PUBLIC REVIEW DRAFT

ENVIRONMENTAL IMPACT REPORT

FRESNO VMT REDUCTION PROGRAM

FRESNO, CALIFORNIA

STATE CLEARINGHOUSE NUMBER: 2024091129

LSA

July 2025

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FRESNO, CALIFORNIA

STATE CLEARINGHOUSE NUMBER: 2024091129

Submitted to:

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July 2025

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TABLE OF CONTENTS

TABLE OF CONTENTS i
FIGURES AND TABLES v
1.0 EXECUTIVE SUMMARY 1-1
1.1 Purpose 1-1
1.2 Project Summary 1-1
1.2.1 Project Location 1-1
1.2.2 Project Description 1-1
1.2.3 Project Objectives 1-2
1.2.4 Significant Unavoidable Adverse Impacts 1-2
1.2.5 Lead Agency, Responsible and Trustee Agencies 1-2
1.3 Summary of Project Alternatives 1-3
1.3.1 No Project Alternative 1-3
1.3.2 All Applicable Fee Alternative 1-3
1.4 Areas of Controversy 1-3
1.5 Public Review of the Draft EIR 1-4
1.6 Executive Summary Matrix 1-5
2.0 INTRODUCTION 2-1
2.1 Purpose of this EIR 2-1
2.2 Environmental Review Process 2-1
2.3 Intended Uses of This EIR 2-2
2.4 Proposed Project 2-3
2.5 EIR Scope 2-4
2.6 Report Organization 2-4
2.7 Public Participation 2-5
3.0 PROJECT DESCRIPTION 3-1
3.1 Project Location and Setting 3-1
3.1.1 Project Location 3-1
3.1.2 Project Setting 3-1
3.2 Background and History 3-2
3.3 Proposed Project 3-3
3.4 Project Objectives 3-8
3.5 Discretionary Approvals 3-9
3.5.1 City of Fresno 3-9
3.5.2 California Department of Transportation (Caltrans) 3-9
3.5.3 Other Responsible/Trustee Agencies 3-9
4.0 EVALUATION OF ENVIRONMENTAL IMPACTS 4-1
Determination of Significance 4-1
Issues Addressed in the Draft EIR 4-1
Environmental Setting 4-1
Cumulative Analysis Context 4-2
Format of Issue Section 4-2

Environmental Issues 4-3
4.1 Aesthetics 4.1-1
4.1.1 Existing Environment Setting 4.1-1
4.1.2 Regulatory Setting 4.1-2
4.1.3 Impacts and Mitigation Measures 4.1-3
4.2 Agriculture and Forestry Resources 4.2-1
4.2.1 Existing Environment Setting 4.2-1
4.2.2 Methodology 4.2-1
4.2.3 Regulatory Setting 4.2-1
4.2.4 Impacts and Mitigation Measures 4.2-5
4.3 Air Quality 4.3-1
4.3.1 Existing Environment Setting 4.3-1
4.3.2 Regulatory Setting 4.3-13
4.3.3 Impacts and Mitigation Measures 4.3-28
4.4 Biological Resources 4.4-1
4.4.1 Existing Environment Setting 4.4-1
4.4.2 Regulatory Setting 4.4-13
4.4.3 Impacts and Mitigation Measures 4.4-21
4.5 Cultrual Resources and Tribal Cultural Resources 4.5-1
4.5.1 Existing Environment Setting 4.5-1
4.5.2 Regulatory Setting 4.5-12
4.5.3 Impacts and Mitigation Measures 4.5-18
4.6 Energy 4.6-1
4.6.1 Existing Environment Setting 4.6-1
4.6.2 Regulatory Setting 4.6-3
4.6.3 Impacts and Mitigation Measures 4.6-6
4.7 Geology and Soils 4.7-1
4.7.1 Existing Environment Setting 4.7-1
4.7.2 Regulatory Setting 4.7-9
4.7.3 Impacts and Mitigation Measures 4.7-17
4.8 Greenhouse Gas Emissions 4.8-1
4.8.1 Existing Environment Setting 4.8-1
4.8.2 Regulatory Setting 4.8-5
4.8.3 Impacts and Mitigation Measures 4.8-16
4.9 Hazards and Hazardous Materials 4.9-1
4.9.1 Existing Environment Setting 4.9-1
4.9.2 Regulatory Setting 4.9-9
4.9.3 Impacts and Mitigation Measures 4.9-16
4.10 Hydrology and Water Quality 4.10-1
4.10.1 Existing Environment Setting 4.10-1
4.10.2 Regulatory Setting 4.10-5
4.10.3 Impacts and Mitigation Measures 4.10-11
4.11 Land Use and Planning 4.11-1
4.11.1 Environmental Setting 4.11-1
4.11.2 Regulatory Setting 4.11-2
4.11.3 Impacts and Mitigation Measures 4.11-10
4.12 Mineral Resources 4.12-1
4.12.1 Existing Environmental Setting 4.12-1

4.12.2 Regulatory Setting....4.12-1
4.12.3 Impacts and Mitigation Measures....4.12-2
4.13 Noise....4.13-1
4.13.1 Methodology....4.13-1
4.13.2 Existing Environmental Setting....4.13-6
4.13.3 Regulatory Setting....4.13-8
4.13.4 Impacts and Mitigation Measures....4.13-15
4.14 Population and Housing....4.14-1
4.14.1 Existing Environmental Setting....4.14-1
4.14.2 Methodology....4.14-3
4.14.3 Regulatory Setting....4.14-4
4.14.4 Impacts and Mitigation Measures....4.14-6
4.15 Public Services and Recreation....4.15-1
4.15.1 Existing Environmental Setting....4.15-1
4.15.2 Regulatory Setting....4.15-10
4.15.3 Impacts and Mitigation Measures....4.15-16
4.16 Transportation....4.16-1
4.16.1 Existing Environmental Setting....4.16-1
4.16.2 Regulatory Setting....4.16-6
4.16.3 Impacts and Mitigation Measures....4.16-10
4.17 Utilities and Service Systems....4.17-1
4.17.1 Existing Environmental Setting....4.17-1
4.17.2 Regulatory Setting....4.17-9
4.17.3 Impacts and Mitigation Measures....4.17-12
4.18 Wildfire....4.18-1
4.18.1 Existing Environmental Setting....4.18-1
4.18.2 Regulatory Setting....4.18-1
4.18.3 Impacts and Mitigation Measures....4.18-3

5.0 CEQA-REQUIRED ASSESSMENT CONCLUSIONS....5-1

5.1 Growth Inducement....5-1
5.1.1 Elimination of Obstacles to Population Growth....5-2
5.1.2 Promotion of Economic Growth....5-3
5.2 Significant Irreversible Changes....5-3
5.3 Significant Unavoidable Impacts....5-4

6.0 ALTERNATIVES TO THE PROPOSED PROJECT....6-1

6.1 Introduction....6-1
6.2 Selection of Alternatives....6-2
6.2.1 Alternatives Considered but Rejected....6-2
6.3 Proposed Project....6-3
6.3.1 Project Characteristics....6-3
6.3.2 Project Objectives....6-3
6.3.3 Significant Unavoidable Impacts of the Proposed Project....6-4
6.4 Alternative 1: No Project Alternative....6-4
6.4.1 Description....6-4
6.4.2 Environmental Analysis....6-4
6.4.3 Overview of Potential Impact/Comparison to Proposed Project....6-5
6.4.4 Project Objectives....6-5

6.5 Alternative 2: All Applicable Fee Alternative 6-5
6.5.1 Description 6-5
6.5.2 Environmental Analysis 6-6
6.5.3 Overview of Potential Impact/Comparison to Proposed Project 6-6
6.5.4 Project Objectives 6-6
6.6 Environmentally Superior Alternative 6-6

7.0 REPORT PREPARATION 7-1

7.1 Report Preparers 7-1
7.1.1 City of Fresno 7-1
7.1.2 LSA Associates, Inc. 7-1
7.2 References 7-1

APPENDICES:

A: NOTICE OF PREPARATION
B: PUBLIC SCOPING COMMENTS
C: VMT REDUCING PROJECTS
D: NATIVE AMERICAN CONSULTATION

FIGURES AND TABLES

FIGURES

Figure 3-1: VMT Reduction Program Fee Projects 3-6
Figure 4.3-1: California Population, Gross State Product (GSP), Diesel Cancer Risk, and Diesel Vehicle Miles Traveled (VMT) Regulatory Context 4.3-13

TABLES

Table 1.A: Executive Summary Matrix 1-6
Table 3.A: Potential VMT-Reducing Improvements 3-4
Table 4.2-1: Existing Farmland Acreages Within the Planning Area 4.2-3
Table 4.2-2: Existing Farmland under Williamson Act Contracts Within the Planning Area 4.2-4
Table 4.3.A: Sources and Health Effects of Air Pollutants 4.3-2
Table 4.3.B: Federal and State Ambient Air Quality Standards 4.3-6
Table 4.3.C: San Joaquin Valley Air Basin Air Quality Attainment Status 4.3-10
Table 4.3.D: Ambient Air Quality in the Project Vicinity 4.3-11
Table 4.3.E: Screening Levels for Potential Odor Sources 4.3-20
Table 4.3.F: SJVAPCD Construction and Operation Thresholds of Significance (Tons per Year) 4.3-28
Table 4.4.A: Special-Status Plant Species Recorded in the Project Vicinity 4.4-6
Table 4.4.B: Special-Status Wildlife Species within the Project Vicinity 4.4-7
Table 4.8.A: Global Warming Potential of Greenhouse Gases 4.8-2
Table 4.8.B: Senate Bill 375 Regional Greenhouse Gas Emissions Reduction Targets 4.8-9
Table 4.9.A: Facilities Listed on the US EPA CERCLIS Database 4.9-3
Table 4.9.B: Facilities Listed on the DTSC EnviroStor Database 4.9-4
Table 4.9.C: Waste Management Units 4.9-5
Table 4.9.D: Facilities Listed on the Water Board List of “Active” CDO and CAOs 4.9-5
Table 4.11.A: General Plan Consistency Analysis 4.11-3
Table 4.11.B: Fresno COG 2022 RTP Consistency Analysis 4.11-12
Table 4.13.A: Definitions of Acoustical Terms 4.13-3
Table 4.13.B: Typical A-Weighted Sound Levels 4.13-4
Table 4.13.C: Human Response to Different Levels of Ground-Borne Noise and Vibration 4.13-5
Table 4.13.D: Measured Existing Noise Levels from Approved General Plan 4.13-7
Table 4.13.E: Summary of USEPA Noise Levels 4.13-9
Table 4.13.F: Summary of Human Effects in Areas Exposed to 55 dBA CNEL 4.13-9
Table 4.13.G: Interpretation of Vibration Criteria for Detailed Analysis 4.13-10
Table 4.13.H: Construction Vibration Damage Criteria 4.13-10
Table 4.13.I: Transportation (Non-Aircraft) Noise Sources 4.13-13
Table 4.13.J: Stationary Noise Sources 4.13-13
Table 4.13.K : Ambient Noise Standards in Decibels 4.13-14
Table 4.14.A: Population Estimate for City of Fresno Planning Area 4.14-2
Table 4.14.B: Employees per Occupied Housing Unit in Fresno County 4.14-2
Table 4.14.C: Number of Jobs per Housing Unit in Fresno County 4.14-3

Table 4.15.A: Existing City of Fresno Fire Stations 4.15-3
Table 4.15.B: Planning Area Planned Open Space 4.15-7
Table 4.15.C: Libraries in the Planning Area 4.15-8
Table 4.15.D: Hospitals in the City of Fresno Planning Area 4.15-9
Table 4.15.E: Fire Facilities Fee Program 4.15-11
Table 4.15.F: Police Facilities Fee Program 4.15-12
Table 4.15.G: Park Facilities Fee Program 4.15-15
Table 6-1: Comparison of the Environmental Impacts of the Proposed Project and the Project Alternatives 6-7

1.0 EXECUTIVE SUMMARY

1.1 PURPOSE

This Draft Environmental Impact Report (EIR) has been prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts resulting from implementation of the Fresno Vehicle Miles Travelled (VMT) Reduction Program (herein referred to as the proposed project) for the City of Fresno. This Draft EIR has been prepared in conformance with CEQA (California Public Resources Code, Section 21000, et seq.); the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000, et seq.); and procedures for implementing CEQA as adopted by the City of Fresno.

A program EIR is an EIR that may be prepared on a series of actions that can be characterized as one large project and are related either (1) geographically; (2) as logical parts in the chain of contemplated actions; (3) in connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of continuing a program; or (4) as individual actions carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects that can be mitigated in similar ways. Later activities in the program must be examined in light of the program EIR to determine whether an additional environmental document must be prepared. The purpose of this Draft EIR is to inform public agency decision-makers, representatives of affected and responsible agencies, the public, and other interested parties of the potential environmental effects that may result from implementation of the proposed project.

1.2 PROJECT SUMMARY

The following provides a summary of the project location, project description, project objectives, potential significant and unavoidable impacts that could result from the proposed project, and a list of the agencies responsible for implementation of the approved VMT Reduction Program and approvals required for subsequent projects.

1.2.1 Project Location

The City of Fresno is located in Fresno County in the central portion of the San Joaquin Valley and covers an area of approximately 113 square miles. The City is located approximately 200 miles north of Los Angeles, and approximately 170 miles south of Sacramento. To the north of Fresno is Madera County, to the northeast and adjacent to Fresno, is the City of Clovis. Unincorporated land is located to the east, south, and west of Fresno. State Route (SR) 99 runs north-south through the City and provides primary connectivity between Fresno and other regions of California. SR-41 runs north-south through the center of the City and connects Fresno to Yosemite National Park. SR-168 links the Downtown area to the adjacent City of Clovis. SR-180 runs east-west, providing access to outlying rural communities.

