementing agencies shall consider measures to reduce or mitigate substantial adverse effects related to the conversion of agricultural land to a non-agricultural use and/or lands under a Williamson Act or Farmland Security Zone (FSZ) contract, as applicable and feasible: • During design, consider project relocation or corridor realignment to avoid active agricultural lands and land under a Williamson Act or FSZ contract. • Establish off-site conservation easements on farmland of equal acreage and quality consistent with the recommendations of the California Department of Conservation (DOC); establish 20-year Farmland Security Zone contracts (Government Code Section 51296 et seq.) or 10-year Williamson Act contracts (Government Code Section 51200 et seq.) on farmland of equal acreage and quality; or use other conservation tools available from the DOC Division of Land Resource Protection. Should the appropriate implementing agency require mitigation as described above, the project sponsor shall provide proof for verification by the implementing agency that the measure has been fulfilled.	During project design	Implementing Agency	Implementing Agency	

Table 7.A Mitigation Monitoring and Reporting Program

Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs)	Timing	Responsible Party	Monitoring Agency	Date Completed and Initials
4.3: Air Quality				
PMM AQ-1: Implementing agencies shall consider mitigation measures to address potential air quality impacts that would conflict with or obstruct implementation of the applicable air quality plan, as applicable and feasible: Prior to approval of individual RTP/SCS projects, each individual project shall conduct a project-level air quality analysis consistent with the requirements of the California Environmental Quality Act (CEQA) and applicable guidance from the San Joaquin Valley Air Pollution Control District (SJVAPCD) for review and approval by the appropriate member agency. The analysis shall quantify construction and operational emissions of criteria air pollutants and precursors and evaluate those emissions against the applicable thresholds of significance adopted by the SJVAPCD. If analysis demonstrates that project emissions would exceed one or more applicable thresholds of significance, the implementing agency shall require that all feasible mitigation measures to reduce emissions to the maximum extent practicable be identified and implemented. Such measures may include, but are not limited to, the following: **Construction Measures:** • All off-road diesel-powered construction equipment ≥50 horsepower shall meet or exceed Tier 4 Final emission standards. • For projects where electrical grid power is available, construction shall minimize the use of diesel generators. • Low-volatile-organic-compound (VOC) architectural coatings, paints, adhesives, and sealants shall be used to the extent feasible. **Operational Measures:** • Projects shall be designed to minimize or eliminate the use of natural gas in buildings, prioritizing all-electric building systems where feasible. • Electric vehicle (EV) charging infrastructure shall be installed consistent with, or exceed, applicable code requirements to support zero-emission vehicle use. • Zero-emission landscaping equipment or the requirement for electric-powered maintenance equipment shall be incorporated into project design where feasible.	Prior to project approval	Project Sponsor/ Construction Contractor	San Joaquin Valley Air Pollution Control District (SJVAPCD)	
PMM AQ-2: Implementing agencies shall consider mitigation measures to address potential air quality impacts that would expose sensitive receptors to substantial pollutant concentrations, as applicable and feasible: • For projects proposed within 500 feet of existing sensitive receptors, the implementing agency shall require the preparation of a Construction Health Risk Assessment (HRA) prior to project approval. The HRA shall: ○ Estimate emissions of toxic air contaminants (TACs), including diesel particulate matter	Prior to project approval and during construction	Implementing Agency	Implementing Agency/ SJVAPCD's	

Table 7.A Mitigation Monitoring and Reporting Program

Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs)	Timing	Responsible Party	Monitoring Agency	Date Completed and Initials
(DPM), from construction equipment and activities. ○ Model pollutant dispersion to determine project-specific concentrations at nearby sensitive receptor locations. ○ Evaluate potential cancer and non-cancer hazards in comparison to the SJVAPCD's adopted health risk thresholds. • If it is determined that the unmitigated health risk would exceed applicable thresholds, measures to reduce TAC exposure may include, but are not limited to, the following: ○ The project shall use Tier 4, or cleaner, off-road equipment during construction. ○ For projects where electrical grid power is available, construction shall minimize the use of diesel generators to the extent feasible. ○ Construction shall be phased to reduce simultaneous heavy equipment activity near sensitive receptors, where feasible.				
4.4: Biological Resources				
PMM-BIO-1: Implementing agencies for a project shall consider mitigation measures to reduce substantial adverse effects related to threatened and endangered species, as applicable and feasible: • Occupied habitat and potentially suitable habitat for threatened, endangered, or rare species, as well as designated critical habitat in project design, shall be avoided during project design wherever practicable and feasible. • Where projects impact suitable habitat for special-status species and/or listed or sensitive species that have specific field survey protocols/guidelines outlined by the United States Fish and Wildlife Service (USFWS), the California Department of Fish and Wildlife (CDFW), or other local agency, focused species surveys shall be conducted prior to construction. If appropriate, surveys shall follow applicable protocols and guidelines and be conducted by qualified personnel. If sensitive plants or wildlife are present, qualified staff shall identify species-specific measures to avoid, minimize, and/or mitigate for potential impacts in consultation with the USFWS or CDFW. • Where avoidance is infeasible for species protected under the federal Endangered Species Act (FESA), the California Endangered Species Act (CESA), or local/regional ordinances and policies, conservation measures to mitigate the loss of habitat and fulfill the requirements of the applicable authorization for incidental take pursuant to Section 7 or 10(a) of FESA, Section 2081 of CESA to support issuance of an incidental take permit, and/or as identified in local/regional plans shall be implemented. Conservation strategies to protect the survival and recovery of federally and State-listed endangered and local special-status species may include:	During project design and construction	Implementing Agency, Qualified Biologist	Implementing Agency/United States Fish and Wildlife Service (USFWS)/ California Department of Fish and Wildlife (CDFW)	

Table 7.A Mitigation Monitoring and Reporting Program

Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs)	Timing	Responsible Party	Monitoring Agency	Date Completed and Initials
○ Impact minimization strategies ○ Contribution of in-lieu fees ○ Use of in-kind mitigation bank credits ○ Habitat restoration, creation, rehabilitation, and/or enhancement ○ Establishment of conservation easements • Temporary access roads and staging areas shall not be located within areas containing sensitive plants, wildlife species, or native habitat wherever feasible. • A worker environmental awareness program (environmental education) shall be implemented during construction to inform project workers of their responsibilities and avoid/minimize impacts on sensitive biological resources. • A qualified botanist shall evaluate the project area during design to document the presence or absence of special status plant species. • A qualified biologist shall monitor construction activities within or adjacent to occupied special-status species habitat to facilitate the avoidance of resources not permitted for impact. • Highly visible markers and/or temporary fencing shall be installed prior to the start of construction to keep project activities within the cleared disturbance footprint. • Construction shall be temporarily halted if protected wildlife enter work areas to allow wildlife to move through the work area unharmed. • If special status-species or sensitive habits are identified, a qualified biologist shall be used to monitor implementation of mitigation measures during construction. • Construction activities shall be scheduled to avoid sensitive time periods for biological resources (e.g., steelhead spawning periods during the winter and spring, the nesting bird season). • An invasive species control plan shall be developed for areas of high-quality native habitat disturbed by project construction. • Appropriate sound attenuation measures and other BMPs shall be implemented where needed to protect sensitive wildlife species. • Pre-construction surveys shall be conducted prior to construction by a qualified biologist to delineate sensitive species habitat to facilitate avoidance. • During design, existing habitat on both sides of the proposed project shall be considered and design features included to retain/improve wildlife connectivity where feasible.				