1.2.2 Project Description

The proposed project aims to establish a VMT Reduction Program with the intent of reducing citywide VMT by establishing mitigation for future development projects in Fresno. The VMT Reduction Program includes two major components that can be applied, individually or in

combination, to new development with VMT impacts: an Urban Design Calculator (UDC), which estimates potential VMT reductions for development projects through incorporation of various design elements; and a mitigation fee (supported by a nexus study) and mitigation bank, which would be used to fund VMT-reducing projects throughout Fresno.

The VMT Reduction Program would identify relevant transportation demand management (TDM) strategies and VMT-reducing projects within Fresno to be funded by mitigation fees from developments that trigger potentially significant VMT impacts under CEQA. Potential VMT-reducing measures may include active transportation improvements, multi-modal transportation programs, and improved street connectivity, including bicycle, pedestrian and transit facilities. The program intends to streamline the Senate Bill 743 compliance process for development projects while funding future VMT improvement projects.

1.2.3 Project Objectives

CEQA Guidelines Section 15124(b) states that an EIR project description must include "[a] statement of objectives sought by the proposed project. The statement of objectives should include the underlying purpose of the project." The proposed project objectives are outlined below.

- Streamline the SB 743 compliance process for development projects by providing feasible mitigation options to reduce potentially significant VMT impacts.
- Identify funding for future TDM strategies and VMT-reducing projects within Fresno to help reduce Citywide total VMT.
- Contribute towards making Fresno a pedestrian-, bicycle-, and transit-oriented community with active, healthy, and livable spaces.

1.2.4 Significant Unavoidable Adverse Impacts

The proposed project would result in the following significant unavoidable impacts:

- Transportation – vehicle miles traveled

1.2.5 Lead Agency, Responsible and Trustee Agencies

The project applicant and lead agency for the proposed project is the City of Fresno. The City is the public agency that has the principal responsibility for certifying the EIR, approving or carrying out the project, or disapproving the project. Although the City is the CEQA Lead Agency for the project, other agencies also have discretionary authority related to components of the project and approvals or serve as a responsible and/or trustee agency in connection to the project. The following lists these agencies.

- California Department of Transportation (Caltrans)
- Federal Aviation Administration
- Fresno County Airport Land Use Commission
- California Department of Fish and Wildlife (CDFW)

- San Joaquin Valley Air Pollution Control District (SJVAPCD)
- Pacific Gas and Electric Company (PG&E)/California Public Utilities Commission, approvals for power line relocations or undergrounding

1.3 SUMMARY OF PROJECT ALTERNATIVES

Below is a summary of the alternatives that were considered and evaluated in Chapter 6.0, Alternatives to the Proposed Project.

1.3.1 No Project Alternative

Under the No Project Alternative, the proposed VMT Reduction Program would not be adopted. VMT-reducing transportation improvements currently identified in existing City planning documents as planned but unfunded would continue to be unfunded under this alternative. The identified improvements would not be funded and implemented, and the City would be required to separately identify funding from another source. Additionally, given that the proposed VMT Reduction Program would not be adopted, a mitigation mechanism would not be established to assist future development with reducing potentially significant VMT impacts under CEQA. Similar to existing conditions, future developments that trigger significant VMT impacts under CEQA would be required to prepare Environmental Impact Reports and adopt statements of overriding consideration pursuant to CEQA Guidelines Section 15093.

1.3.2 All Applicable Fee Alternative

All Applicable Fee Alternative would require all future development in Fresno to pay into the proposed VMT Reduction Program. Unlike the proposed project, this alternative would require development projects to pay into the proposed VMT Reduction Program even if the development projects are located in low VMT areas, or areas that would not result in VMT impacts. As a result, this alternative would require all future development projects that generate VMT responsible for addressing Citywide VMT. This alternative would increase funds collected for VMT-reducing projects and would allow for implementation of more VMT-reducing projects and TDM measures than the proposed project.

1.4 AREAS OF CONTROVERSY

Pursuant to CEQA Guidelines Section 15123(b), a summary section includes a discussion of areas of controversy known to the lead agency, including issues raised by agencies and the public. The following are the known areas of controversy.

- Air Quality – increases in air emissions and increases in concentrations of toxic air contaminants in Fresno
- Biological Resources – impacts to plant and animal species and habitats
- Greenhouse Gases – increases in greenhouse gas emissions

1.5 PUBLIC REVIEW OF THE DRAFT EIR

Upon completion of this Draft EIR, the City of Fresno prepared and filed a Notice of Completion (NOC) with the California Office of Planning and Research/State Clearinghouse to begin the public review period (Public Resources Code, Section 21161) on July 2, 2025. Concurrent with the NOC, the City of Fresno distributed a Notice of Availability (NOA) in accordance with Section 15087 of the CEQA Guidelines. The NOA was mailed to the organizations and individuals who previously requested such a notice to comply with Public Resources Code Section 21092(b)(3). This Draft EIR was distributed to the Governor's Office of Land Use and Climate Innovation/State Clearinghouse in accordance with Section 15206 of the CEQA Guidelines. This Draft EIR was also published in the Fresno Bee newspaper to comply with Section 15087(a) of the State CEQA Guidelines and was distributed to affected agencies, surrounding cities and municipalities, and all interested parties. During the public review period, this Draft EIR, including the appendices, is available for review at the following locations:

City of Fresno
Planning and Development Department
2600 Fresno Street, Third Floor
Fresno, CA 93721
Monday through Friday: 9:00 a.m. to 4:00 p.m.
Saturday and Sunday: Closed

Fresno County Public Library, Central Branch
2420 Mariposa Street
Fresno, CA 93721
Monday through Thursday: 9:00 a.m. to 6:00 p.m.
Friday and Saturday: 9:00 a.m. to 5:00 p.m.
Sunday: 12:00 p.m. to 5:00 p.m.

In addition, the Draft EIR, including the appendices, is available at the following City of Fresno website:

www.fresno.gov/vmt

Agencies, organizations, individuals, and all other interested parties not previously contacted, or who did not respond to the NOP/IS or attended the scoping meeting, currently have the opportunity to comment on this Draft EIR during the 45-day public review period beginning on July 2, 2025 and ending on August 15, 2025. Written comments on this Draft EIR should be addressed to:

City of Fresno
Planning and Development Department
2600 Fresno Street, Room 3065
Fresno, CA 93721
Attention: Sophia Pagoulatos, Planning Manager
Telephone: (559) 621-8062 Fax: (559) 621-2489
Email: Longrangeplanning@fresno.gov

Upon completion of the public review period, written responses to all substantive environmental issues raised will be prepared and made available for review at least 10 days prior to the public hearing on the project before the City of Fresno City Council, at which the certification of the Final Program EIR will be considered. Comments received and the responses to comments will be included as part of the record for consideration by decision-makers for the project.

1.6 EXECUTIVE SUMMARY MATRIX

Table 1.A below summarizes the impacts, mitigation measures, and resulting level of significance after mitigation for the relevant environmental issue areas evaluated for the proposed VMT Reduction Program. Table 1.A is intended to provide an overview; narrative discussions for the issue areas are included in the corresponding sections of this Draft EIR. Table 1.A is included in the Draft EIR pursuant to CEQA Guidelines Section 15123(b)(1).

Table 1.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.1: AESTHETICS			
AES-1: The proposed project would not have a substantial adverse effect on a scenic vista.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
AES-2: The proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
AES-3: The proposed project would not 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 not conflict with applicable zoning and other regulations governing scenic quality.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
AES-4: The proposed project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
AES-5: The proposed project, in combination with past, present, and reasonably foreseeable projects, would not contribute to a significant cumulative impact with respect to aesthetics.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
4.2: AGRICULTURE AND FORESTRY			
AG-1: The proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
AG-2: The proposed project would not conflict with existing zoning for agricultural use, or a Williamson Act contract.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
AG-3: The proposed project would not conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.

Table 1.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)).			
AG-4: The proposed project would not result in the loss of forest land or conversion of forest land to non-forest use.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
AG-5: The proposed project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Important Farmland, to non-agricultural use.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
AG-6: The proposed project, in combination with past, present, and reasonably foreseeable projects, would not result in significant cumulative impacts with respect to agricultural resources.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
4.3: AIR QUALITY			
AQ-1: The proposed project would not conflict with or obstruct implementation of the applicable air quality plan.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
AQ-2: The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project is nonattainment under an applicable federal or state ambient air quality standard.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
AQ-3: The project would not expose sensitive receptors to substantial pollutant concentrations.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
AQ-4: The project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
AQ-5: The proposed project, in combination with other projects, would not contribute to a significant cumulative impact related to air quality.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
4.4: BIOLOGICAL RESOURCES			
BIO-1: The proposed project could have a substantial adverse effect, either directly or through habitat	Potentially significant impact.	**Mitigation Measure BIO-1:** Transportation improvements funded by the proposed Vehicle Miles	Less Than Significant Impact with Mitigation Incorporated.

Table 1.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
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.		Traveled Reduction Program subject to California Environmental Quality Act (CEQA) review, and with the potential to reduce or eliminate habitat for native plant and wildlife species or sensitive habitats, shall provide a Biological Resources Assessment prepared by a qualified biologist for review and approval by the City of Fresno. The assessment shall include biological field survey(s) of the project site to characterize the extent and quality of habitat that would be impacted by development. Surveys shall be conducted by qualified biologists and/or botanists in accordance with California Department of Fish and Wildlife and/or United States Fish and Wildlife Services survey protocols for target species. If no special status/sensitive species, sensitive habitats/natural communities, or federally protected wetlands are observed during the field survey, then no further mitigation will be required. If biological resources are documented on the project site, the project proponent shall comply with the applicable requirements of the regulatory agencies and shall apply mitigation determined through the agency permitting process.	
BIO-2: The proposed project could have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.	Potentially Significant Impact.	Refer to **Mitigation Measure BIO-1.**	Less Than Significant Impact with Mitigation Incorporated.
BIO-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.	Refer to **Mitigation Measure BIO-1.**	Less Than Significant Impact with Mitigation Incorporated.

Table 1.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
BIO-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.	**Mitigation Measure BIO-4:** A pre-construction nesting bird clearance survey shall be conducted by a qualified biologist no more than fourteen (14) days prior to the start of any vegetation removal or ground disturbing activities associated with a transportation improvement project. The survey shall be conducted by a qualified biologist and cover all suitable nesting habitat within the project impact area, and areas within a biologically defensible buffer zone surrounding the project impact area. Further, if an active bird nest is found, the qualified biologist should identify the specific bird species and establish a "no-disturbance" buffer around the active nest to avoid potential direct and indirect impacts. It is further recommended that the qualified biologist periodically monitor any active bird nests to determine if project-related activities disturb the birds and if the "no disturbance" buffer should be increased. Once the young have fledged and left the nest, or the nest otherwise becomes inactive under natural conditions, project activities within the "no-disturbance" buffer may occur following an additional survey by the qualified biologist to search for any new nests in the restricted area.	Less Than Significant Impact with Mitigation Incorporated.
BIO-5: The project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
BIO-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.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.

Table 1.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
BIO-7: The project, in combination with other projects, could contribute to a significant cumulative impact related to biological resources.	Potentially Significant Impact.	Refer to **Mitigation Measures Bio-1 and Bio-4.**	Less Than Significant Impact with Mitigation Incorporated.
4.5: CULTURAL RESOURCES AND TRIBAL CULTURAL RESOURCES			
CUL-1: The project could cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.	Potentially Significant Impact.	**Mitigation Measure CUL-1:** To ensure identification and preservation of potentially historic resources (as defined by CEQA Guidelines Section 15064.5 as a resource listed in, eligible for listing in, or listing in the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), or local register), each transportation improvement funded by the proposed Vehicle Miles Traveled Reduction Program subject to California Environmental Quality Act (CEQA) review (meaning, subject to discretionary action and non-exempt from CEQA) shall be conditioned as follows: prior to any construction activities that could impact potential or previously identified historical resources, the project proponent shall provide a historical resources assessment performed by an architectural historian or historian who meets the Secretary of the Interior's Professional Qualification Standards for architectural history or history (as defined in 48 Code of Federal Regulations 44716) to the City of Fresno Planning and Development Department for review and approval. The historical resources assessment shall include a records search at the Southern San Joaquin Valley Information Center (SSJVIC) and a survey in accordance with the California Office of Historic Preservation (OHP) guidelines to identify any previously unrecorded potential historical resources that may be potentially affected by the proposed project. If a historical resource is identified on-site, the resource shall be avoided to the extent feasible.	Less Than Significant Impact with Mitigation Incorporated..

Table 1.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		If relocation, rehabilitation, or alteration of a historical resource is required, the project proponent shall utilize the Secretary of the Interior's Standards for the Treatment of Historic Properties to the maximum extent feasible to ensure the historical significance of the resource is not impaired. If demolition or significant alteration of a historical resource is required, the resource shall be evaluated, and/or designated in the NRHP, CRHR, or local register, and recordation shall take the form of Historic American Buildings Survey (HABS), Historic American Engineering Record (HAER), or Historic American Landscape Survey (HALS) documentation, and shall be performed by an architectural historian or historian who meets the Secretary of the Interior's Professional Qualification Standards. Recordation shall meet the Secretary of the Interior's Standards and Guidelines for Architectural and Engineering, which defines the products acceptable for inclusion in the HABS/HAER/HALS collection at the Library of Congress. The specific scope and details of documentation shall be developed at the project level in coordination with the City of Fresno Planning and Development Department and performed prior to the first issuance of any demolition, building, or grading permits.	
CUL-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.	**Mitigation Measure CUL-2.1:** To ensure identification and preservation of archaeological resources within the City of Fresno, each transportation improvement funded by the proposed Vehicle Miles Traveled Reduction Program subject to California Environmenta Quality Act (CEQA) review (meaning, subject to discretionary action and non-exempt from CEQA) shall be screened by the City of Fresno Planning and Development Department to determine whether a	Less Than Significant Impact with Mitigation Incorporated..

Table 1.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		Cultural Resources Assessment is required. Screening shall consider the type of project and whether ground disturbances will occur. Ground disturbances include activities such as grading, excavation, trenching, boring, or demolition that extend below the current grade. If there will be no ground disturbance, then a Cultural Resources Assessment shall not be required. If there will be ground disturbances, prior to issuance of any permits required to conduct ground disturbing activities, the City may require a Cultural Resources Assessment be conducted under the supervision of an archaeologist that meets the Secretary of the Interior's Professionally Qualified Standards in either prehistoric or historic archaeology. The Cultural Resources Assessment shall include a California Historical Resources Information System (CHRIS) records search conducted through the Southern San Joaquin Valley Information Center (SSJVIC) and Sacred Land Files (SLF) search through the Native American Heritage Commission (NAHC), review of historical maps, and a Phase I (intensive) pedestrian survey to assess the likelihood for buried archaeological resources to occur. The Cultural Resources Assessment shall meet or exceed standards in the Office of Historic Preservation's Archaeological Resource Management Reports (ARMR): Recommended Contents and Format (1990) and Guidelines for Archaeological Research Designs (1991). **Mitigation Measure CUL-2.2:** In the event that cultural resources are unearthed during excavation and grading activities of any future transportation improvement project funded by the proposed program, the construction contractor shall cease all earth-disturbing activities within a 100-meter radius of	

Table 1.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		the find and the project proponent shall retain a qualified archaeologist that meets the Secretary of the Interior's Professionally Qualified Standards in either prehistoric or historic archaeology to evaluate the significance of the finding and appropriate course of action. Salvage operation requirements pursuant to Section 15064.5 of the CEQA Guidelines shall be followed. After the find has been appropriately mitigated, work in the area may resume.	
CUL-3: The project would not disturb any human remains, including those interred outside of dedicated cemeteries.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
CUL-4: The project would not result in a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: • Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k), or • A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	Potentially Significant Impact.	Refer to **Mitigation Measures CUL-1 and CUL-2.**	Less Than Significant Impact with Mitigation Incorporated.

Table 1.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
CUL-5: The project, in combination with other projects, could contribute to a significant cumulative impact related to cultural resources and tribal cultural resources.	Potentially Significant Impact.	Refer to **Mitigation Measures CUL-1, CUL-2.1, and CUL-2.2.**	Less Than Significant Impact with Mitigation Incorporated.
4.6: ENERGY			
ENG-1: The proposed project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
ENG-2: The proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
ENG-3: The project, in combination with other projects, would not contribute to a significant cumulative impact related to energy.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
4.7: GEOLOGY AND SOILS			
GEO-1: The proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known fault, strong seismic ground shaking, seismic-related ground failure, or landslides. i. 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; ii. Strong seismic ground shaking; iii. Seismic-related ground failure, including liquefaction; or iv. iv. Landslides.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.

Table 1.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
GEO-2: The project would not result in substantial soil erosion or the loss of topsoil.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
GEO-3: The project would not 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.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
GEO-4: The project would not be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
GEO-5: The project does not contain soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
GEO-6: The proposed project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	Potentially Significant Impact.	**Mitigation Measure GEO-6:** Subsequent to a preliminary City review of the project grading plans, if there is evidence that a project will include excavation or construction activities within previously undisturbed soils, a field survey and literature search for unique paleontological/geological resources shall be conducted. The following procedures shall be followed: • If unique paleontological/geological resources are not found during either the field survey or literature search, excavation and/or construction activities can commence. In the event that unique paleontological/geological resources are discovered during excavation and/or construction activities, construction shall stop in the immediate vicinity of the find and a qualified paleontologist shall be consulted to determine whether the resource requires further study. The qualified paleontologist shall make recommendations to	Less Than Significant Impact with Mitigation Incorporated.

Table 1.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		the City on the measures that shall be implemented to protect the discovered resources, including but not limited to, excavation of the finds and evaluation of the finds. If the resources are determined to be significant, mitigation measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any paleontological/geological resources recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study. • If unique paleontological/geological resources are found during the field survey or literature review, the resources shall be inventoried and evaluated for significance. If the resources are found to be significant, mitigation measures shall be identified by the qualified paleontologist. Similar to above, appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. In addition, appropriate mitigation for excavation and construction activities in the vicinity of the resources found during the field survey or literature review shall include a paleontological monitor. The monitoring period shall be determined by the qualified	

Table 1.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		paleontologist. If additional paleontological/geological resources are found during excavation and/or construction activities, the procedure identified above for the discovery of unknown resources shall be followed.	
GEO-7: The project, in combination with other projects, could contribute to a significant cumulative impact related to geology and soils.	Potentially Significant Impact.	Refer to **Mitigation Measures GEO-6.**	Less Than Significant Impact with Mitigation Incorporated.
4.8: GREENHOUSE GAS EMISSIONS			
GHG-1: The project would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
GHG-2: The proposed project would conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
GHG-3: The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in significant cumulative impacts with respect to greenhouse gas emissions.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
4.9: HAZARDS AND HAZARDOUS MATERIALS			
HAZ-1: The project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
HAZ-2: The project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
HAZ-3: The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.

Table 1.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
HAZ-4: The project 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.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
HAZ-5: The proposed project would not result in a safety hazard or excessive noise for people residing or working in the project area.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
HAZ-6: The proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact.
HAZ-7: The proposed project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
HAZ-8: The proposed project, in combination with past, present, and reasonably foreseeable projects, would not result in significant cumulative impacts related to hazards and hazardous materials.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
4.10: HYDROLOGY AND WATER QUALITY			
HYD-1: The project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
HYD-2: The project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
HYD-3: The project would not 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:	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.

Table 1.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
• Result in a substantial erosion or siltation on- or off-site; • Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; • Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; nor • Impede or redirect flood flows.			
HYD-4: The project would not risk release of pollutants due to project inundation in a flood hazard, tsunami, or seiche zones.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
HYD-5: The project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
HYD-6: The project, in combination with other projects, would not contribute to a significant cumulative impact related to hydrology and water quality.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
4.11: LAND USE AND PLANNING			
LU-1: The proposed project would not physically divide an established community.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
LU-2: The proposed project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
LU-3: The project, in combination with other projects, would not contribute to a significant cumulative impact related to land use and planning.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.

Table 1.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.12: MINERAL RESOURCES			
MIN-1: The proposed project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
MIN-2: The proposed project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
MIN-3: The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to mineral resources.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
4.13: NOISE			
NOI-1: The project could generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	Potentially Significant Impact.	**Mitigation Measure NOI-1:** Each transportation improvement funded by the proposed program subject to California Environmental Quality Act (CEQA) review shall ensure through contract specifications that construction best management practices (BMPs) are implemented by construction contractors to reduce construction noise levels. Contract specifications shall be included in construction documents, which shall be reviewed and approved by the City of Fresno Planning and Development Director prior to issuance of a grading or building permit (whichever is issued first). BMPs to reduce construction noise levels may include, but are not limited to, the following: • Ensure that construction equipment is properly muffled according to industry standards and is in good working condition. • Place noise-generating construction equipment and construction staging areas away from sensitive uses.	Less Than Significant Impact with Mitigation Incorporated.

Table 1.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		• Construction activities shall occur between the hours of 7:00 a.m. and 10:00 p.m. Monday through Saturday, pursuant to Section 10-109 of the City of Fresno Municipal Code. • Implement noise attenuation measures, as needed, which may include, but are not limited to, temporary noise barriers or noise blankets around stationary construction noise sources. • Use electric air compressors and similar power tools rather than diesel equipment, where feasible. • Construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use for more than five minutes. • The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment (between the hours of 7:00 a.m. and 10:00 p.m. Monday through Saturday). The haul route exhibit shall design delivery routes to minimize the exposure of sensitive land uses or residential dwellings to delivery truck-related noise. • Construction hours, allowable workdays, and the phone number of the job superintendent shall be clearly posted at all construction entrances to allow surrounding owners and residents to contact the job superintendent. If the City or the job superintendent receives a complaint, the superintendent shall investigate, take appropriate corrective action, and report the action taken to the reporting party and the Director of Development.	

Table 1.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
NOI-2: The project could generate excessive groundborne vibration or groundborne noise levels.	Potentially Significant Impact.	**Mitigation Measure NOI-2:** Prior to issuance of a grading permit, each transportation improvement funded by the proposed program subject to California Environmental Quality Act (CEQA) review with construction activities requiring operation of groundborne vibration generating equipment (i.e., vibratory compactor/roller, large bulldozer, caisson drilling, loaded trucks, and jackhammer) within 25 feet of an existing structure shall be required to prepare a project-specific vibration impact analysis to evaluate potential construction vibration impacts associated with the project, and to determine any specific vibration control mechanisms that shall be incorporated into the project's construction bid documents to reduce such impacts. Contract specifications shall be included in construction documents, which shall be reviewed and approved by the City prior to issuance of a grading permit.	Less Than Significant Impact with Mitigation Incorporated.
NOI-3: The proposed would not expose people residing or working in the project area to excessive noise levels.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
NOI-4: The project, in combination with other projects, could contribute to a significant cumulative impact related to noise.	Potentially Significant Impact.	Refer to **Mitigation Measures NOI-1 and NOI-2.**	Less Than Significant Impact with Mitigation Incorporated.
4.14: POPULATION AND HOUSING			
POP-1: The proposed project would not induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.

Table 1.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
POP-2: The proposed project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
POP-3: The proposed project would not contribute to a significant cumulative impact related to population and housing.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
4.15: PUBLIC SERVICES AND RECREATION			
PSR-1: The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
PSR-2: The proposed project would not 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.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
PSR-3: The proposed project would not include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.	Less Than Significant Impact.	No mitigation measures are required	Less Than Significant Impact.
PSR-4: The project, in combination with other projects, would not contribute to significant cumulative impacts related to public services and recreation.	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact.
4.16: TRANSPORTATION			
TRA-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 measures are required.	Less Than Significant Impact.
TRA-2: The project would conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).	Potentially Significant Impact.	No feasible mitigation measures are available.	Significant and Unavoidable Impact.

Table 1.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
TRA-3: The proposed project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
TRA-4: The proposed project would not result in inadequate emergency access.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
TRA-5: The project, in combination with other projects, would contribute to a significant cumulative impact related to transportation.	Potentially Significant Impact.	No feasible mitigation measures are available.	Significant and Unavoidable Impact.
4.18: UTILITIES			
UTL-1: The project would not require nor 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.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
UTL-2: The project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
UTL-3: The project would not result in a determination by the wastewater treatment provider, which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
UTL-4: The project would not 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.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
UTL-5: The project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.

Table 1.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
UTL-6: The project, in combination with other projects, would not contribute to a significant cumulative impact related to utilities and service systems.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
4.19: WILDFIRE			
WF-1: The proposed project would not impair an adopted emergency response plan or emergency evacuation plan.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
WF-2: The proposed project would not, 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.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
WF-3: The proposed project would not 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.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
WF-4: The proposed project would not 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.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.
WF-5: The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to wildfire.	Less Than Significant Impact.	No mitigation measures are required.	Less Than Significant Impact.

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2.0 INTRODUCTION

2.1 PURPOSE OF THIS EIR

The California Environmental Quality Act (CEQA) requires that all State and local government agencies consider the environmental consequences of programs and projects over which they have discretionary authority before taking action on them. This Environmental Impact Report (EIR) has been prepared in accordance with CEQA to evaluate the potential environmental impacts associated with implementation of the Fresno Vehicle Miles Travelled (VMT) Reduction Program (herein referred to as the proposed project) for the City of Fresno. This EIR has been prepared in conformance with CEQA, California Public Resources Code Section 21000 et seq; the California *State CEQA Guidelines* (California Code of Regulations, Title 14, Section 15000 et seq); and the rules, regulations, and procedures for implementing CEQA as adopted by the City of Fresno (herein referred to as the City).

This EIR is intended to serve as an informational document for the public agency decision-makers and the public regarding the potential environmental impacts associated with the construction and long-term buildout of the proposed project. In addition to identifying potential environmental impacts, this EIR also identifies potential mitigation measures and alternatives to reduce potential environmental impacts.

Environmental impacts cannot always be mitigated to a level that is considered less than significant. In accordance with Section 15093(b) of the *State CEQA Guidelines*, if a lead agency, such as the City of Fresno, approves a project that has significant impacts that are not substantially mitigated (i.e., significant unavoidable impacts), the lead agency shall state in writing the specific reasons for approving the project, based on the final CEQA documents and any other information in the public record for the project. This is identified in Section 15093 of the *State CEQA Guidelines*, "a statement of overriding considerations." These potential impacts are discussed in more detail throughout Chapter 4.0 of this EIR.