Table 7.A Mitigation Monitoring and Reporting Program

Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs)	Timing	Responsible Party	Monitoring Agency	Date Completed and Initials
PMM BIO-2: Implementing agencies shall consider mitigation measures to reduce substantial adverse effects related to riparian habitats and other sensitive natural communities, as applicable and feasible: • During project design, implementing agencies shall consult with the USFWS and/or National Marine Fisheries Service (NMFS) where riparian or sensitive habitats provide potential for occupied habitat for federally listed rare, threatened, and endangered species afforded protection pursuant to FESA. • During project design, implementing agencies shall consult with the United States Forest Service (USFS) where sensitive or riparian habitats provide potential for occupied habitat for Forest Sensitive Species for the four national forests in the Fresno COG Region. • During project design, implementing agencies shall consult with the CDFW where such State-designated sensitive or riparian habitats provide potential for occupied habitat for State-listed rare, threatened, and endangered species afforded protection pursuant to CESA, or Fully Protected Species afforded protection pursuant to the California Fish and Game Code. • During project design, implementing agencies shall consult with the CDFW pursuant to the provisions of Section 1600 of the State Fish and Game Code as they relate to impacts to lakes and streambeds. • During project design, implementing agencies shall consult with the USFWS, USFS, and CDFW, as appropriate, where State-designated sensitive or riparian habitats are occupied by birds afforded protection pursuant to the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code during the breeding season. • Sensitive natural communities and riparian habitats shall be avoided, wherever practicable and feasible, during project design. Where practicable and feasible, upland buffers shall be included in the project to minimize impacts to riparian corridors. • Where avoidance is infeasible, sufficient conservation measures shall be developed through coordination with local agencies and the regulatory agency (i.e., USFWS or CDFW), as appropriate, to protect sensitive natural communities and riparian habitats and develop appropriate compensatory mitigation where required. • A qualified biologist shall monitor construction activities that may occur in or adjacent to, sensitive and riparian habitats and implementation of mitigation measures. • When construction activities require stream crossings, work shall be scheduled during dry conditions and use rubber-wheeled vehicles, when feasible. A qualified wetland scientist or regulatory specialist shall determine if potential project impacts require regulatory permits from the United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and/or CDFW prior to construction.	During project design and construction	Implementing Agency/ Qualified Biologist	Implementing Agency/USFWS/ CDFW/ National Marine Fisheries Service (NMFS)	

Table 7.A Mitigation Monitoring and Reporting Program

Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs)	Timing	Responsible Party	Monitoring Agency	Date Completed and Initials
• Temporary construction fencing, or other suitable markings, shall be installed around the perimeter of sensitive and riparian habitat prior to construction. • Topsoil (the surface material from 6 to 12 inches deep) and perennial native plants, when recommended by a qualified ecologist/biologist, shall be salvaged and stockpiled for use in restoring native vegetation to areas of temporary disturbance within the project area. Salvage of soils containing invasive species, seeds, and/or rhizomes shall be avoided as identified by a qualified ecologist/biologist. • Appropriate, locally native vegetation shall be installed following the completion of construction activities, as identified by the qualified ecologist/biologist. • BMPs shall be used at construction sites to minimize erosion and sediment transport from the area. BMPs include encouraging growth of native vegetation in disturbed areas, using straw bales or other silt-catching devices, and using settling basins to minimize soil transport.				
PMM BIO-3: Implementing agencies shall consider mitigation measures to reduce substantial adverse effects related to aquatic resources, as applicable and feasible: • An aquatic resources delineation shall be completed by a qualified biologist or regulatory specialist during project design to identify and map the extent of State and federally protected aquatic resources. Impacts to these aquatic resources shall be avoided or minimized in project design, consistent with the provisions of Sections 404 and 401 of the Clean Water Act (CWA), the Porter-Cologne Water Quality Control Act, and/or Section 1600 of Fish and Game Code. • Where avoidance of aquatic resources is infeasible and authorizations from the USACE, RWQCB, and/or CDFW are required, sufficient conservation measures and/or mitigation shall be developed to fulfill the requirements of those authorizations.	During project design	Implementing Agency/ Qualified Biologist	Implementing Agency/ CDFW/United States Army Corps of Engineers (USACE)/ Regional Water Quality Control Board (RWQCB)	
PMM BIO-4: Implementing agencies for a project shall consider mitigation measures to reduce substantial adverse effects related to wildlife movement, as applicable and feasible: • During project design, implementing agencies shall consult with the USFS where impacts to migratory wildlife corridors may occur in an area afforded protection by an adopted Forest Land Management Plan or Resource Management Plan for the four national forests in the region. • During project design, consult with counties, cities, and/or other local organizations, as appropriate, when impacts may occur to open space areas that have been designated as important for wildlife movement related to local ordinances or conservation plans. • A qualified biologist shall conduct surveys to identify active migratory/native bird nests no more than 7 days before the start of construction at project sites from February 1 through August 31.	During project design and construction	Implementing Agency/ Qualified Biologist/Construction Contractor	Implementing Agency/ CDFW/USACE/ Regional Water Quality Control Board (RWQCB)	

Table 7.A Mitigation Monitoring and Reporting Program

Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs)	Timing	Responsible Party	Monitoring Agency	Date Completed and Initials
• Construction activities shall be prohibited within 250 feet of active raptor nests and 50 feet of active non-raptor nests. • When feasible and practicable during project design, impacts shall be minimized to wildlife movement and existing functional wildlife corridors shall be preserved. Site-specific analyses of opportunities to preserve or improve habitat linkages shall be conducted during project design, if appropriate. • Long, linear projects with the possibility of impacting wildlife movement shall analyze habitat linkages/wildlife movement corridors on a broad scale to avoid critical choke points that could reduce the function of recognized movement corridors. • Construction drawings and habitat connectivity mapping shall be reviewed by a qualified biologist during design to determine the risk of habitat fragmentation. • When practicable and feasible, projects shall be designed to promote wildlife corridor redundancy by including multiple connections between habitat patches. • During project design, the potential for overpasses, underpasses, and culverts shall be evaluated to create wildlife crossings where a project may interrupt the movement of species. Wildlife crossings shall be provided in accordance with proven standards, such as the Federal Highway Administration's (FHWA) *Critter Crossings*, and in consultation with wildlife corridor authorities. • Directional wildlife fencing shall be installed, where appropriate, to minimize wildlife injury due to direct interaction between wildlife and roads or construction. • Where avoidance is infeasible, sufficient conservation measures shall be designed through coordination with local agencies and the regulatory agency (i.e., USFWS or CDFW) and in accordance with the respective County and cities' general plans to mitigate for the temporal or permanent loss of fish and wildlife movement corridors and/or wildlife nursery sites. The consideration of conservation measures may include the following measures where applicable: ○ Wildlife movement buffer zones ○ Corridor realignment ○ Appropriately spaced breaks in center barriers ○ Stream rerouting ○ Culverts ○ Creation of artificial movement corridors such as freeway under- or overpasses ○ Acquisition of contiguous adjacent land parcels to be protected in perpetuity from encroachment and development ○ Other comparable measures				

Table 7.A Mitigation Monitoring and Reporting Program

Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs)	Timing	Responsible Party	Monitoring Agency	Date Completed and Initials
• Applicable and appropriate guidance (e.g., FHWA HEP 16 059), as well as BMPs, shall be incorporated into project design to benefit pollinators, with a focus on native plants. • During design, berms and sound/sight barriers at wildlife crossings shall be evaluated to encourage wildlife to utilize crossings. Sound and lighting shall be minimized, particularly in areas adjacent to natural habitats. • Lighting impacts on sensitive species shall be reduced through implementation of mitigation measures, such as, but not limited to: ○ High-pressure sodium and/or cut-off fixtures shall be incorporated into project design instead of typical mercury-vapor fixtures for outdoor lighting. ○ Exterior lighting shall be designed to confine illumination to the project site. Structural and/or vegetative screening shall be provided for light-sensitive uses where feasible. ○ Non-reflective glass, or glass treated with a non-reflective coating, shall be specified for all exterior windows and glass used on building surfaces. ○ Architectural lighting onto building surfaces shall be directed to minimize glare and limit light intrusion onto adjacent properties. • Noise impacts to sensitive species shall be minimized through implementation of mitigation measures. Some measures from **PMM NOI-1** (see Section 4.13, Noise) may also be applicable where they support these objectives, including, but not limited to: ○ Temporary noise barriers shall be installed around sensitive habitat during construction. ○ Where feasible, structural and/or vegetative screening shall be provided for noise sensitive habitats. ○ Construction equipment shall be properly maintained per manufacturers' specifications and fitted with the best available noise suppression devices. ○ Hydraulically or electrically powered tools shall be used during construction to avoid noise associated with compressed air exhaust from pneumatic tools. Where pneumatic tools are unavoidable, exhaust mufflers and tool jackets shall be used to reduce noise. ○ Quieter procedures (e.g., drills rather than impact equipment) shall be used during construction, when feasible. ○ Equipment and trucks with the best available noise control techniques shall be used during construction. • Where feasible, include buffers as large as possible between sensitive habitats and freeways in project design. • To the extent practicable, construction at night and during dawn and dusk, when wildlife activity is highest, shall be avoided.				