2.2 ENVIRONMENTAL REVIEW PROCESS

The City of Fresno, serving as Lead Agency responsible for administering the environmental review for the proposed project, determined that preparation of an EIR was required for the Fresno VMT Reduction Program.

CEQA requires that, before a decision can be made to approve a project that could result in adverse physical effects, an EIR must be prepared that fully describes the environmental effects of the project. The EIR is a public information document for use by governmental agencies and the public to identify and evaluate potential environmental impacts of a project, to recommend mitigation measures to lessen or eliminate significant adverse impacts, and to examine feasible alternatives to the project. The information contained in the EIR must be reviewed and considered by the City of Fresno Planning Commission, City Council, and other approving bodies prior to a decision to approve, disapprove, or modify the project.

As part of the consideration of the proposed project, an agency must prepare findings that identifies that all environmental effects of the project are supported by substantial evidence in the record. CEQA requires that agencies shall neither approve nor implement a project unless the project's significant environmental effects have been reduced to a less-than-significant level, essentially "eliminating, avoiding, or substantially lessening" the potentially significant impacts, except when certain findings are made. If an agency approves a project that will result in the occurrence of significant adverse impacts that cannot be mitigated to less-than-significant levels, the agency must state the reasons for its action in writing, demonstrate that its action is based on the EIR or other information in the record, and adopt a Statement of Overriding Considerations.

2.3 INTENDED USES OF THIS EIR

As noted above and described in the *State CEQA Guidelines*, public agencies are charged with the duty to avoid or substantially lessen significant environmental effects, where feasible. In undertaking this duty, a public agency has an obligation to balance a project's significant effects on the environment with its benefits, including economic, social, technological, legal, and other non-environmental characteristics.

This EIR is intended as an informational document to: evaluate the proposed project and the potential for significant impacts on the environment; examine methods of reducing adverse environmental impacts; identify any significant and unavoidable adverse impacts that cannot be mitigated; and identify reasonable and feasible alternatives to the proposed project that would eliminate any significant adverse environmental effects or reduce the impacts to a less-than-significant level. The Lead Agency is required to consider the information in the EIR, along with any other relevant information, in making its decisions on the proposed project. This analysis, in and of itself, does not determine whether a project will be approved, but aids the planning and decision-making process by disclosing the potential for significant and adverse impacts.

In conformance with CEQA and the *State CEQA Guidelines*, this EIR provides objective information addressing the environmental consequences of the project and identifies possible means of reducing or avoiding significant impacts, either through mitigation measures or feasible project alternatives. The City must certify the Final EIR prior to project approval and implementation. Under *State CEQA Guidelines* Section 15168, this is a program-level EIR. This type of EIR examines implementation of a plan over an extended period of time but considers potential construction and operational impacts of implementing the plan. This type of EIR would also allow for later activities that would occur under the proposed Integrated Master Plan to be evaluated to the extent feasible based on the level of detail provided at the time the program EIR is prepared. Later activities and discretionary actions occurring under the proposed Integrated Master Plan would be subject to additional environmental review and documentation.

The *State CEQA Guidelines* help define the role and standards of this EIR, as follows:

- **Information Document.** An EIR is an informational document which will inform public agency decision-makers and the public generally of the significant environmental effect(s) of a project, identify possible ways to minimize significant effects, and describe reasonable alternatives to

the project. The public agency shall consider the information in the EIR along with other information which may be presented to the agency (*State CEQA Guidelines* Section 15121(a)).

- **Degree of Specificity.** The degree of specificity required in an EIR will correspond to the degree of specificity involved in the underlying activity which is described in the EIR. An EIR on a development project will necessarily be more detailed in its discussion of specific effects of the project than will be an EIR on the adoption of a local general plan or comprehensive zoning ordinance because the effects of the construction can be predicted with greater accuracy (*State CEQA Guidelines* Section 15146(a)).

- **Standards for Adequacy of an EIR.** An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information, which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure (*State CEQA Guidelines* Section 15151).

Section 15382 of the *State CEQA Guidelines* defines a significant effect on the environment as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project…" Therefore, in identifying the significant impacts of the project, this EIR focuses on the substantial physical effects and mitigation measures to avoid, reduce, or otherwise alleviate those effects.

2.4 PROPOSED PROJECT

The proposed project, called the VMT Reduction Program, aims to establish mitigation for future projects that exceed the City's VMT thresholds in the form of a mitigation bank and an Urban Design Calculator (UDC) which could be applied individually or in combination. The mitigation bank would be used to fund VMT-reducing projects throughout Fresno and an UDC would recommend potential VMT reductions for development projects through incorporation of various design elements.

The fee program would identify, quantify, and prioritize applicable mitigation measures, and relevant VMT-reducing projects within Fresno to be funded by the proposed mitigation bank. These projects, which may include active transportation improvements, multi-modal transportation programs, and improved street connectivity, including bicycle, pedestrian and transit facilities, would be subject to future CEQA analysis on a project-by-project basis as they are proposed and as the extent of impacts become known through the design process.

The proposed mitigation fee would be determined through the development of a Nexus Study, which would include technical details on the estimation of various cost components for the proposed mitigation measures for the project and their efficacy on VMT reductions. The Nexus Study would provide justification and nexus between anticipated VMT growth and proposed mitigation measures, costs, and fees.

Additionally, the proposed project would include updating the City's existing UDC for use by individual projects. Projects that would have a significant VMT impact can reduce the project's impact by applying VMT reducing project design features at the project site. The extent of VMT reduction could be calculated using the UDC as a first step of the VMT Reduction Program prior to participating in the VMT mitigation bank. After applying VMT reductions using UDC, the remaining excess VMT from the project would be used to calculate the project's contribution into the mitigation bank.

2.5 EIR SCOPE

A Notice of Preparation (NOP) of the EIR was circulated for 30 days on September 27, 2024, to help identify the types of impacts that could result from implementation of the proposed project, as well as potential areas of controversy. The NOP was mailed to public agencies, organizations, and individuals likely to be interested in the project and its potential impacts. Additionally, a public scoping meeting to inform interested parties and the public about the proposed project was held on October 21, 2024. A total of five comment letters regarding the NOP were received within the review period. Copies of the NOP and the comment letters are included in Appendix B.

The following environmental topics are addressed in this EIR:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources and Tribal 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 and Recreation
- Transportation
- Utilities and Service Systems
- Wildfire

2.6 REPORT ORGANIZATION

This EIR is organized into the following chapters:

- **Chapter 1.0 – Executive Summary**: This chapter provides a summary of the impacts that would result from implementation of the proposed project, describes mitigation measures recommended to reduce or avoid significant impacts, and describes the alternatives to the proposed project.

- **Chapter 2.0 - Introduction**: This chapter discusses the overall EIR purpose, provides a summary of the proposed project, describes the EIR scope, and summarizes the organization of the EIR.

- **Chapter 3.0 - Project Description**: This chapter provides a description of the project site, the project objectives, the proposed project, and intended uses of this EIR.

- **Chapter 4.0 – Evaluation of Environmental Impacts**: This chapter describes the following for each environmental technical topic: existing conditions (setting), potential environmental impacts and their level of significance, and mitigation measures recommended to mitigate identified impacts. Potential adverse impacts are identified by levels of significance, as follows: less-than-significant impact (LTS), significant impact (S), and significant and unavoidable impact (SU). The significance of each impact is categorized before and after implementation of any recommended mitigation measures(s). Cumulative impacts are also addressed.

- **Chapter 5.0 - Alternatives**: This chapter provides an evaluation of the alternatives to the proposed project in addition to the CEQA-required No Project alternative.

- **Chapter 6.0 – CEQA-Required Assessment Conclusions**: This chapter provides an analysis of effects found not to be significant, growth-inducing impacts, unavoidable significant environmental impacts, and significant irreversible changes.

- **Chapter 7.0 - Report Preparation**: This chapter identifies preparers of the EIR, references used, and the persons and organizations contacted.

- **Appendices***:* The appendices contain the NOP and comment letters on the NOP (Appendix B), technical calculations, and other documentation prepared in conjunction with this EIR.

2.7 PUBLIC PARTICIPATION

The *State CEQA Guidelines* encourage public participation in the planning and environmental review processes. The City will provide opportunities for the public to present comments and concerns regarding the CEQA and planning processes. These opportunities will occur during the Draft EIR public review and comment period and public hearings before the City of Fresno Planning Commission and City Council.

This Draft EIR, in compliance with Section 15105 of the *State CEQA Guidelines*, has been distributed to responsible and trustee agencies, and other interested organizations, agencies and individuals for review and comment on the adequacy of the environmental analysis. The public review and comment period for the Draft EIR would be 45 days.

Written public comments may be submitted to the Planning and Development Department during the specified public review and comment period, and oral comments may be presented at the Draft EIR public hearing before the City of Fresno Planning Commission and City Council. Written comments should be delivered in person or by courier service, or be sent by mail or email to:

Sophia Pagoulatos
Planning Manager
City of Fresno – Planning and Development Department
2600 Fresno Street, Room 3043
Fresno, CA 93721
(559) 621-8062
Longrangeplanning@fresno.gov

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3.0 PROJECT DESCRIPTION

This chapter describes the proposed Fresno Vehicle Miles Traveled (VMT) Reduction Program evaluated in this Draft Environmental Impact Report (EIR). This chapter includes a description of the project location and setting, background and history, a list of project objectives, a description of proposed project components, and a list of required approvals and entitlements. The City of Fresno (City) is the CEQA lead agency and has final authority to approve the proposed project. Information presented in this chapter was derived from the Fresno VMT Reduction Program and other information provided by City staff, and serves as the basis for the environmental analysis contained in this Draft EIR.

3.1 PROJECT LOCATION AND SETTING

3.1.1 Project Location

The City of Fresno is located in Fresno County in the central portion of the San Joaquin Valley and covers an area of approximately 113 square miles. The City is located approximately 200 miles north of Los Angeles, and approximately 170 miles south of Sacramento. To the north of Fresno is Madera County, to the northeast and adjacent to Fresno, is the City of Clovis. Unincorporated land is located to the east, south, and west of Fresno. State Route (SR) 99 runs north-south through the City and provides primary connectivity between Fresno and other regions of California. SR-41 runs north-south through the center of the City and connects Fresno to Yosemite National Park. SR-168 links the Downtown area to the adjacent City of Clovis. SR-180 runs east-west, providing access to outlying rural communities.

3.1.2 Project Setting

The City of Fresno's General Plan was adopted in December 2014 and governs future development throughout Fresno. The General Plan contains policies, plans and programs that form a blueprint for the physical development of the City, prioritizing infill development, Downtown, and neighborhood revitalization; transit-oriented development along major streets; mixed-uses; and the building of Complete Neighborhoods. Policy direction for development according to the General Plan is further refined by community and specific plans that were called for in the General Plan, such as the Fulton Corridor Specific Plan, the Downtown Neighborhoods Community Plan, and the Southwest Fresno Specific Plan. These plans were adopted in order to address specific issues and to identify future investment needs. Central to these plans is the transformation of these areas into walkable complete neighborhoods and communities through well-designed infill development, in combination with a multi-modal transportation system.

As described in the Fresno General Plan and the Fresno Municipal Code (Municipal Code), a variety of land use designations and zoning districts encompass the City. Land use designations that make up the City include the following: Low Density Residential, Medium Low Density Residential, Medium Density Residential, Medium High Density Residential, Urban Neighborhood Residential, High Density Residential, Main Street Commercial, Community Commercial, Recreation Commercial, General Commercial, Highway and Auto Commercial, Regional Commercial, Employment - Office, Employment - Business Park, Employment - Regional Business Park, Employment - Light Industrial,

Employment - Heavy Industrial, Neighborhood Mixed Use, Corridor/Center Mixed Use, Regional Mixed Use, Downtown Core, Downtown General, Downtown Neighborhood, Open Space, and Public Facilities.

Further, the following zoning districts encompass the City : Buffer (B), RE (Residential Estate), RS-1 (Residential Single-Family, Extremely Low Density) RS-2 (Residential Single-Family, Very Low Density), RS-3 (Residential Single-Family, Low Density), RS-4 (Residential Single-Family, Medium Low Density), RS-5 (Residential Single-Family, Medium Density), RM-MH (Mobile Home Park), RM-1 (Residential Multi-Family, Medium High Density), RM-2 (Residential Multi-Family, Urban Neighborhood), RM-3 (Residential Multi-Family, High Density), NMX (Neighborhood Mixed-Use), CMX (Corridor/Center Mixed-Use), RMX (Regional Mixed-Use), CMS (Commercial - Main Street), CC (Commercial - Community), CR (Commercial - Regional), CG (Commercial - General), CH (Commercial - Highway and Auto), CRC (Commercial - Recreation), DTN (Downtown Neighborhood), DTG (Downtown General), DTC (Downtown Core), O (Office), BP (Business Park), RBP (Regional Business Park), IL (Light Industrial), IH (Heavy Industrial), OS (Open Space), PR (Parks and Recreation), and PI (Public and Institutional).

3.2 BACKGROUND AND HISTORY

In September 2013, the Governor's Office of Planning and Research (OPR) signed Senate Bill (SB) 743 into law, starting a process that fundamentally changed the way transportation impact analysis is conducted under the California Environmental Quality Act (CEQA). SB 743 identifies vehicle miles traveled (VMT) as the most appropriate CEQA transportation metric and eliminates auto delay, or level of service (LOS), and similar measurements of vehicular roadway capacity and traffic congestion as the basis for determining significant impacts. In December 2018, the California Natural Resource Agency certified and adopted the CEQA statute (14 California Code of Regulations Section 15064.3). Per the CEQA statute, the VMT guidelines became effective on July 1, 2020.

In accordance with SB 743, the Fresno City Council adopted the City's VMT Guidelines on June 25, 2020 to address the shift from delay-based LOS CEQA traffic analyses to VMT CEQA traffic analyses. The City's VMT Guidelines include standardized project screening criteria for projects, recommendations for appropriate VMT significance thresholds for development projects, transportation projects, and plans, and feasible VMT mitigation strategies for projects.

The implementation of SB 743 and the City's recently adopted VMT Guidelines have created challenges for development projects in Fresno. Specifically, development projects located in some parts of Fresno or requiring General Plan Amendment (GPA)/Zone Change (ZC) have been triggering potentially significant VMT impacts under CEQA with no established feasible mitigation to offset such impacts. Thus, the City is proposing to create a VMT Reduction Program to streamline the SB 743 compliance process for development within Fresno.

As part of this effort, the City retained LSA to prepare the proposed VMT Reduction Program. LSA conducted thorough research of local planning documents such as the City's Active Transportation Plan and Fresno Area Express' (FAX) short-range transit plan and long-range transit plan, Fresno Council of Governments' (Fresno COG's) Regional Transportation Plan (RTP), consulted available literature providing VMT mitigation strategies, and reviewed the City's VMT Guidelines to assess

existing types of VMT mitigation that could serve as potential active transportation and transit-related infrastructure and capital improvement projects funded by the program. Planning-level cost estimates and Nexus calculations were prepared for the identified VMT-reducing projects to estimate the cost of identified improvements and the net VMT benefits.

As presented to City Council in June of 2020, the VMT Reduction Program includes an Urban Design Calculator (UDC) and a mitigation fee program. The UDC would help projects that have a significant VMT impact reduce the project's VMT by implementing VMT-reducing project design features at the project site. The mitigation impact fee would allow new development to mitigate VMT impacts by making "fair share" payments into a mitigation bank to cover the cost of the identified VMT-reducing projects in the proposed VMT Reduction Program. The fee contribution would be calculated by analyzing the relationship between the excess VMT generated by the project compared to the City's VMT threshold. The future project would then be required to pay the calculated fee based on the excess VMT generated by the future project. It is possible that by utilizing the UDC and implementing the design features and reducing the future project's VMT, future projects may be able to reduce the assessed fee contribution. By virtue of collecting this fee as part of the mitigation bank, the City would be able to implement the proposed mitigation projects as identified in the mitigation bank. A nexus study, prepared as part of the VMT Reduction Program, was prepared to provide a framework for the City to confirm that the fees collected have a relationship to the VMT-reducing projects.

The fee collected as part of the mitigation bank would be applicable to new residential and non-residential developments in Fresno subject to VMT analysis under CEQA that would generate VMT over the significance thresholds established in the City's VMT Guidelines. Therefore, if a project screens out of VMT analysis based on City's VMT Guidelines, the impact fee would not be applicable. The impact fee would only apply for projects that result in potentially significant VMT impacts under CEQA.

3.3 PROPOSED PROJECT

The proposed VMT Reduction Program (from herein referred to as the "program" or "project") aims to establish mitigation for future projects that exceed the City's VMT thresholds in the form of a mitigation bank. The program would identify, quantify, and prioritize applicable mitigation measures, and relevant VMT-reducing projects within Fresno to be funded by the proposed mitigation bank.

As described above under Section 3.2, Background and History, mitigation measures and VMT-reducing projects for the proposed VMT Reduction Program were determined through thorough research of local planning documents, consultation of available literature providing VMT mitigation strategies, and review of the City's VMT Guidelines to assess existing types of VMT mitigation measures identified herein.

The following existing City planning documents were reviewed to identify unfunded, planned infrastructure improvement projects within Fresno that contribute towards reducing Citywide VMT and could be funded by the proposed program:

- FAX Short Range Transit Plan
- FAX Long Range Transit Plan
- Fresno Council of Governments (COG) Regional Transportation Plan (RTP)
- Fresno Safe Routes to School Action Plan
- Fresno Active Transportation Plan
- Fresno County Regional Trails Plan
- Southern Blackstone Avenue Smart Mobility Plan
- Highway 41+ North Corridor Complete Streets Plan

Table 3.A below provides a summary of VMT-reducing improvements that were identified for the proposed program. Refer to Appendix C, VMT-reducing projects, for additional detail related to these TDM strategies, VMT-reducing projects and associated VMT reduction scores. Additionally, Figure 3-1 illustrates the approximate locations of the identified VMT-reducing improvements within Fresno.

Table 3.A: Potential VMT-Reducing Improvements

Improvement Locations	Improvement Descriptions
Transportation Demand Management Projects	
1. Citywide	Mobile Ticketing Trip Planning App
2. Citywide	Marketing for Transit, Active Transportation, TDM, and Multi-Modal Travel
3. Citywide	Transportation Demand Management Coordinator
4. Citywide	Bike/Pedestrian Trip Trackers
5. Citywide	Intermodal Signage to connect transit and bicycle/pedestrian networks.
Transit Projects	
6. Clinton Avenue	Three new buses for 15-minute frequency on Route 39
7. Southern Industrial Area	52 new ADA compliant stops for Southern Industrial service expansion on Route 34
8. Bullard Avenue	Four new buses and 72 new stops for Bullard Avenue Crosstown Route
9. Church Avenue	Four new buses and 68 new stops for Church Avenue Crosstown Service
10. Willow Avenue	Four new buses and 68 new stops for service on Willow Avenue from Shields and Clovis Community College
11. Ashlan Avenue	Two new buses and 10 new stops to increase service on Route 45
12. Cedar Avenue	Cedar Avenue Transit Signal Priority - Adaptive Signal Control on Cedar from Herndon to Jensen
13. Fresno Street/First Street	Six new buses to increase service on Route 32
Bicycle/Pedestrian Projects	
14. Along Herndon No 39 Canal (section on East Shields Avenue) to Mill No 36 Canal (section along East McKinley Avenue) to North Clovis Avenue	Priority Bikeway Network/Pedestrian Network/Midtown Trail
15. Southern Blackstone from SR 180 to Dakota Ave.	Class IV Bikeway
16. First Street from Dakota Avenue to Ventura Avenue	Pedestrian Safety Enhancement Corridor
17. Downtown Fresno - South of Divisadero Street and Northeast of Highway 99, Northwest of Highway 41	Pedestrian Improvements in Pedestrian Activity Areas
18. North Avenue Neighborhood	Pedestrian Improvements in Underserved Neighborhoods

Table 3.A: Potential VMT-Reducing Improvements

Improvement Locations	Improvement Descriptions
19. Kings Canyon Road/Cesar Chavez Blvd – Cedar Avenue to Clovis Avenue	Pedestrian Improvements in Pedestrian Safety Enhancement Corridor
20. Florence Avenue adjacent to Balderas Elementary School	Pedestrian Improvements in Underserved Neighborhoods
21. Tower District-Olive Avenue from Palm Avenue to Van Ness Avenue	Pedestrian Improvements in Pedestrian Activity Areas
22. Yosemite Middle School Neighborhood	Pedestrian Improvements in Underserved Neighborhoods
23. Blackstone Avenue/Abby Street from Divisadero to Shaw Ave	Pedestrian Improvements in Pedestrian Activity Areas
24. Scandinavian Middle School Neighborhood	Pedestrian Improvements in Underserved Neighborhoods

Source: Compiled by LSA (2025)
TDM = Transportation demand management
ADA = Americans with Disabilities Act

The VMT-reducing improvements identified above could potentially be constructed utilizing funds collected under the proposed VMT Reduction Program. These projects would be subject to future CEQA analysis on a project-by-project basis as they are planned and as the extent of impacts become known through the design process. However, these facilities may result in impacts to the environment. Additionally, it is expected that the VMT-reducing projects identified above may be completed, and the City expects to review and update the project list over time.

The proposed mitigation fee is determined through the development of a Nexus Study, as required by Government Code §§ 66000 – 66025 (also referred to as the "Mitigation Fee Act"). The Nexus Study includes technical details on the estimation of various cost components for the proposed mitigation measures for the project and their efficacy on VMT reductions. The development of the Nexus Study must comply and be consistent with the requisite statutory findings contained in § 66001 of the Mitigation Fee Act by identifying the purpose of the fee, how the fee is being utilized, and a determination that there is a reasonable relationship between the fee and the types of projects that will be subject to the fee, and that there is a reasonable relationship between the need for an infrastructure improvement and the type of project that will be subject to the fee. The Nexus Study provides justification and nexus between anticipated VMT growth and proposed mitigation measures, costs, and fees. The findings of the Nexus Study will be used to establish a mitigation fee for excess VMT (compared to the City's VMT threshold) generated by the proposed development in Fresno, which would be used to offset and mitigate project-level VMT impacts through funding of active transportation and transit improvement projects identified in the proposed VMT Reduction Program.

As part of the VMT Reduction Program, the City's existing UDC was created for use by individual projects. Projects that would have a significant VMT impact can reduce the project's impact by applying VMT reducing project design features at the project site. The extent of VMT reduction could be calculated using the UDC as a first step of the VMT Reduction Program prior to

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Transportation Demand Management Projects

(not shown on map)

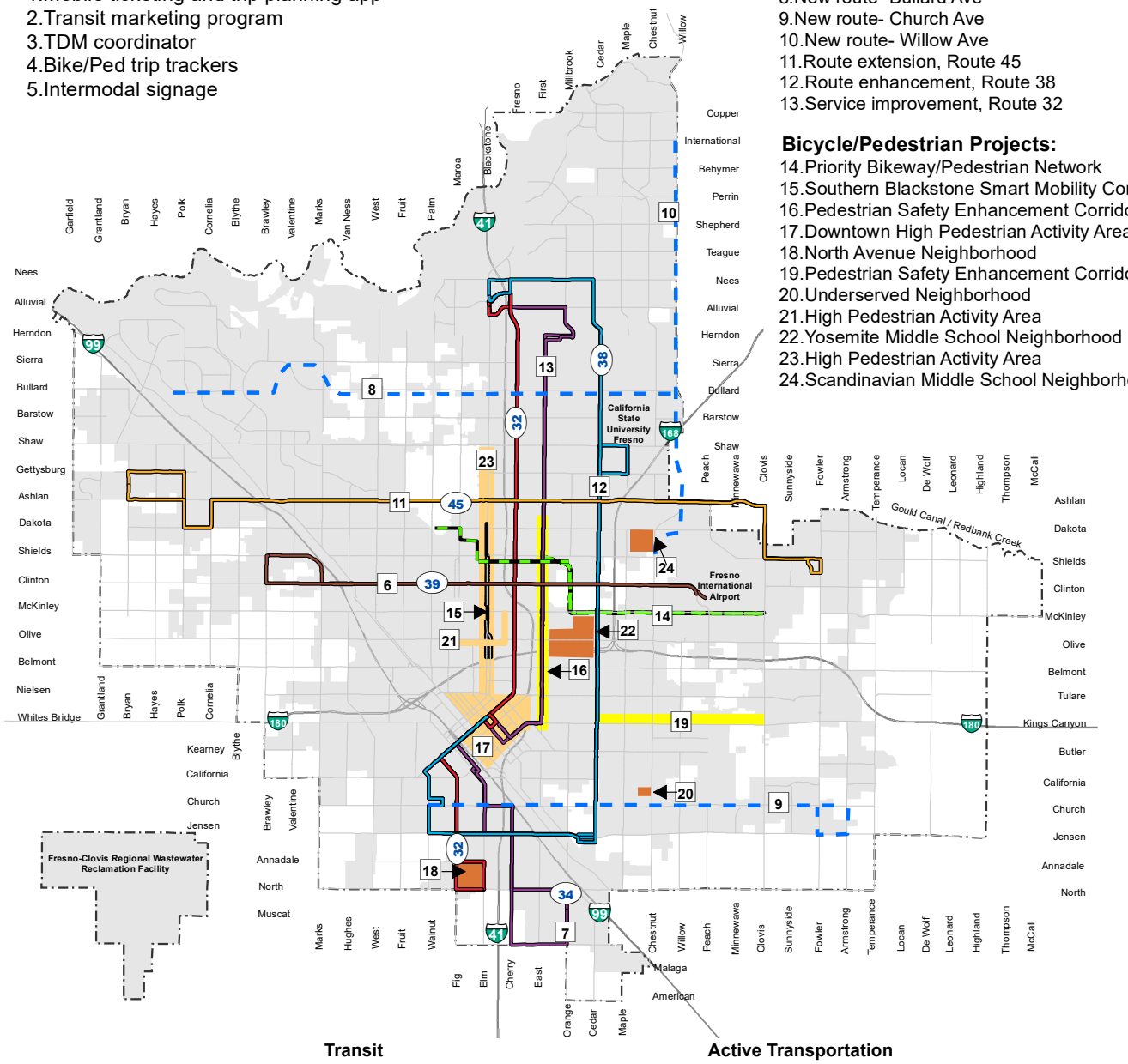
1.Mobile ticketing and trip planning app
2.Transit marketing program
3.TDM coordinator
4.Bike/Ped trip trackers
5.Intermodal signage

Transit Projects:

6.Frequency enhancement, Route 39
7.Accessibility improvements, Route 34
8.New route- Bullard Ave
9.New route- Church Ave
10.New route- Willow Ave
11.Route extension, Route 45
12.Route enhancement, Route 38
13.Service improvement, Route 32

Bicycle/Pedestrian Projects:

14.Priority Bikeway/Pedestrian Network
15.Southern Blackstone Smart Mobility Corridor
16.Pedestrian Safety Enhancement Corridor
17.Downtown High Pedestrian Activity Area
18.North Avenue Neighborhood
19.Pedestrian Safety Enhancement Corridor
20.Underserved Neighborhood
21.High Pedestrian Activity Area
22.Yosemite Middle School Neighborhood
23.High Pedestrian Activity Area
24.Scandinavian Middle School Neighborhood



LSA

FIGURE 3-1

0 1.5 3
MILES

SOURCE: City of Fresno, 2025

Fresno VMT Mitigation Program EIR

VMT Reduction Program Fee Projects

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participating in the VMT mitigation bank. After applying VMT reductions using the UDC, the remaining excess VMT from the project would be used to calculate the project's contribution into the mitigation bank.