Table 7.A Mitigation Monitoring and Reporting Program

Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs)	Timing	Responsible Party	Monitoring Agency	Date Completed and Initials
PMM BIO-5: Implementing agencies shall consider mitigation measures to reduce conflicts with local policies and ordinances protecting biological resources, such as trees, as applicable and feasible: • During design, implementing agencies shall consult with the appropriate local agency responsible for the administration of the policy or ordinance protecting biological resources. • Existing trees shall be retained on site consistent with local regulations. Adequate protection during construction shall be provided for any trees that are to remain, as recommended by an International Society of Arboriculture (ISA) Certified Arborist. • During design, if specific project area trees are designated as "Protected Trees," "Landmark Trees," or "Heritage Trees," approval for encroachment or removals shall be obtained through the appropriate entity. Appropriate mitigation measures shall be developed to ensure that the trees are replaced. Mitigation trees shall be locally sourced native species, as directed by a certified arborist. • An ISA-Certified Arborist shall monitor construction activities that may occur in areas with trees designated as "Protected Trees," "Landmark Trees," or "Heritage Trees" to facilitate avoidance of resources not permitted for impact. Before the start of any clearing, excavation, construction, or other work on the site, fencing shall be installed for every protected tree deemed to be potentially endangered by said site work. Fences shall be left in place for the duration of all such work. All trees to be removed shall be clearly marked. • The removal and disposal of logs, brush, earth, and other debris shall be planned to avoid injury to any protected tree. Where proposed development or other site work could encroach upon the dripline of any protected tree, special measures to allow the roots to breathe and obtain water and nutrients shall be implemented. Excavation, cutting, filling, or compaction of the existing ground surface shall be minimized within the dripline. No change in existing ground level shall occur from the base of any protected tree. No burning or use of equipment with an open flame shall occur near or within the protected perimeter of any protected tree. • No storage or dumping of oil, gas, chemicals, or other substances that may be harmful to trees shall occur within the dripline of any protected trees or any other location on the site from which such substances might enter the protected perimeter. No heavy construction equipment or construction materials shall be operated or stored within the dripline of any protected trees. Wires, ropes, or other devices shall not be attached to any protected tree, except as needed for support of the tree. • The leaves of protected trees shall be periodically sprayed with water during construction to prevent buildup of dust and other pollution that would inhibit leaf transpiration, as directed	During project design and construction	Implementing Agency/ ISA-Certified Arborist/ Construction Contractor	Implementing Agency	

Table 7.A Mitigation Monitoring and Reporting Program

Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs)	Timing	Responsible Party	Monitoring Agency	Date Completed and Initials
by the certified arborist. • If any damage to a protected tree occurs during construction, the appropriate local agency shall be immediately notified of such damage. If the damaged tree cannot be preserved in a healthy state, as determined by the certified arborist, the tree shall be replaced with another tree or trees on the same site as deemed adequate by the local agency to compensate for the loss of the tree that is removed. • Where avoidance is infeasible, sufficient conservation measures shall be developed to fulfill the requirements of the applicable policy or ordinance, such as to support issuance of a tree removal permit. The consideration of conservation measures may include: ○ Avoidance strategies ○ Contribution of in-lieu fees ○ Planting of replacement trees ○ Re-landscaping areas with native vegetation post-construction ○ Other comparable measures developed in consultation with the local agency and certified arborist.				
4.5: Cultural Resources				
PMM CUL-1: Implementing agencies shall consider mitigation measures to reduce substantial adverse changes in the significance of a historical resource, as applicable and feasible: As part of the appropriate environmental review of individual projects, a record search at the Southern San Joaquin Valley Information Cetner (SSJVIC) at California State University, Bakersfield, shall be conducted to determine whether the project area has been previously surveyed and whether resources were identified.	During CEQA environmental review	Implementing Agency	Implementing Agency	
PMM CUL-2: Implementing agencies shall consider mitigation measures to reduce substantial adverse changes in the significance of an archaeological resource. Such measures may include the following or other comparable measures identified by implementing agencies: If SJJVIC recommends a survey of an individual project site, the implementing agency shall obtain a qualified architectural historian to conduct historic architectural surveys of affected buildings, structures, or objects to determine their individual or potential collective eligibility for listing in the California Register of Historical Resources (CRHR) and/or National Register of Historic Places (NRHP). Based on the results of the surveys, the implementing agency shall develop measures to mitigate potential impacts to historical resources, including maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation, relocation, or reconstruction of any impacted historic resource, which shall be conducted in a manner consistent with the Secretary of the Interior's Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic	During CEQA environmental review	Implementing Agency/ Qualified Architectural Historian	Implementing Agency/San Joaquin Valley Information Cetner (SSJVIC)	

Table 7.A Mitigation Monitoring and Reporting Program

Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs)	Timing	Responsible Party	Monitoring Agency	Date Completed and Initials
Buildings, as set forth in State California Environmental Quality Act (CEQA) Guidelines Section 15064.5(b)(3). When the above measures are not feasible or possible, the implementing agency shall secure a qualified architectural historian, or other such qualified person, to document any significant historical resource(s) by way of historic narrative, photographs, or architectural drawings, as mitigation for the effects of demolition of a historic resource. This work shall follow the general guidelines as described in the Historic American Building Survey (HABS), Historic American Engineering Record (HAER), or the Historical American Landscapes Survey (HALS). The appropriate level of recordation shall be established by the implementing agency based on the resource(s) that may be adversely affected by each project, including the number of copies to prepare and a list of designated recipients identified (e.g., local historical societies, museums, library branch, local government agency or department, and the SSJVIC). The report preparer shall contact the organizations identified and inquire whether (1) they are interested in receiving a copy of the documentation and, (2) if so, what format they prefer (e.g., a bound hard copy, a copy saved electronically and stored on a thumbdrive, or both). The implementing agency shall coordinate with the documentation preparer(s) and determine when the documentation package is finalized and deemed complete. A set number of copies and distribution or hosting the information on a website shall occur. The development of project-specific mitigation plans based on site and resource characteristics shall reduce potential impacts to the extent feasible.				
PMM CUL-3: Implementing agencies shall consider mitigation measures to reduce potential impacts related to the disturbance human remains, including those interred outside of formal cemeteries, as applicable and feasible: • Prior to issuance of grading permits for projects that contain known archaeological resources (or could potentially contain archaeological resources according to SSJVIC records), a Secretary of the Interior's Standards qualified and certified Registered Professional Archaeologist (RPA) (project archaeologist) shall be contracted to oversee archaeological monitoring of ground-disturbing. Ground-disturbing activities may include, but are not limited to, pavement removal, potholing or auguring, grubbing, boring, grading, excavation, drilling, and trenching. The project archaeologist, in consultation with the developer, shall develop an Archaeological Monitoring Plan to address the details, timing, and responsibility of all archaeological and cultural activities that will occur on the project site. Details in the plan shall include: ○ Project grading and development scheduling. ○ Cultural resources sensitivity training requirement for all earthwork-related construction	Prior to issuance of grading permits and disturbing activities	Implementing Agency/Secretary of the Interior's Standards qualified and certified Registered Professional Archaeologist (RPA)	Implementing Agency	

Table 7.A Mitigation Monitoring and Reporting Program

Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs)	Timing	Responsible Party	Monitoring Agency	Date Completed and Initials
personnel ○ If applicable, the development of a rotating or simultaneous schedule in coordination with the project sponsor and the project archaeologist for designated Native American Tribal monitors, if any, during grading, excavation, and ground-disturbing activities on the site. ○ The safety requirements, duties, scope of work, and Native American Tribal monitors' authority to stop and redirect grading activities in coordination with all project archaeologists. ○ The protocols and stipulations that the developer, Tribes, and project archaeologist must follow in the event of inadvertent cultural resources discoveries, including any newly discovered cultural resource deposits that shall be subject to a cultural resources evaluation. • The archaeological monitor shall maintain a daily log documenting, at a minimum, the identity of the monitor, the work monitored, and any cultural materials identified or other actions taken by the monitor. The monitoring logs shall be provided to the implementing agency upon request and may be shared with interested parties at the implementing agency's discretion. • On-site monitoring shall end when the project site grading and excavation activities are completed, or when the monitor has indicated that the site has a low potential for archaeological resources.				
PMM CUL-4: Implementing agencies shall consider mitigation measures to reduce substantial adverse effects to prehistoric or historic-era subsurface archaeological features or deposits, as applicable and feasible: In the event that evidence of any prehistoric or historic-era subsurface archaeological features or deposits (e.g., ceramic shards, trash scatters, lithic scatters) are discovered during construction, all ground-disturbing activity within 50 meters (165 feet) of the discovery shall be halted until an RPA (project archaeologist) can assess the significance of the find. If the find is a prehistoric archaeological site, the appropriate Native American group shall be notified. If the project archaeologist determines that the find does not meet the Center for Regional Heritage Research standards of significance for cultural resources, construction may proceed. If the project archaeologist determines that further information is needed to evaluate significance, a testing plan shall be prepared and implemented. If the find is determined to be significant by the project archaeologist (i.e., because the find is determined to constitute either a historical resource or a unique archaeological resource), the project archaeologist shall work with the project sponsor to avoid disturbance to the resources, and if complete avoidance is not feasible in light of project design, economics, logistics, and other factors, shall recommend additional	During construction and in the event that evidence of any prehistoric or historic-era subsurface archaeological features or deposits are found.	Implementing Agency/Project Sponsor/Secretary of the Interior's Standards qualified and certified Registered Professional Archaeologist (RPA)	Implementing Agency	