Existing VMT estimation tools for land use development projects, such as the Fresno COG Activity Based Model (ABM) do not adequately capture the benefits of various project design elements such as pedestrian and bike improvements at the project site level. The City developed its UDC to apply to development projects that have a significant VMT impact to appropriately account for the benefits of various design features in reducing VMT that improve the multimodal design aspects of developments in Fresno.

The UDC estimates the potential reductions in development projects' VMT due to various design elements of the project. The UDC includes various strategies related to projects' land use characteristics, urban design elements, and parking pricing/management policies. The UDC has been updated to estimate VMT reductions for various design elements based on the most recent version of California Air Pollution Control Officers Association (CAPCOA) *Handbook for Analyzing Greenhouse Gas Emission Reduction, Assessing Climate Vulnerabilities, and Advancing Health and Equity (December 2021)*. While the VMT reduction strategies and methodologies are based on the CAPCOA handbook, the methodologies/variables have been adjusted to the City's regional characteristics using data from Fresno COG ABM. The UDC helps the user to assess various VMT reduction strategies and select those that are best suited to the type of project, its location, and their efficacies. The UDC is intended to reduce VMT impacts at the project level and related mitigation fees by improving the multimodal design aspects of the City's development projects.

It is recommended that the UDC be reviewed and updated in the future to incorporate data from existing and approved developments in Fresno that include VMT-reducing design elements, so that elasticities specifically applicable to the City can be refined for the tool. Basing VMT reduction quantifications for specific design elements on data collected within Fresno would provide substantial evidence on the efficacy of specific design features and measures for reducing VMT.

3.4 PROJECT OBJECTIVES

CEQA Guidelines Section 15124(b) states that an EIR project description must include "[a] statement of objectives sought by the proposed project. The statement of objectives should include the underlying purpose of the project." The proposed project objectives are outlined below.

- Streamline the SB 743 compliance process for development projects by providing feasible mitigation options to reduce potentially significant VMT impacts.
- Identify funding for future TDM strategies and VMT-reducing projects within Fresno to help reduce Citywide total VMT.
- Contribute towards making Fresno a pedestrian-, bicycle-, and transit-oriented community with active, healthy, and livable spaces.

3.5 DISCRETIONARY APPROVALS

Although the City is the CEQA Lead Agency for the project, other agencies also have discretionary authority related to the project and approvals or serve as a responsible and/or trustee agency in connection to the project. The following lists these agencies and potential permits and approvals that may be required.

3.5.1 City of Fresno

- Certification of the EIR
- Adoption of the VMT Reduction Program and Nexus Study and the associated Capital Improvement Plan
- Adoption of ordinance amending the Fresno Municipal Code to codify the VMT Mitigation Fee
- Amendment of the Master Fee Schedule to include a VMT Mitigation Fee

Additionally, TDM strategies and VMT-reducing improvements implemented in accordance with the VMT Reduction Program and constructed as part of future developments or by the City would require separate future discretionary approvals, such as:

- Site Development Permits
- Street Vacations/Dedications
- Encroachment Permits
- Building and Construction Permits

3.5.2 California Department of Transportation (Caltrans)

- Encroachment Permits

3.5.3 Other Responsible/Trustee Agencies

- Federal Aviation Administration
- Fresno County Airport Land Use Commission
- California Department of Fish and Wildlife (CDFW)
- San Joaquin Valley Air Pollution Control District (SJVAPCD)
- Pacific Gas and Electric Company (PG&E)/California Public Utilities Commission, approvals for power line relocations or undergrounding

4.0 EVALUATION OF ENVIRONMENTAL IMPACTS

This chapter contains an analysis of each potentially significant environmental issue that has been identified for the Fresno Vehicle Miles Travelled (VMT) Reduction Program (proposed project). The following: (1) identifies how a determination of significance is made; (2) identifies the environmental issues addressed in this chapter; (3) describes the context for the evaluation of cumulative effects; (4) lists the format of the topical issue section; and (5) provides an evaluation of each potentially significant issue in Sections 4.1 through 4.18.

DETERMINATION OF SIGNIFICANCE

Under the California Environmental Quality Act (CEQA), a significant effect is defined as a substantial, or potentially substantial, adverse change in the environment. The *State CEQA Guidelines* direct that this determination be based on scientific and factual data. The impact evaluation in this chapter is prefaced by criteria of significance, which are the thresholds for determining whether an impact is significant. These criteria of significance are based on the *State CEQA Guidelines* and applicable City policies.

ISSUES ADDRESSED IN THE DRAFT EIR

Sections 4.1 through 4.18 in this chapter describe the environmental setting of the project as evaluated in this Environmental Impact Report (EIR) and the impacts that are expected to result from implementation of the proposed project. Mitigation measures are proposed to reduce potential impacts, where appropriate.

4.1 Aesthetics
4.2 Agriculture and Forestry Resources
4.3 Air Quality
4.4 Biological Resources
4.5 Cultural Resources and Tribal Cultural Resources
4.6 Energy
4.7 Geology and Soils
4.8 Greenhouse Gas Emissions
4.9 Hazards and Hazardous Materials
4.10 Hydrology and Water Quality
4.11 Land Use and Planning
4.12 Mineral Resources
4.13 Noise
4.14 Population and Housing
4.15 Public Services and Recreation
4.16 Transportation
4.17 Utilities and Service Systems
4.18 Wildfire

ENVIRONMENTAL SETTING

This chapter has been prepared in accordance with *State CEQA Guidelines* Section 15125, which states: “An EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. The environmental setting will normally constitute the baseline physical

conditions by which a Lead Agency determines whether an impact is significant. The description of the environmental setting shall be no longer than is necessary to provide an understanding of the physical effects of the proposed project and its alternatives."

The Notice of Preparation (NOP) of an EIR for the proposed project was published on September 27, 2024. Thus, each of the environmental topical sections in this chapter includes a discussion of physical conditions in the vicinity of the project site on or around September 27, 2024.

CUMULATIVE ANALYSIS CONTEXT

CEQA defines cumulative impacts as "two or more individual effects which, when considered together, are considerable, or which can compound to increase other environmental impacts." Section 15130 of the *State CEQA Guidelines* requires that an EIR evaluate potential environmental impacts when the project's incremental effect is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of "reasonably foreseeable probable future" projects, per CEQA Section 15355. Cumulative impacts can result from a combination of the proposed project together with other closely related projects that cause an adverse change in the environment. Cumulative impacts can result from individually minor but collectively significant projects taking place over time.

The methodology used for assessing cumulative impacts typically varies depending on the specific topic being analyzed. CEQA requires that cumulative impacts be discussed using either a list of past, present, and probable future projects producing related or cumulative impacts, or a summary of projections contained in an adopted local, regional, or Statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. This EIR uses both approaches to evaluate cumulative impacts, and the particular approach used depends on the topical area under consideration. Refer to the cumulative discussion in the individual topic sections for further discussion and the identification of the cumulative study are for each topic.

FORMAT OF ISSUE SECTION

The environmental topical sections comprise two primary parts: (1) Environmental Setting, and (2) Impacts and Mitigation Measures. An overview of the general organization and the information provided in the two parts is provided below:

- **Existing Environmental Setting.** The Environmental Setting section for the environmental topic generally provides a description of the applicable physical setting (e.g., existing land uses, existing traffic conditions) for the project site. An overview of regulatory considerations that are applicable to each specific environmental topic is also provided.

- **Regulatory Setting.** The Regulatory Setting section for the environmental topic provides a description of the applicable regulatory considerations that are applicable to the specific environmental topic discussed.

- **Impacts and Mitigation Measures.** The Impacts and Mitigation Measures section for the environmental topic presents a discussion of the impacts that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds to determine whether an impact is significant. The latter part of this section presents the impacts from the proposed project and mitigation measures, as appropriate. Cumulative impacts are also addressed.

Impacts are numbered and shown in bold type, and the corresponding mitigation measures are numbered and indented. Impacts and mitigation measures are numbered consecutively and begin with an acronymic or abbreviated reference to the impact section (e.g., TRA for Transportation). The following symbols are used for individual topics:

AES	Aesthetics
AG	Agriculture and Forestry Resources
AIR	Air Quality
BIO	Biological Resources
CUL	Cultural Resources and Tribal Cultural Resources
EN	Energy
GEO	Geology and Soils
GHG	Greenhouse Gas Emissions
HAZ	Hazards and Hazardous Materials
HYD	Hydrology and Water Quality
LU	Land Use and Planning
MIN	Mineral Resources
NOI	Noise
POP	Population and Housing
PSR	Public Services and Recreation
TRA	Transportation
UTL	Utilities and Service Systems
WF	Wildfire

Impacts are also categorized by type of impact, as follows: No Impact, Less Than Significant, Less Than Significant with Mitigation Incorporated, and Potentially Significant.

ENVIRONMENTAL ISSUES

Sections 4.1 through 4.18 of this chapter describe the environmental setting of the project as it relates to each specific environmental topic evaluated in the EIR and the impacts that are expected to result from implementation of the proposed project. Mitigation measures are proposed to reduce potential impacts, where appropriate.

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4.1 AESTHETICS

This section describes the existing aesthetic character of the project area and evaluates the potential impacts to visual resources associated with implementation of the proposed VMT Reduction Program.

4.1.1 Existing Environment Setting

- **Scenic Resources:** Scenic resources are defined as natural or man-made elements that contribute to an area's scenic value and are visually pleasing. Scenic resources include landforms, vegetation, water, or adjacent scenery and may include a cultural modification to the natural environment. The degree to which these resources are present in a community is clearly subject to personal and cultural interpretation. Scenic resources within the city of Fresno include landscaped open space areas including parks and golf courses; areas along the San Joaquin River due to varying topography; and the river bluffs, which provide a unique geological feature in the San Joaquin Valley. Man-made scenic resources include historic buildings in Downtown Fresno, which provide a unique skyline.

- **Light and Glare:** Lighting effects are associated with the use of artificial light during the evening and nighttime hours. There are two primary sources of light: light emanating from building interiors passing through windows, and light from exterior sources (i.e., street lighting, building illumination, security lighting, parking lot lighting, and landscape lighting). Light introduction can be a nuisance to adjacent residential areas, diminish the view of the clear night sky, and if uncontrolled, can cause disturbances. Uses such as residences are considered light sensitive since occupants have expectations of privacy during evening hours and may be subject to disturbance by bright light sources.

  Glare is primarily a daytime occurrence caused by the reflection of sunlight or artificial light by highly polished surfaces such as window glass or reflective materials and, to a lesser degree, from broad expanses of light-colored surfaces. Perceived glare is the unwanted and potentially objectionable sensation as observed by a person as they look directly into the light source of a luminaire. Daytime glare generation is common in urban areas and is typically associated with buildings with exterior facades largely or entirely comprised of highly reflective glass. Glare can also be produced during evening and nighttime hours by the reflection of artificial light sources such as automobile headlights. Glare-sensitive uses include residences, transportation corridors, and aircraft landing corridors.

  The majority of the area within the existing city limits is urbanized and is characterized by significant sources of light and glare, including streetlights, lighting within parking lots, interior lights from Downtown buildings, lighting associated with recreational facilities, and light emitted from residential and non-residential buildings throughout the city. Rural residential and agricultural areas that are located within the southeastern and western portions of the city are not characterized by significant sources of light and glare.

  The analysis of visual impacts focuses on changes in the visual character of the city that may result subsequent to the approval of the proposed project. This would include the visual

compatibility of land uses, changes in scenic vistas and viewsheds where visual changes would be evident, changes to scenic resources along designated scenic corridors, and the introduction of new sources of light and glare. Impacts to the existing environment in and around the city are identified by the contrast between the visual setting of the city before and after implementation of the proposed project.

4.1.2 Regulatory Setting

4.1.2.1 Federal Policies and Regulations

No federal policies or regulations pertaining to aesthetics are applicable to the proposed project.

4.1.2.2 State Policies and Regulations

Caltrans Scenic Highway Program. The Caltrans Scenic Highway Program 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 that traverses an area of exceptional scenic quality. 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. As stated previously, there are no eligible or officially designated State Scenic Highways within the city of Fresno.

California Building Energy Efficiency Standards. Title 24, Part 6 of the California Code of Regulations outlines mandatory provisions for lighting control devices and luminaires for all new developments. This code encourages buildings (both residential and nonresidential) to be constructed and operated utilizing energy-efficient development strategies.

4.1.2.3 Local Policies and Regulations

The following is a summary of the applicable policies included in the City's Zoning Ordinance and

General Plan that are related to aesthetic resources and applicable to the proposed project.