Table 7.A Mitigation Monitoring and Reporting Program

Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs)	Timing	Responsible Party	Monitoring Agency	Date Completed and Initials
measures such as the preparation and implementation of a data recovery plan. All cultural resources work shall follow accepted professional standards in recording any find, including submittal of standard Department of Parks and Recreation (DPR) Primary Record forms (Form DPR 523) and location information to the appropriate California Historical Resources Information System office for the project area.				
4.6: Energy				
FMM EN-1: The Fresno COG shall encourage member agencies to increase the number of alternative fuel vehicles (i.e., vehicles not powered strictly by gasoline or diesel fuel) both in publicly owned vehicles, as well as those owned by franchisees of these agencies, such as trash haulers, green waste haulers, street sweepers, and curbside recyclable haulers.	Ongoing	Fresno COG	Fresno COG	N/A
FMM EN-2: The Fresno COG shall encourage member agencies to alter zoning to improve the jobs/housing balance, create communities where people live closer to work, and offer alternatives to personal automobile travel (bike, walk, and transit).	Ongoing	Fresno COG	Fresno COG	N/A
FMM EN-3: The Fresno COG shall encourage member agencies to streamline permitting and provide public information to facilitate accelerated construction of solar and wind power.	Ongoing	Fresno COG	Fresno COG	N/A
FMM EN-4: The Fresno COG shall encourage member agencies to adopt a "Green Building Program" to promote green building standards that go beyond minimum mandatory requirements, such as achieving California Green Building Standards Code (CALGreen) Tier 1 or Tier 2 measures. Green building standards include energy efficiency, usage of renewable resources, and reduced waste generation.	Ongoing	Fresno COG	Fresno COG	N/A
PMM EN-1: Implementing agencies shall consider mitigation measures to reduce impacts to the wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation, as applicable and feasible, as follows: • Expanding light-duty vehicle retirement programs; • Increasing commercial vehicle fleet modernization; • Implementing driver training modules on fuel consumption; • Replacing gasoline-powered mowers with electric mowers; • Reducing idling from construction equipment; • Incentivizing alternative fuel vehicles and equipment; • Developing infrastructure for alternative-fueled vehicles; • Implementing truck idling rules, devices, and truck-stop electrification; • Requiring electric truck refrigerator units; • Reducing locomotives' fuel use; • Modernizing older off-road engines and equipment; • Encouraging freight mode shift;	During project construction and operation	Implementing Agency	Implementing Agency	

Table 7.A Mitigation Monitoring and Reporting Program

Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs)	Timing	Responsible Party	Monitoring Agency	Date Completed and Initials
• Limiting use of and developing fleet rules for construction equipment; and • Requiring zero-emission forklifts.				
PMM EN-2: Implementing agencies shall consider mitigation measures to reduce impacts to the wasteful, inefficient, or unnecessary consumption of energy resources, during construction bid solicitations, as applicable and feasible: Include the use of alternative formulations of cement and asphalt to the extent they are available at a reasonable cost in the marketplace. Solicitations shall include the recycling of construction waste and debris.	Prior to construction	Implementing Agency	Implementing Agency	
PMM EN-3: Implementing agencies shall consider mitigation measures to reduce impacts to the wasteful, inefficient, or unnecessary consumption of energy resources, during the design and approval, as applicable and feasible: • Lighting fixtures shall achieve energy reductions beyond an estimated baseline energy use for such lighting. • Light-emitting diode (LED) technology shall be used for all new or replaced traffic lights, rail signals, and other new development lighting features compatible with LED technology.	During project design	Implementing Agency	Implementing Agency	
4.7: Geology and Soils				
Refer to **PMMs HYD-1** and **HYD-2** as detailed in 4.10 Hydrology and Water Quality				
PMM GEO-1: Implementing agencies shall consider mitigation measures to reduce substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as applicable and feasible: • During project design and prior to construction of individual RTP/SCS projects, a qualified geologist shall be retained by the implementing agency to prepare a geotechnical investigation to establish site-specific geotechnical conditions, identify seismic and other geologic hazards, and develop appropriate project-specific recommendations to address those hazards. • The implementing agency shall incorporate the recommendations of the geotechnical investigation into project design and construction, as applicable.	Prior to project construction	Implementing Agency/ Qualified Geologist	Implementing Agency	
PMM GEO-2: Implementing agencies shall consider mitigation measures to reduce substantial adverse effects, including the risk of loss, injury, or death involving landslides, as applicable and feasible: Prior to construction of individual RTP/SCS projects, the implementing agency shall confirm that adequate slope drainage and appropriate landscaping are incorporated into project design to minimize the potential for slope instability and erosion.	Prior to project construction	Implementing Agency/ Qualified Geologist	Implementing Agency	

Table 7.A Mitigation Monitoring and Reporting Program

Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs)	Timing	Responsible Party	Monitoring Agency	Date Completed and Initials
PMM GEO-3: Implementing agencies shall consider mitigation measures to reduce impacts related to the destruction of unique paleontological resources or unique geologic features, as applicable and feasible: • During environmental review, an implementing agency or designee shall conduct a project-specific records search at the appropriate Information Center to determine whether the project site has been previously evaluated for paleontological resources and whether any such resources have been identified. • If determined to be necessary based on the records search, implementing agencies shall retain a qualified paleontologist to conduct a field survey of the project site to assess potential impacts to paleontological resources. As part of this assessment, the qualified paleontologist shall identify and recommend appropriate avoidance, minimization, and/or mitigation measures.	During CEQA environmental review	Implementing Agency/Qualified Paleontologist	Implementing Agency	
4.8: Greenhouse Gas Emissions				
Refer to **FMM EN-1** through **EN-4** and **PMMs EN-1** and **EN-2** as detailed in 4.6 Energy.				
FMMs GHG-1: The Fresno Council of Governments (COG), in partnership with local air districts, shall continue to work with local jurisdictions to adopt qualified greenhouse gas (GHG) reduction plans (e.g., Climate Action Plans), develop GHG-reducing planning policies, and support local implementation of climate initiatives.	Ongoing	Fresno COG	Fresno COG	N/A
PMM GHG-1: Implementing agencies shall consider mitigation measures to reduce impacts related to the generation of greenhouse gas (GHG) emissions, as applicable and feasible: • Prior to approval of individual Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) projects, the project sponsor shall prepare and submit a technical assessment evaluating potential project-related GHG impacts. The evaluation shall be prepared in conformance with the San Joaquin Valley Air Pollution Control District (SJVAPCD) methodology. • If the Fresno Council of Governments (COG), Fresno COG member agencies, or SJVAPCD establish numeric thresholds of significance for evaluating the GHG emissions impact of a proposed project (i.e., California Environmental Quality Act [CEQA] qualified Greenhouse Gas Reduction Plan/Climate Action Plan or SJVAPCD project-specific GHG thresholds), the evaluation of project-related GHG emissions shall demonstrate consistency with those thresholds of significance. • In the absence of project-specific GHG thresholds, projects shall demonstrate compliance with the newest version of the Scoping Plan's GHG requirements, consistent with State GHG emissions reduction and equity prioritization goals, by implementing the following design elements where feasible:	Prior to project approval	Implementing Agency or Project Sponsor	Implementing Agency/ SJVAPCD/ Fresno COG	

Table 7.A Mitigation Monitoring and Reporting Program

Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs)	Timing	Responsible Party	Monitoring Agency	Date Completed and Initials
○ Projects shall not include natural gas appliances or natural gas plumbing. ○ Projects shall achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the newest version of the Scoping Plan. ○ Projects shall not result in any wasteful, inefficient, or unnecessary electrical usage, as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines. ○ Projects shall comply with electric vehicle (EV) requirements in the most recently adopted version of California Green Building Standards Code (CALGreen) Tier 2. • Should a proposed project exceed established thresholds of significance, GHG emission reduction measures shall be implemented to reduce emissions below applicable thresholds or to a level commensurate with implementing the recommended project-design features outlined above. Such mitigation measures could include, but are not limited to, energy efficiency measures, water conservation and efficiency measures, solid waste measures, and transportation and motor vehicles measures. The identified measures shall be included as part of the conditions of approval.				
4.9: Hazards and Hazardous Materials				
Refer to **PMM HYD-1** and **HYD-2** as detailed in Section 4.10, Hydrology and Water Quality.				
Refer to **PMM WILD-2** as described in Section 4.20, Wildfire.				
FMM HAZ-1: The Fresno Council of Governments (COG) shall work with the California Department of Transportation (Caltrans) and the California Highway Patrol to reduce risks associated with the transport of hazardous materials in the Fresno COG Region through its consultation role assisting in the development of routes designated for hazardous materials.	Ongoing	Fresno COG	Fresno COG	N/A
PMM HAZ-1: Implementing agencies shall consider the following mitigation measures to reduce substantial adverse effects related to the routine transport, use, or disposal of hazardous materials and hazardous materials releases, as applicable and feasible: • Prior to construction, a project-specific hazardous materials management plan shall be prepared to identify the types, quantities, storage locations, and handling procedures for hazardous materials used during construction. These plans would be implemented by the Construction Contractor during construction. • Prior to construction, coordination shall be conducted with local emergency response agencies (e.g., fire departments, emergency operations centers) to ensure adequate emergency access, response planning, and integration of the project into existing emergency response plans. For projects involving substantial transport of hazardous materials (e.g., rail or highway corridors), coordination shall be conducted with local jurisdictions and emergency response	Prior to project construction	Implementing Agency/ Construction Contractor	Implementing Agency	

Table 7.A Mitigation Monitoring and Reporting Program

Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs)	Timing	Responsible Party	Monitoring Agency	Date Completed and Initials
providers prior to construction regarding the nature of materials transported and emergency contact procedures, consistent with applicable federal regulations (e.g., 49 Code of Federal Regulations Part 15).				
PMM HAZ-2: Implementing agencies shall consider the following mitigation measures to reduce significant hazards to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, as applicable and feasible: • A records review shall be performed during the environmental review of a project to determine whether there is existing permitted use of hazardous materials, or documented evidence of hazardous waste contamination, within the project site. • A Phase I Environmental Site Assessment (Phase I ESA) shall be completed during a project's environmental review when it includes any site with the potential for residual hazardous materials as a result of historical land uses or release. The Phase I ESA shall be prepared in conformance with the ASTM E1527-21 standard and shall include the following: ○ A review of federal, State, and local regulatory agency databases for hazardous materials sites; ○ A review of historical sources, including aerial photographs, fire insurance maps, and prior land use records; ○ A site reconnaissance to identify evidence of hazardous materials use, storage, or disposal; ○ Interviews with current and past owners, operators, or other knowledgeable persons, as available; ○ Identification of recognized environmental conditions (RECs), historical RECs, and controlled RECs; ○ Conclusions and recommendations regarding the need for further investigation, if applicable. • If recommended by the Phase I ESA a Phase II ESA report shall be prepared for the project prior to construction. The Phase II ESA shall make recommendations for remedial action, if appropriate, and be signed by a professional geologist or professional engineer. Recommendations provided in the Phase II ESA shall be implemented. • During design, the appropriate local, State, and federal environmental regulatory agencies shall be consulted to ensure sufficient minimization of risk to human health and environmental resources has been implemented. Coordination shall include construction and post-construction considerations, and consider risk posed by soil contamination, groundwater contamination (including dewatering effluent), or other surface hazards such as underground storage tanks, fuel distribution lines, waste pits, and sumps.	During project design and construction	Implementing Agency/ California Occupational Safety and Health Administration (Cal/OSHA) Certified Asbestos Inspector/Assessor/Cal/OSHA-Certified Lead Inspector/Assessor or certified Lead Supervisor/ Professional Geologist or Professional Engineer	Implementing Agency/ California Department of Toxic Substances Control (DTSC), Regional Water Quality Control Board (RWQCB)/ SJVAPCD/ Environmental Protection Agency (EPA)/Fresno County Health Division/Certified Unified Program Agency (CUPA)/ Cal/OSHA	

Table 7.A Mitigation Monitoring and Reporting Program

Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs)	Timing	Responsible Party	Monitoring Agency	Date Completed and Initials
• During construction, work shall be stopped if soil, groundwater (including dewatering effluent), or other environmental medium with suspected contamination is encountered unexpectedly. Contamination could be identified by odor or visual staining, or if any underground storage tanks, abandoned drums, or other hazardous materials or wastes are encountered. The Construction Contractor shall secure the area and take all appropriate measures to protect human health and the environment, including, but not limited to, notification of regulatory agencies and identification of the nature and extent of contamination. Construction in the affected area shall be halted until appropriate measures have been implemented, consistent with the guidance of applicable regulatory authorities. • Soil generated by construction activities shall be stockpiled on site in a secure and safe manner. All contaminated soils determined to be hazardous or non-hazardous waste shall be adequately sampled by the Construction Contractor prior to acceptable reuse or disposal at an appropriate off-site location. Sampling, handling, and transport procedures for reuse or disposal shall be followed in accordance with applicable local, State, and federal laws and policies. • Groundwater (including dewatering effluent) pumped from the subsurface shall be evaluated for the presence of contaminants prior to discharge or disposal. If contamination is suspected or identified, groundwater shall be characterized in accordance with applicable State and federal hazardous waste regulations to determine appropriate handling, treatment, and disposal requirements. Groundwater pumped from the subsurface shall be contained on site in a secure and controlled manner to prevent releases to the environment and exposure to construction workers and the public. Contaminated groundwater, if identified, shall be managed, treated, and/or disposed of in accordance with applicable California Department of Toxic Substances Control (DTSC), RWQCB, and other regulatory agency requirements, including hazardous waste regulations, as appropriate. Engineering controls, including impermeable or vapor barriers, shall be installed to prevent groundwater-related contaminant movement and vapor intrusion into structures. • Prior to issuance of any demolition, grading, or building permit, the implementing agency (or other appropriate government agency) shall obtain written verification that the appropriate federal, State, and/or local oversight authorities have granted all required clearances and confirmed that all applicable standards, regulations, and conditions have been met for previous contamination at the site. • During construction, the Construction Contractor shall develop, train, and implement appropriate worker awareness and protective measures to ensure that worker and public exposure are minimized to an acceptable level and to prevent any further environmental				

Table 7.A Mitigation Monitoring and Reporting Program

Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs)	Timing	Responsible Party	Monitoring Agency	Date Completed and Initials
contamination as a result of construction. • During project design, potential presence asbestos-containing materials (ACMs), lead-based paint (LBP), and any other building materials classified as hazardous waste by State or federal law shall be assessed for projects that include the demolition or modification of structures constructed prior to 1978. • If ACMs are present in building materials, the implementing agency shall retain a California Occupational Safety and Health Administration (Cal/OSHA) certified Asbestos Inspector/Assessor to prepare specifications for the removal, encapsulation, or enclosure of ACMs. These specifications shall be signed by the certified Inspector/Assessor and submitted to the implementing agency and any applicable local regulatory agencies prior to issuance of demolition or renovation permits and prior to commencement of construction activities that could disturb ACMs. The Construction Contractor shall implement the specifications during demolition or renovation. All ACM removal, encapsulation, or enclosure activities shall be conducted in accordance with applicable federal, State, and local laws and regulations, including, but not limited to: California Code of Regulations (CCR), Title 8 (Section 1529); California Business and Professions Code (BPC) Division 3, (Sections 7058.5, 7180-7189.6, and 7028.1); California Health and Safety Code Sections 25915–25919.7; and any other local regulations. In addition, a completed San Joaquin Valley Air Pollution Control District (SJVAPCD) Asbestos Notification Form shall be submitted at least 10 working days in advance, and all ACMs shall be removed and disposed of by an accredited contractor in accordance with SJVAPCD Rule 8021 (Asbestos NESHAP), the United States Environmental Protection Agency (EPA), Cal/OSHA, and other applicable federal, State, and local standards. • Where the remediation of LBP is required, the project sponsor shall retain Cal/OSHA-certified Lead Inspector/Assessor or certified Lead Supervisor, Project Monitor, or Project Designer to prepare specifications for the stabilization and/or removal of identified LBP. These specifications shall be submitted to the implementing agency and the appropriate local regulatory agency (e.g., Fresno County Environmental Health Division/Certified Unified Program Agency [CUPA]) prior to issuance of demolition or renovation permits and prior to commencement of construction activities that could disturb LBP. The Construction Contractor shall implement these specifications during demolition or renovation. All stabilization and/or removal activities shall be conducted in accordance with applicable laws and regulations, including, but not limited to: Cal/OSHA's Construction Lead Standard (CCR Title 8, Section 1532.1) and Department of Health Services regulations (17 CCR Sections 35001–36100), as may be amended. If other materials classified as hazardous waste by State or federal law are present, the project sponsor shall submit written confirmation to the appropriate local				