City of Fresno Municipal Code

Zoning Ordinance. The City's Zoning Ordinance (Chapter 15 of the Municipal Code) is intended to provide a guide for the physical development of the city in order to achieve the arrangement of land uses depicted in the City's General Plan, as well as implement goals, objectives, and policies of the City's General Plan. Among the aspects of development regulated by the Municipal Code are types of allowable land uses, setback and height requirements, landscaping, walls, fencing, signage, access, parking requirements, storage areas, and trash enclosures. Article 25, Performance Standards, of the Zoning Ordinance includes standards related to lighting and glare.

City of Fresno General Plan. The City of Fresno's General Plan Urban Form, Land Use, and Design Element includes objectives and policies that work to establish a comprehensive Citywide land use planning strategy to meet economic development objectives, achieve efficient and equitable use of

resources and infrastructure, and create an attractive living environment. The following policies related to aesthetics are applicable to the proposed project.

Policy LU-5-g: Scale and Character of New Development. Allow new development in or adjacent to established neighborhoods that is compatible in scale and character with the surrounding area by promoting a transition in scale and architectural character between new buildings and established neighborhoods, as well as integrating pedestrian circulation and vehicular routes.

Policy D-4-f: Design Compatibility with Residential Uses. Strive to ensure that all new nonresidential land uses are developed and maintained in a manner complementary to and compatible with adjacent residential land uses, to minimize interface problems with the surrounding environment and to be compatible with public facilities and services.

Policy MT-3-a: Scenic Corridors. Implement measures to preserve and enhance scenic qualities along scenic corridors or boulevards, including:

- Van Ness Boulevard - Weldon to Shaw Avenues
- Van Ness Extension - Shaw Avenue to the San Joaquin River Bluff
- Kearney Boulevard - Fresno Street to Polk Avenue
- Van Ness/Fulton couplet - Weldon Avenue to Divisadero
- Butler Avenue - Peach to Fowler Avenues
- Minnewawa Avenue - Belmont Avenue to Central Canal
- Huntington Boulevard - First Street to Cedar Avenue
- Shepherd Avenue - Friant Road to Willow Avenue
- Audubon Drive - Blackstone to Herndon Avenues
- Friant Road - Audubon to Millerton Roads
- Tulare Avenue - Sunnyside to Armstrong Avenues
- Ashlan Avenue- Palm to Maroa Avenues

4.1.3 Impacts and Mitigation Measures

The following section presents a discussion of the impacts related to aesthetics that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds to determine if an impact is significant. The latter part of this section presents the impacts associated with implementation of the proposed project and the recommended mitigation measures. Mitigation measures are recommended, as appropriate, for significant impacts to eliminate or reduce them to a less-than-significant level. Cumulative impacts are also addressed.

4.1.3.1 Significance Criteria

The thresholds for aesthetics impacts used in this analysis are consistent with Appendix G of the *State CEQA Guidelines*. The proposed project may be deemed to have a significant impact with respect to aesthetics if it would:

a. Have a substantial adverse effect on a scenic vista.

b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

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

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

4.1.3.2 Project Impacts

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

AES-1 The proposed project would not have a substantial adverse effect on a scenic vista.

A scenic vista is generally defined as a view of undisturbed natural lands exhibiting a unique or unusual feature that comprises an important or dominant portion of the viewshed. Scenic vistas may also be represented by a particular distant view that provides visual relief from less attractive views of nearby features. Other designated Federal and State lands, as well as local open space or recreational areas, may also offer scenic vistas if they represent a valued aesthetic view within the surrounding landscape of nearby features.

The city is almost entirely developed and is characterized by an urban and suburban landscape consisting of low, medium, and high density residential, commercial, office, mixed use, industrial, institutional, and open space uses. The visual setting of the proposed project is primarily characterized by areas of low- to moderate-scale buildings and structures; however, the Downtown Fresno area is characterized by high-rise buildings that are greater in height, density, and scale than other surrounding areas. Views from the project area include highly valued features such as the San Joaquin River, Sierra Nevada Mountain foothills, and buildings in Downtown Fresno. Public views of the San Joaquin River from the project are limited due to the prevalence of privately-owned property located adjacent to the river. From the eastern portion of the city, public views of the Sierra Nevada Mountain foothills are prevalent from existing public roadways. It should be noted that views of the foothills are typically impeded due to the poor air quality within the city.

The City's General Plan identifies six locations along the San Joaquin River bluffs as designated vista points from which views should be maintained. The scenic views from the San Joaquin River bluffs are not expected to be substantially affected since the land uses included in the City's General Plan are similar to current land uses. As such, implementation of the VMT Reduction Program would result in a less than significant impact on existing designated vista points.

Public views of buildings in Downtown Fresno provide a skyline view with the city of Fresno. Due to relatively flat topography, intervening land uses, and landscaping, views of the skyline are primarily

limited to areas within the Downtown Fresno area. Limited views of existing high-rise buildings in Downtown Fresno are visible from portions of elevated freeways, including SR 41, SR 99, and SR 180. Implementation of the VMT Reduction Program would not affect future development in the Downtown area. Therefore, potential impacts of the proposed project on scenic vistas would be less than significant, and no mitigation would be required.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

AES-2 The proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

According to the Caltrans State Scenic Highway Mapping System, there are no eligible or officially designated State Scenic Highways within Fresno. However, Fresno County has three eligible State Scenic Highways; the nearest eligible highways include a portion of SR 180 (approximately 7 miles east of the City's Planning Area) and a portion of SR 168 (approximately 5 miles east of the Planning Area). The nearest officially designated State Scenic Highway is located more than 30 miles northeast of Fresno within the county of Madera. Due to intervening land uses and distance, implementation of the VMT Reduction Program would not impact scenic resources from these eligible and officially designated State Scenic Highways nearest to Fresno. Therefore, since there are no eligible or officially designated State Scenic Highways within or in close proximity to the City of Fresno Planning Area, future projects implemented under the VMT Reduction Program would not impact scenic resources within a designated state scenic highway.

Although there are no eligible or officially designated State Scenic Highways located in the Planning Area, the City's General Plan designates the following local scenic corridors:

- Van Ness Boulevard – Weldon to Shaw Avenues
- Van Ness Extension – Shaw Avenue to the San Joaquin River Bluff
- Kearney Boulevard – Fresno Street to Polk Avenue
- Van Ness-Fulton couplet – Weldon Avenue to Divisadero
- Butler Avenue – Peach to Fowler Avenues
- Minnewawa Avenue – Belmont Avenue to Central Canal
- Huntington Boulevard – First Street to Cedar Avenue
- Shepherd Avenue – Friant Road to Willow Avenue
- Audubon Drive – Blackstone to Herndon Avenues
- Friant Road – Audubon to Millerton Roads
- Tulare Avenue – Sunnyside to Armstrong Avenues
- Ashlan Avenue – Palm to Maroa Avenues.

Although implementation of the VMT Reduction Program would facilitate new projects in the city, future projects would not affect scenic qualities along these scenic corridors. Therefore, the proposed project would not result in impacts related to the substantial damage of scenic resources within a State-designated highway or local scenic corridors.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

AES-3 The proposed project would not 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 not conflict with applicable zoning and other regulations governing scenic quality.

The City includes both urbanized and non-urbanized areas. For the purposes of this threshold and given the nature of the proposed program and location of most VMT-reducing improvements within the City, the project's potential to conflict with applicable zoning and other regulations governing scenic quality is evaluated below.

As stated, the proposed program would fund VMT-reducing transportation improvements as City-initiated projects. As a result, future improvements would be required to comply with existing City standards related to street improvements. Additionally, future transportation improvements implemented as part of development projects would be required to comply with zoning-specific development standards governing scenic quality, including setbacks, landscaping, outdoor lighting, and signage per Municipal Code Chapter 15, Citywide Development Code. Future improvements may also be located in Specific Plan areas of the City and thus, would be required to comply with development standards and design guidelines governing scenic quality as they relate to roadway design within those areas. All future transportation improvements would also be required to undergo separate environmental review under CEQA and implement project-level mitigation measures, as needed.

Overall, future transportation improvements would be required to comply with existing zoning regulations governing scenic quality and would be ensured as part of the City's plan review process. Thus, future improvements constructed as part of the proposed project would be consistent with the Municipal Code and impacts in this regard would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

AES-4 The proposed project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

A significant impact may occur if lighting, as part of a proposed project exceeds adopted thresholds for light and glare, including exterior lighting or light spillover, or if a proposed project creates a substantial new source of light or glare. Light-sensitive uses in Fresno are predominantly associated with residential development.

Future construction activities associated with implementation of the VMT Reduction Program could involve temporary glare impacts as a result of construction equipment and materials. However, the

majority of projects identified by the VMT Reduction Program would occur within existing rights-of-way. Therefore, glare generated from construction activities would not be substantial when compared to other existing sources of glare along City roadways (e.g., buildings, structures, and vehicles).

Additionally, construction activities within Fresno are generally limited to the hours of 7:00 a.m. to 10:00 p.m. from Monday through Saturday per Municipal Code Section 10-109. Thus, as no construction activities would be permitted after 10:00 p.m. from Monday through Saturday, or on Sundays, short-term construction-related impacts pertaining to nighttime lighting are not anticipated.

It should also be noted that all future projects implemented as part of the VMT Reduction Program would be required to undergo separate environmental review under CEQA and would be evaluated on a project-specific level with regards to light and glare construction impacts.

Most of the anticipated transportation improvements funded by the VMT Reduction Program would have no operational impacts with regards to light and glare. However, some improvements, including those implemented as part of future development projects, could include additional roadway or pathway lighting within or along existing rights-of-way or at new bus stop shelters. Outdoor lighting requirements are detailed in Municipal Code Title 15, Outdoor Lighting and Illumination. For example, Municipal Code Section 15-2015, Outdoor Lighting and Illumination, regulates outdoor lighting and requires lighting to be directed away from adjacent properties and designed and located in a manner that prevents glare onto adjacent properties. As stated, future transportation improvements and those implemented as part of future development projects would be required to undergo separate environmental review under CEQA to evaluate project-level impacts with regards to operational light and glare and implement mitigation, as needed. Thus, impacts would be less than significant in this regard.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

4.1.3.3 Cumulative Impacts

CEQA Guidelines Section 15355 requires an analysis of cumulative impacts, which are defined as, "two or more individual effects which, when considered together, are considerable, or which compound or increase other environmental impacts." The cumulative analysis below considers the proposed project's impacts in conjunction with future buildout of the General Plan.

Scenic Vistas. Future cumulative projects developed in accordance with the General Plan could result in adverse impacts to scenic vistas in Fresno. However, similar to future transportation improvements associated with the VMT Mitigation Program, cumulative projects would be required to undergo project-specific environmental review under CEQA to evaluate project-level impacts to scenic vistas and to determine any required mitigation. As analyzed above, transportation improvements implemented in accordance with the proposed program are not anticipated to contribute to a cumulative impact with regards to scenic vistas, as these improvements would

predominantly be located within or along existing rights-of-way and would not be large enough in scale and height to block or obstruct views compared to existing surrounding structures. Further, future transportation improvements would also be required to undergo separate environmental review under CEQA. Thus, the proposed program would not significantly contribute to cumulative impacts in this regard and impacts would be less than significant.

Scenic Highways. There are no designated State Scenic Highways within the city of Fresno. As result, implementation of the VMT Reduction Program would not impact eligible or officially designated State Scenic Highways. The nearest State Scenic Highway in the county of Madera is located more than 30 miles northeast of the Planning Area. Further, due to distance, cumulative development located outside of the city of Fresno would not impact local scenic corridors as designated in the City's General Plan. Therefore, future projects implementation of the VMT Reduction Program would result in no cumulative impact on scenic vistas, State Scenic Highways, local scenic corridors.

Visual Quality. Under this threshold, future cumulative projects developed in accordance with the General Plan would be evaluated based on whether the project is located in an urbanized or nonurbanized area. If a cumulative project is proposed in an urbanized area, the project would be evaluated based on whether it could conflict with applicable zoning and other regulations governing scenic quality. If a cumulative project is proposed in a non-urbanized area (e.g., rural), it would be evaluated based on whether it could substantially degrade the existing visual character or quality of public views of the site and its surrounding. Regardless, cumulative projects would be required to undergo project-specific environmental review under CEQA to evaluate project-level impacts and to determine any required mitigation. As part of the City's plan review process, the City would review each cumulative project for consistency with applicable General Plan policies and site development standards included in the Municipal Code that aid in governing scenic quality.

As stated, future transportation improvements funded by the proposed program would be required to comply with existing City standards related to street improvements and zoning-specific land use development standards under Municipal Code Chapter 15. Further, should future improvements be located in a Specific Plan area, the improvements would be required to comply with development standards and design guidelines governing scenic quality as they relate to roadway design within those areas. Thus, the proposed project would not significantly contribute to cumulative impacts to scenic quality regulations and impacts in this regard would be less than significant.

Light and Glare. Development of cumulative projects could result in increased light and glare in the City during construction and operational activities. However, all cumulative development would be required to undergo separate environmental review under CEQA to evaluate project-level impacts associated with light and glare. Additionally, similar to the proposed project, cumulative projects would be required to comply with outdoor lighting requirements specific to each zoning district as detailed in Municipal Code Chapter 15, Citywide Development Code.