Table 7.A Mitigation Monitoring and Reporting Program

Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs)	Timing	Responsible Party	Monitoring Agency	Date Completed and Initials
agency that all State and federal laws and regulations are being followed when profiling, handling, treating, transporting, and/or disposing of such materials.				
PMM HAZ-3: A project proposed within 0.25 mile of schools shall avoid the transport of hazardous materials when schools are in session, wherever feasible. When not feasible, notifications of the anticipated schedule of transport of such materials shall be provided to schools prior to construction.	During project design and construction	Implementing Agency	Implementing Agency	
PMM HAZ-4: Implementing agencies shall consider mitigation measures to reduce impacts to an adopted emergency response plan or emergency evacuation plan, as applicable and feasible: • Prior to construction, all necessary local and State road and railroad encroachment permits shall be obtained. All applicable conditions of approval shall be compiled and tracked for reference during project construction. If required as a permit condition, the Construction Contractor shall prepare a traffic control plan in accordance with professional engineering standards prior to construction. Traffic control plans shall include the following requirements: ○ Identification of all roadway locations where special construction techniques (e.g., directional drilling or nighttime construction) would be used to minimize impacts to traffic flow. ○ Development of circulation and detour plans to minimize impacts to traffic circulation. This may include the use of signing and flagging to guide vehicles through and/or around the construction zone. ○ Scheduling of truck trips outside of peak morning and evening commute hours to the maximum extent feasible. ○ Limiting lane closures during peak hours to the maximum extent feasible. ○ Use of designated haul routes to minimize truck traffic on local roadways to the maximum extent feasible. ○ Inclusion of detours for bicycles and pedestrians in all areas potentially affected by project construction. ○ Development of access plans for highly sensitive land uses such as police and fire stations, transit stations, hospitals, and schools prior to construction. The access plans will include input from the facility owner or administrator. To minimize disruption to emergency vehicles, the plans shall consider the timing, location, and duration of construction activities including detours and lane closures. ○ Storage of construction materials only in designated areas.	Prior to construction	Implementing Agency/ Construction Contractor	Implementing Agency	

Table 7.A Mitigation Monitoring and Reporting Program

Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs)	Timing	Responsible Party	Monitoring Agency	Date Completed and Initials
4.10: Hydrology and Water Quality				
PMM HYD-1: Implementing agencies shall consider mitigation measures to reduce project impacts that may violate water quality standards or waste discharge requirements, or otherwise substantially degrade surface water or groundwater quality, as applicable and feasible: • Prior to construction, the implementing agency shall require the project sponsor to retain a qualified civil engineer to prepare an erosion and sedimentation control plan for review and approval by the appropriate regulatory agency. Applicable BMPs shall include, but are not limited to, the following: ○ On sloped properties, the downhill end of the construction area shall be protected with perimeter control measures (e.g., silt fence, sandbags, filter fabric, silt curtains) and measures (e.g. hay bales) oriented parallel to the contours of the slope at a constant elevation to prevent erosion and limit sediment from entering streets, gutters, and storm drains. ○ In accordance with an approved erosion control plan, the Construction Contractor shall use mechanical and vegetative measures to reduce erosion and sedimentation, including appropriate seasonal maintenance. One hundred percent degradable erosion control fabric shall be installed on all graded slopes to protect and stabilize the slopes during construction and before permanent vegetation is established. All graded areas shall be temporarily protected from erosion by seeding with fast-growing annual species. All bare slopes shall be covered with staked tarps when rain is occurring or is expected. ○ The removal of natural vegetation or ground cover from the site shall be minimized during project design and construction to reduce the potential for erosion. Disturbed areas shall be stabilized with native vegetation as soon as possible. ○ During construction, filter materials shall be installed at storm drain inlets prior to the start of the wet weather season, site dewatering activities, street washing activities, and saw cutting asphalt or concrete. Filter materials shall be maintained and/or replaced, as necessary, to ensure effectiveness and prevent street flooding. ○ During construction, concrete/granite supply trucks or concrete/plaster finishing operations shall not be allowed to discharge wash water into watercourses, street gutters, or storm drains. ○ Tool and equipment cleaning locations shall be selected so that wash water does not discharge into the street, gutters, or storm drains. ○ The Construction Contractor shall provide a contained and covered area for storage of bags of cement, paints, flammables, oils, fertilizers, pesticides, or any other materials that could be discharged to a storm drain system by the wind or in the event of a material spill.	Prior to construction	Implementing Agency/Construction Contractor	Implementing Agency/ RWQCB	

Table 7.A Mitigation Monitoring and Reporting Program

Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs)	Timing	Responsible Party	Monitoring Agency	Date Completed and Initials
○ Construction debris shall be gathered on a regular basis and placed in a dumpster or other container that is emptied or removed on regular basis (interval approved by the implementing agency). When appropriate, tarps shall be used to collect fallen debris or splatters that could contribute to stormwater pollution. ○ During and following construction, dirt, gravel, refuse, and green waste shall be removed from sidewalks, street pavement, and storm drain systems within and near the project. ○ As appropriate, the Construction Contractor shall sweep street pavement adjacent to the project on a daily basis. Caked-on mud or dirt shall be scraped from these areas prior to sweeping. At the end of each workday, the entire site shall be cleaned and secured against potential erosion, dumping, or discharge to the street, gutter, and/or storm drains. ○ All erosion and sedimentation control measures installed during construction shall be in accordance with the control standards listed in the latest edition of the Erosion and Sediment Control Field Manual published by the Central Valley RWQCB. ○ During construction, all erosion and sedimentation control measures shall be monitored regularly by the Construction Contractor. If measures are insufficient to control sedimentation and erosion, the Construction Contractor, in coordination with the project sponsor, shall develop and implement additional and more effective measures immediately.				
PMM HYD-2: Implementing agencies shall consider mitigation measures to reduce project impacts that may violate water quality standards or waste discharge requirements, or otherwise substantially degrade surface water or groundwater quality, as applicable and feasible: • During project design, the implementing agency shall incorporate low impact development (LID) BMPs, infiltration BMPs, and hydromodification measures to mimic the natural hydrology of the site. These would maintain pre-project flow velocities/rates/volumes and retain/treat pollutants in stormwater runoff prior to discharge. Design elements may include, but are not limited to, the following: ○ New drainage channels/culverts; ○ Detention/retention basins; ○ Oil and grease traps; ○ Filter systems; ○ Vegetated buffers/median strips; ○ Incorporation of natural spaces; and ○ Wetland/riparian area restoration.	During project design	Implementing Agency/ Construction Contractor	Implementing Agency	

Table 7.A Mitigation Monitoring and Reporting Program

Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs)	Timing	Responsible Party	Monitoring Agency	Date Completed and Initials
4.11: Land Use and Planning				
PMM LU-1: The Fresno COG shall facilitate the exchange of information (e.g., geographic information system [GIS] shapefiles, demographic information, policy updates) that may be useful for member jurisdictions' reference for their planning documents and funding programs in timely updates.	Ongoing	Fresno COG	Fresno COG	N/A
FMM LU-1: Implementing agencies shall consider mitigation measures to reduce project impacts that may conflict with an applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, as applicable and feasible: During project design, each implementing agency shall protect access to existing community facilities and minimize existing and proposed barriers to pedestrians and bicyclists. Community facilities shall be identified, and public access shall considered. New or expanded pedestrian and bicycle routes connecting to community facilities shall be considered to improve community connectivity.	Ongoing	Fresno COG	Fresno COG	N/A
4.12: Mineral Resources				
PMM MIN-1: Implementing agencies shall consider mitigation measures to reduce the loss of availability of a known mineral resource, as applicable and feasible: • During construction, the Construction Contractor shall recycle and reuse building materials resulting from demolition, particularly aggregate and asphalt materials, to the maximum extent practicable. • During construction, the Construction Contractor shall identify and use recycled building materials, particularly aggregate materials, from other construction sites within a reasonable hauling distance of the project, where feasible. • During project design, the implementing agency shall evaluate the use of buffer zones or screening to reduce potential conflicts with adjacent or nearby mineral resource extraction areas. • During project planning and design, the implementing agency shall evaluate and select project sites and design features (e.g., buffers) to avoid or minimize impacts on known mineral resources and mineral resource recovery sites. To the extent feasible, projects shall be sited to maintain portions of Mineral Resource Zone 2 (MRZ-2) in open space or other general plan land use designations and zoning that allow for mineral resource extraction.	During project construction	Implementing Agency/ Construction Contractor	Implementing Agency	

Table 7.A Mitigation Monitoring and Reporting Program

Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs)	Timing	Responsible Party	Monitoring Agency	Date Completed and Initials
4.13: Noise				
PMM NOI-1: Implementing agencies shall consider mitigation measures to reduce construction noise impacts to levels at or below those established in the General Plan Noise Ordinance or other applicable standards (such as the Federal Transit Administration [FTA] construction noise criteria), as applicable and feasible: • The Construction Contractor shall limit project construction activities to the permitted hours of construction in accordance with local jurisdiction regulations in the applicable general plan noise element or noise ordinance. • The Construction Contractor shall erect a minimum 10-foot-high temporary construction barrier between project construction activities and noise-sensitive land uses when construction noise is predicted to exceed local or project-specific noise thresholds or during high-noise activities. The barrier shall be continuous with no gaps or holes and may be constructed of any material with a minimum Sound Transmission Class (STC) rating of 28. • To the extent feasible, the Construction Contractor shall schedule heavy construction activities generating high noise levels, such as the use of bulldozers, scrapers, graders, and pile driving, to the least noise-sensitive hour of the day. • To the extent feasible, the Construction Contractor shall implement pile driving alternatives to minimize construction noise impacts. These include, but are not limited to, pre-drilling and cast-in-drill-hole (CIDH). • The Construction Contractor shall stage all stationary construction equipment as far from noise-sensitive receptors as feasible. • To the extent feasible, construction-related traffic shall be routed away from streets with noise-sensitive land uses, including residences, or to streets with the fewest noise-sensitive land uses. • The Construction Contractor shall ensure that all construction equipment is properly maintained per manufacturers' specifications and fitted with the best available noise suppression devices (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds, whenever feasible). All intake and exhaust ports on power equipment shall be muffled or shielded. • To the extent feasible, the Construction Contractor shall use hydraulically or electrically powered tools (e.g., jack hammers, pavement breakers, and rock drills). • The Construction Contractor shall post the construction schedule, noise complaint procedures, and project contact information in a publicly accessible location for reference in the event of a noise disturbance.	During project construction	Implementing Agency/ Construction Contractor	Implementing Agency	

Table 7.A Mitigation Monitoring and Reporting Program

Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs)	Timing	Responsible Party	Monitoring Agency	Date Completed and Initials
PMM NOI-2: Implementing agencies shall consider mitigation measures to reduce potential stationary noise impacts, as applicable and feasible: • During project design of individual RTP/SCS projects, the implementing agency shall require the project sponsor to retain a qualified acoustical consultant to prepare a project-level noise study to assess potential stationary noise impacts from transportation and land development projects. The study shall be prepared in accordance with the applicable guidelines, procedures, and requirements. It shall determine whether project noise levels would result in a substantial permanent increase in ambient noise levels exceeding standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Further, the study shall recommend avoidance, minimization, and/or mitigation measures to reduce noise levels to the extent feasible. Noise reduction measures may include, but are not limited to: ○ Locating stationary noise sources on the site to be shielded by structures (e.g., buildings, enclosures, or soundwalls); and ○ Using equipment with lower noise emission ratings.	During project design	Implementing Agency/ Qualified Acoustical Consultant	Implementing Agency	
PMM NOI-3: Implementing agencies shall consider mitigation measures to reduce to reduce excessive groundborne vibration or groundborne noise levels during construction, as applicable and feasible: • Heavy construction (e.g., pile driving, blasting, large bulldozers, and loaded trucks) shall be restricted or the use of light construction equipment (e.g., pre-drilling, CIDH, small bulldozers and trucks) shall be required at a distance from off-site building structures that avoids potential damage and minimizes annoyance to the extent feasible. • Loaded trucks shall be routed away from residential streets or select streets with the fewest homes to the extent feasible.	During project construction	Implementing Agency/Construction Contractor	Implementing Agency	
PMM NOI-4: Implementing agencies shall consider mitigation measures to reduce operational vibration levels, as applicable and feasible: The implementing agency shall ensure implementation of applicable mitigation procedures provided in Table 4.13.N of this Program Environmental Impact Report (PEIR) to reduce operational vibration levels. Mitigation may occur at the source, along the propagation path, or at the receiver. If the mitigation procedures listed in Table 4.13.N are not feasible at certain properties, the implementing agency shall attempt to negotiate a vibration easement with affected property owners or, where feasible, consider relocation of sensitive receptors outside the area subject to significant vibration impacts.	During project operation	Implementing Agency/Construction Contractor	Implementing Agency	

Table 7.A Mitigation Monitoring and Reporting Program

<table>
<tr><th>Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs)</th><th>Timing</th><th>Responsible Party</th><th>Monitoring Agency</th><th>Date Completed and Initials</th></tr>
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Table 4.13.N: Potential Vibration Mitigation Procedures and Descriptions

Mitigation Procedure	Location of Mitigation	Description
Maintenance	Source	Rail condition monitoring systems with rail grinding on a regular basis. Wheel truing to re-contour the wheel, provide a smooth running surface, and remove wheel flats. Reconditioning vehicles. Installing wheel condition monitoring systems.
Location and Design of Special Trackwork	Source	Careful review of crossover and turnout locations during the preliminary engineering stage. When feasible, relocate special trackwork to a less vibration-sensitive area. Installation of spring frogs eliminates gaps at crossovers and helps reduce vibration levels.
Vehicle Suspension	Source	Rail vehicle should have a low unsprung weight, soft primary suspension, minimum metal-on-metal contact between moving parts of the truck, and smooth wheels that are perfectly round.
Special Track Support Systems	Source	Floating slabs, resiliently supported ties, high-resilience fasteners, resilient sub-roadbed materials, and ballast mats all help reduce vibration levels from the track support system.
Building Modifications	Receiver	For existing buildings, if vibration-sensitive equipment is affected by train vibration, the floor upon which

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Table 7.A Mitigation Monitoring and Reporting Program

Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs)			Timing	Responsible Party	Monitoring Agency	Date Completed and Initials
		the vibration-sensitive equipment is located could be stiffened and isolated from the remainder of the building. For new buildings, the building foundation should be supported by elastomer pads that are similar to bridge-bearing pads.				
	Trenches	Along Vibration Propagation Path	A trench can be an effective vibration barrier if it changes the propagation characteristics of the soil. It can be open or solid. Open trenches can be filled with Styrofoam. Solid barriers can be constructed with sheet piling. Rows of drilled shafts can be filled with either concrete or a mixture of soil and lime, or concrete poured into a trench.				
	Operational Changes	Source	Reduce vehicle speed. Adjust nighttime schedules to minimize train movements during sensitive hours. Operating restrictions require continuous monitoring and may not be practical.				
	Buffer Zones	Receiver	Negotiate a vibration easement from the affected property owners or expand the rail right-of-way.				
	Source: Federal Railroad Administration. 2012. *High-Speed Ground Transportation Noise and Vibration Assessment.*						

Table 7.A Mitigation Monitoring and Reporting Program

Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs)	Timing	Responsible Party	Monitoring Agency	Date Completed and Initials
4.14: Population and Housing				
FMM POP-1: Implementing agencies shall consider mitigation measures to reduce impacts related to the displacement of a substantial number of people, as applicable and feasible: During construction of individual RTP/SCS projects, the implementing agency shall require the Construction Contractor to prepare a construction schedule designed to minimize potential neighborhood disruption associated with prolonged construction activity. The schedule shall be submitted to the implementing agency or designated reviewing authority for review and approval.	Ongoing	Fresno COG	Fresno COG	N/A
PMM POP-1: The implementing agencies for each individual future transportation improvement and land use development project facilitated by the proposed project shall require that a construction schedule be developed that minimizes potential neighborhood deterioration from protracted waiting periods.	During project design	Implementing Agency	Implementing Agency	
PMM POP-2: Implementing agencies shall consider mitigation measures to reduce impacts related to the displacement of a substantial number of people, as applicable and feasible: Individual RTP/SCS projects with the potential to displace homes and businesses shall require implementing agencies to evaluate alternative alignments and transportation facility designs early in the design process to minimize displacement.	During project design	Implementing Agency	Implementing Agency	
4.15: Public Services				
Refer to **PMM LU-1** as detailed in Section 4.11, Land Use and Planning**.**				
4.16: Recreation				
No mitigation measures are applicable.				
4.17: Transportation and Traffic				
FMM TRAN-1: Fresno COG will continue to engage State agencies in developing such policies/program while implementing the following regional/local implementation measures: • Fresno COG will continue to secure funding for active transportation projects to fund more bike/pedestrian projects in the Fresno County region. • Fresno COG will encourage and support the local jurisdictions to grow more sustainably by building more infill, compact and mixed uses development. • Fresno COG will work with transit agencies in Fresno County to secure funding to expand transit services and improve the efficiency of the transit system. • Fresno COG will continue to support and encourage transit-oriented development through various funding programs. • Fresno COG will continue to support grant applications to state-wide funding programs such as the Affordable Housing and Sustainable Communities (AHSC), the Transit-Oriented Development (TOD) Housing Program, etc.	Ongoing	Fresno COG	Fresno COG	N/A

Table 7.A Mitigation Monitoring and Reporting Program

Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs)	Timing	Responsible Party	Monitoring Agency	Date Completed and Initials
• Fresno COG will continue to work with the transit agencies and the local governments to implement micro transit, mobility hubs, and micro-grid system in Fresno County. • Fresno COG will encourage transit agencies and local governments to implement first mile/last mile strategies to provide connection to the transit service. • Fresno COG will encourage local to explore the Missing Middle Housing issue, and develop mechanisms to fill the gap of such housing types to meet the affordable housing needs. • Fresno COG will continue to incentivize carpooling and vanpooling to reduce total VMT in the region. • Fresno COG will continue to support safe route to school programs/projects. • Fresno COG will continue to work with the San Joaquin Valley Air Pollution Control District (the Air District) to implement Rule 9410, which requires major employers in the region to provide employees with alternative to private automobiles as commute method. • Fresno COG will continue to provide support for the implementation of SB 743 by providing technical support for local agencies and the private sector. • Fresno COG will explore the implementation of a regional VMT mitigation program. • Fresno COG will explore the feasibility of managed lanes in the region. • Fresno COG will work with the transit agencies and local governments to provide more efficient demand-response services. • Fresno COG will encourage local governments to develop and implement Complete Street policies to facilitate more bike and walk trips. • Fresno COG will continue to support efforts to provide shades to transit riders and pedestrians by building more bus shelters and planting more trees along sidewalks.				
PMM TRAN-1: Prior to approval of individual RTP/SCS projects, the project sponsor shall consider preparation of a safety analysis as needed for locations where sight lines could be impeded or other potential safety hazards are present. If prepared, the safety analysis shall be prepared according to the jurisdiction's applicable Municipal Code requirements and the Caltrans Highway Design Manual (HCM) standards and guidelines. Depending on the outcome of the safety analysis, the implementing agency shall consider safety improvements to reduce substantial adverse effects, as applicable and feasible, such as the following: • Limited use areas (e.g., low-height landscaping); • On-street parking restrictions (e.g., red curb); and • Turning restrictions (e.g., right in/right-out).	Prior to approval of individual RTP/SCS projects	Project Sponsor	Implementing Agency	

Table 7.A Mitigation Monitoring and Reporting Program

Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs)	Timing	Responsible Party	Monitoring Agency	Date Completed and Initials
4.18: Tribal Cultural Resources				
Refer to **PMMs CUL-1, CUL-3,** and **CUL-4** as detailed in Section 4.5, Cultural Resources.				
4.19: Utilities and Service Systems				
Refer to **PMM HYD-1** and **HYD-2** as detailed in Section 4.10, Hydrology and Water Quality.				
PMM UTIL-1: Implementing agencies for a project shall consider mitigation measures to ensure adequate capacity and availability of utility and service systems, as applicable and feasible. Such utilities and services include, but are not limited to, water supply, wastewater treatment, stormwater drainage, electric power, natural gas, and telecommunications systems, as applicable and feasible: During the environmental review for individual RTP/SCS projects, implementing agencies shall ensure the provision of adequate utilities, including water supply, wastewater treatment, stormwater drainage, electric power, natural gas, and telecommunication systems, to avoid or reduce significant environmental impacts associated with the construction or expansion of such facilities. Projects requiring wastewater service, solid waste collection, or potable water service shall coordinate with the relevant local agencies to confirm that existing public services and utilities can accommodate the anticipated demand. If the current infrastructure serving an individual RTP/SCS project is inadequate, necessary infrastructure improvements shall be identified in the CEQA documentation for that individual project. Environmental impacts associated with the construction or expansion of utility infrastructure shall be avoided or minimized by adopting conditions of approval that must be followed by those responsible for construction or expansion activities.	During the CEQA review	Implementing Agency	Implementing Agency	
PMM UTIL-2: Implementing agencies for a project shall consider mitigation measures to ensure sufficient water supplies, as applicable and feasible: • During design individual RTP/SCS projects, coordination shall be conducted with relevant water service providers to ensure existing water supplies can accommodate the increase in demand. If any water service provider servicing the project site has inadequate water supply, improvements and/or mitigation measures shall be identified in each project's CEQA documentation. • Projects shall reduce the use of potable water for landscape irrigation. Project design shall include drought-tolerant plantings for landscaping, water-efficient irrigation systems, and rainwater capture infrastructure, where feasible. • Project design shall specify drip or other water-conserving or weather-based irrigation systems for landscaping. • Project design shall incorporate elements that reduce the use of potable water, including water-conserving fixtures such as low-flow toilets, water-efficient clothes washers, reduced-	During project design	Implementing Agency	Implementing Agency/ Applicable water service providers	

Table 7.A Mitigation Monitoring and Reporting Program

Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs)	Timing	Responsible Party	Monitoring Agency	Date Completed and Initials
flow faucets, and EnergyStar-rated appliances. • Project design shall incorporate the use of reclaimed water for non-potable uses, such as landscape irrigation, ornamental water features, concrete mixing, and dust control, when located in an area with existing reclaimed water conveyance infrastructure. For projects areas with planned reclaimed water service, design shall specify dual plumbing systems in anticipation of future reclaimed water use.				
PMM UTIL-3: The implementing agency for a project shall consider mitigation measures to reduce the generation of solid waste, as applicable and feasible: • Maintenance or reuse of existing building structures and materials associated with proposed building renovations and redevelopment shall be incorporated into the project to the extent feasible. • Construction waste shall be diverted from landfills, where feasible, through the following measures: ○ A construction waste management plan shall be implemented that identifies materials to be diverted from disposal. ○ Salvaged, refurbished, or reused materials shall be used, where practicable, to divert such items from landfills. ○ Diversion targets for construction waste shall be established and met.	During project construction	Implementing Agency	Implementing Agency/ Applicable solid waste service providers	
4.20: Wildfire				
Refer to **PMM HAZ-4** as detailed in Section 4.9, Hazards and Hazardous Materials.				
FMM WILD-1: The Fresno COG shall continue to provide a regional forum for collaboration in planning, communication, and information sharing on best practices around wildfire resilience.	Ongoing	Fresno COG	Fresno COG	N/A
PMM WILD-1: Implementing agencies shall consider the following mitigation measures to reduce wildfire risk, as applicable and feasible: • Structures proposed in high-fire-hazard areas shall be designed and constructed in accordance with applicable State and federal fire safety standards to improve survivability and allow for shelter-in-place, where appropriate. • During project design, improvements to roadway access and circulation shall be considered to support emergency response and safe evacuation. • During project design, defensible space requirements shall be incorporated to reduce flammable vegetation, debris, and combustible materials near structures. • Fire protection features, such as exterior sprinkler systems with independent water sources, shall be incorporated during project design. • Where feasible, distributed energy resources (e.g., solar with battery storage) shall be incorporated during project design to reduce reliance on overhead electrical infrastructure.	During project design	Implementing Agency/Construction Contractor	Implementing Agency	

Table 7.A Mitigation Monitoring and Reporting Program

Project-Specific Mitigation Measures (PMMs) and Fresno COG Mitigation Measures (FMMs)	Timing	Responsible Party	Monitoring Agency	Date Completed and Initials
• Project design shall comply with any existing fire protection plans in high-fire-hazard areas. • Fire-resistant features shall be incorporated into the design of development project proposed in fire-prone areas, including ember-resistant vents and fire-resistant roofing materials.				
PMM WILD-2: Implementing agencies shall consider the following mitigation measures to reduce fire risk related to the installation or maintenance of associated infrastructure, as applicable and feasible: Individual RTP/SCS projects located within Very High Hazard Severity Zones or State Responsibility Areas (SRAs) shall prepare a Construction Fire Prevention Plan prior to initiation of construction. A draft copy of the plan shall be provided to the California Public Utilities Commission (CPUC) and State and local fire agencies at least 90 days before the start of any construction activities in areas designated as Very High or High Fire Hazard Severity Zones. The plan shall also include federal, State, or local agencies with jurisdiction over areas where the project is located. The final plan shall be approved by the CPUC at least 30 days prior to the initiation of construction activities. The plan shall be fully implemented throughout the construction period and include the following: • The purpose and applicability of the plan. • Responsibilities and duties. • Preparedness training and drills. • Procedures for fire reporting, response, and prevention that include: ○ Identification of daily site-specific risk conditions ○ The tools and equipment needed on vehicles and to be on hand at sites ○ Reiteration of fire prevention and safety considerations during tailboard meetings ○ Daily monitoring of the red-flag warning system with appropriate restrictions on types and levels of permissible activity ○ Coordination procedures with federal and local fire officials ○ Crew training, including fire safety practices and restrictions ○ Method(s) for verifying that all plan protocols and requirements are being followed • A project Fire Marshal or similar qualified position shall be established to enforce all provisions of the Construction Fire Prevention Plan as well as to perform other duties related to fire detection, prevention, and suppression for the project. Construction activities shall be monitored to ensure implementation and effectiveness of the plan.	During project design and construction	Implementing Agency/Construction Contractor/ Fire Marshal or similar qualified position	Implementing Agency/ California Public Utilities Commission (CPUC)/ Fire Marshal or similar qualified position	

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