As stated, short-term and long-term light and glare impacts associated with the project's transportation improvements would be reduced to less than significant levels following conformance with outdoor lighting standards under the Municipal Code. Further, the majority of transportation improvements would occur within or adjacent to existing rights-of-way and would not result in substantial new sources of light and glare compared to existing conditions. Thus, the project would

not cumulatively contribute to the creation of substantial new lighting or glare and impacts would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

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4.2 AGRICULTURE AND FORESTRY RESOURCES

This section provides a discussion of the existing agricultural and forestry resources in the project area and in the surrounding area, and evaluates the potential for conversion of agriculture and forestry land uses that could result from implementation of the proposed Fresno VMT Reduction Program.

4.2.1 Existing Environment Setting

The study area for project impacts regarding agricultural resources is the Fresno Planning Area because, as shown in Figure 3-2 in Chapter 3.0, Project Description, potential development under the proposed project would be limited to areas within the Planning Area. The Planning Area includes all areas within the City's current city limits, including the Fresno-Clovis Regional Wastewater Reclamation Facility (RWRF), the areas within the current Sphere of Influence (SOI). The Planning Area is characterized as a mature agricultural area due to the prevalence and diversity of farming activities. Agricultural operations are comprised of relatively stable crops such as orchards and vineyards. Fruits and nuts, livestock and poultry, vegetable crops, and field crops are prevalent in Fresno and Madera counties.

4.2.2 Methodology

The potential project-related impacts to agricultural and forestry resources were evaluated on a qualitative and quantitative basis. Quantitative impacts were assessed based on existing farmland data from the California Department of Conservation (California DOC) Farmland Mapping and Monitoring Program (FMMP), as well as farmland data received from the Fresno County Assessor's Office Land Use Codes provided by City staff. Qualitative impacts were assessed by evaluating the project's potential for impacting agricultural activities within the Planning Area.

4.2.3 Regulatory Setting

4.2.3.1 Federal Policies and Regulations

Farmland Protection Policy Act. The Farmland Protection Policy Act (FPPA) was enacted to minimize the impact of federal programs on the conversion of farmland to non-agricultural uses. To the extent possible, the FPPA ensures that federal programs are administered to be compatible with state and local regulations to protect farmland. This act does not authorize the federal government to regulate the use of private or non-federal land. For the purposes of the FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance.

4.2.3.2 State Policies and Regulations

Farmland Mapping and Monitoring Program. In 1982, the California DOC began coordinating with the United Stated Department of Agriculture (USDA) Soil Conservation Service in the preparation and completion of mapping of important farmland throughout the State. The FMMP created a greater level of mapping compared to the USDA Soil Conservation Service by modifying the federal criteria for use in the State and incorporating irrigation criteria for farmland significance. The primary purpose of the FMMP is to monitor the conversion of the State's agricultural lands. The DOC Division of Land Resource Protection works with landowners, local governments, and researchers to

conserve California's farmland and open space resources based on information provided in the FMMP.

The DOC FMMP produces maps and statistical data used for analyzing impacts on agricultural resources. Agricultural land is categorized according to soil quality and irrigation status. The maps are updated every 2 years through review of aerial photographs, a computer mapping system, public review, and field reconnaissance. The FMMP categories are defined as follows:

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

- **Farmland of Statewide Importance (S):** This category is similar to Prime Farmland but with minor shortcomings (e.g., greater slopes or less ability to store soil moisture). The land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.

- **Unique Farmland (U):** This category consists of lesser quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards. The land must have been cropped at some time during the 4 years prior to the mapping date.

- **Farmland of Local Importance (L):** This land category is important to the local agricultural economy as determined by each county's Board of Supervisors and a local advisory committee.

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

- **Urban and Built-Up Land (D):** This type of land is occupied by structures with a building density of at least one unit to 1.5 acres, or approximately six structures to a 10-acre parcel. Common examples include residential, industrial, commercial, institutional facilities, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, and water control structures.

- **Other Land (X):** This type of land is not included in any other mapping category. Common examples include low-density rural developments, brush, timber wetland, riparian area not suitable for livestock grazing, and water bodies smaller than 40 acres. Vacant and non-agricultural land surrounded on all sides by urban development that is greater than 40 acres is mapped as Other Land.

- **Water (W):** This classification includes perennial water bodies with an extent of at least 40 acres.

- **Optional Designation – Land Committed to Non-Agricultural Use:** This type of land is defined as existing farmland, grazing land, and vacant areas, which have a permanent commitment for development.

The DOC FMMP considers Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance collectively as Important Farmland.

Based on the farmland mapping categories identified above, Table 4.2-1 depicts the acreages of each category within the Planning Area.

Table 4.2-1: Existing Farmland Acreages Within the Planning Area

Designation	Acreage
Prime Farmland	9,134
Farmland of Statewide Importance	2,269
Unique Farmland	3,224
Farmland of Local Importance	7,896
Urban and Built Up	71,963
Rural Residential	6,434
Nonagricultural or Natural Vegetation	1,869
Confined Animal Agriculture	136
Grazing	1
Vacant or Disturbed	2,327
Water	57
Semi-Agricultural and Rural Commercial	729

Source: USDA FMMP (2016).

As shown in Table 4.2-1, the Planning Area includes approximately 9,134 acres of Prime Farmland, approximately 2,269 acres of Farmland of Statewide Importance, and approximately 3,224 acres of Unique Farmland. In total, the Planning Area includes approximately 14,627 acres of Prime Farmland, Farmland of Statewide Importance, and Unique Farmland. This represents approximately 13.8 percent of the Planning Area.[1]

Land Conservation Act of 1965 (Williamson Act). The California Land Conservation Act, better known as the Williamson Act, has acted as the State's agricultural land protection program since its enactment in 1965. Fundamentally, the Williamson Act is a State policy administered by local governments, who enter into agreements with local landowners. In return, the landowners receive property tax assessments based on farming and open space uses, as opposed to full market value, thus resulting in a lower tax burden. Local governments are not mandated to administer the Act, but those that do have some latitude to tailor the program to suit local goals and objectives. The purpose of the Williamson Act is to preserve agricultural and open space lands by discouraging premature and unnecessary conversion to urban uses. In general, the minimum preserve size is 100 acres, and the minimum standard contract size for the county of Fresno is 20 acres on Prime

[1] Calculation: 14,627 acres of farmland / 106,000 acres in Planning Area = 13.8 percent

Farmland and 40 acres on non-prime farmland within a preserve. The Williamson Act has a minimum contract size of 10 acres.

Williamson Act contracts have a minimum term of 10 years, with renewal occurring automatically each year (local governments can establish initial contract terms for longer periods of time). The Williamson Act contracts run with the land and are binding on all successors in interest of the landowner. Only land located within an agricultural preserve is eligible for Williamson Act contracts. An agricultural preserve defines the boundary of an area within which a city or county would enter into contracts with landowners. The boundary is designated by resolution of the board of supervisors or city council having jurisdiction. The rules of each agricultural preserve specify the uses allowed. Generally, any commercial agricultural uses would be permitted within any agricultural preserve. In addition, local governments may identify compatible uses allowed with a use permit. The landowner can petition to cancel a contract, although the presiding jurisdiction must make a finding based on substantial evidence that supports the cancellation of the contract. Upon approval, the landowner must pay a fee of 12.5 percent of the current fair market valuation of the property. Table 4.2-2 shows the acreages of land under a Williamson Act contract within the Planning Area.

Table 4.2-2: Existing Farmland under Williamson Act Contracts Within the Planning Area

Designation	Acreage
Prime Farmland	1,012
Farmland of Statewide Importance	343
Unique Farmland	431
Farmland of Local Importance	157
Other Lands	603
Total	**2,546**

Source: USDA FMMP (2016).

As shown in Table 4.2-2, the Planning Area contains approximately 1,012 acres of prime agricultural land that are under a Williamson Act contract as well as approximately 931 acres of non-prime agricultural land (i.e., Statewide Importance, Unique, or Local Importance).

Public Resources Code 12220 (g) – Forest Land. “Forest land” is 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.**Public Resources Code 4526 - Timberland.** “Timberland” means land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the board on a district basis.**Public Resources Code 51104 (g) – Timberland Production Zone.** “Timberland production zone” or “TPZ” means an area which has been zoned pursuant to Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses.Local Policies and Regulations

City of Fresno General Plan. The General Plan is a set of goals, objectives, and policies that form a blueprint for the physical development of the city. The following objective and policies related to agricultural resources are applicable to the proposed project.

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

Policy RC-9-b: Unincorporated Land in the Planning Area. Express opposition to residential and commercial development proposals in unincorporated areas within or adjacent to the Planning Area when these proposals would do any of the following:

- Make it difficult or infeasible to implement the General Plan;
- Contribute to the premature conversion of agricultural, open space, or grazing lands; or
- Constitute a detriment to the management of resources and/or facilities important to the region (such as air quality, water quantity and quality, traffic circulation, and riparian habitat).

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

4.2.4 Impacts and Mitigation Measures

The following section presents a discussion of the impacts related to agriculture and forestry resources that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds to determine if an impact is significant. The latter part of this section presents the impacts associated with implementation of the proposed project and the recommended mitigation measures, if required. Mitigation measures are recommended, as appropriate, for significant impacts to eliminate or reduce them to a less than significant level. Cumulative impacts are also addressed.

4.2.4.1 Significance Criteria

Based on *State CEQA Guidelines* Appendix G, the proposed project would have a significant impact on agricultural resources if it would:

a. 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;

b. Conflict with existing zoning for agricultural use, or a Williamson Act contract;

c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC Section 12220(g)), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g));

d. Result in the loss of forest land or conversion of forest land to non-forest use; or

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

4.2.4.2 Project Impacts

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

AG-1 The proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.

The project area is located within Fresno and which includes areas that have been designated as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance through the FMMP of the California DOC. However, it should be noted that existing agricultural operations are not necessarily occurring on all of the land designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance by the FMMP. In addition, there may be agricultural operations that occur within the Fresno that are not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

The project is proposing to adopt a VMT Reduction Program which aims to establish mitigation for future projects that exceed the City's VMT thresholds in the form of a mitigation bank and urban design calculator (UDC). The program would identify, quantify, and prioritize applicable mitigation measures, and relevant VMT-reducing projects within Fresno to be funded by the proposed mitigation bank. The project would not result in any physical improvements or change the distribution or intensity of the land uses within the project area. The adoption of the proposed VMT Reduction Program would support future design improvements at the project level through the UDC and multi-modal or transportation improvements citywide in accordance with the program. These improvements would not involve converting important farmland to non-agricultural uses. Although the program identifies VMT-reducing improvements for the program, these improvements are associated with VMT-reducing measures through the implementation of multi-modal improvements within Fresno and would not require the conversion of agricultural land. Therefore, the proposed

project would not result in impacts to agricultural resources within the project area and no mitigation is necessary.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

AG-2 The proposed project would not conflict with existing zoning for agricultural use, or a Williamson Act contract.

The project is proposing to adopt a VMT Reduction Program which aims to establish mitigation for future projects that exceed the City's VMT thresholds in the form of a mitigation bank. The program would identify, quantify, and prioritize applicable mitigation measures, and relevant VMT-reducing projects within Fresno to be funded by the proposed mitigation bank. The adoption of the proposed VMT Reduction Program would support future multi-modal or transportation improvements in accordance with the program.

The project description does suggest identified improvements in areas within the project area that allow for multimodal improvements or are associated with existing transportation uses. These improvements would not result in impacts that conflict with existing zoning for agricultural use or Williamson Act contracts as the improvements are located in areas with existing transportation land uses. Additionally, adoption of the VMT Reduction Program would not result in a conflict with existing zoning for agricultural use or a Williamson Act contract. Therefore, the project would not conflict with the existing zoning for agricultural use or Williamson Act contracts and no mitigation is necessary.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

AG-3 The proposed project would not 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)).

The project is proposing to adopt a VMT Reduction Program which aims to establish mitigation for future projects that exceed the City's VMT thresholds in the form of a mitigation bank. The program would identify, quantify, and prioritize applicable mitigation measures, and relevant VMT-reducing projects within Fresno to be funded by the proposed mitigation bank. The adoption of the proposed VMT Reduction Program would support future multi-modal or transportation improvements in accordance with the program.

The project area is not used for forestry purposes, and no properties within the project area are designated or zoned for forestry uses. Therefore, the project would not conflict with existing zoning for, or cause rezoning of, forest land timberland, or timberland zoned Timberland Production. Therefore, the project would not impact forestry resources, and no mitigation is required.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

AG-4 The proposed project would not result in the loss of forest land or conversion of forest land to non-forest use.

The project is proposing to implement a VMT Reduction Program which aims to establish mitigation for future projects that exceed the City's VMT thresholds in the form of a mitigation bank. The program would identify, quantify, and prioritize applicable mitigation measures, and relevant VMT-reducing projects within Fresno to be funded by the proposed mitigation bank. The adoption of the proposed VMT Reduction Program would support future transportation improvements in accordance with the program and would likely be located within or adjacent to areas associated with existing transportation uses.

As stated above, the planning area is not used for forestry purposes, and no properties within the project area are designated or zoned for forestry uses. Therefore, the project would not result in the loss of forest land or conversion of forest land to non-forest use and no mitigation is required.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

AG-5 The proposed project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Important Farmland, to non-agricultural use.

The project is proposing to adopt a VMT Reduction Program which aims to establish mitigation for future projects that exceed the City's VMT thresholds in the form of a mitigation bank. The program would identify, quantify, and prioritize applicable mitigation measures, and relevant VMT-reducing projects within Fresno to be funded by the proposed mitigation bank. The adoption of the proposed VMT Reduction Program would support future multi-modal or transportation improvements in accordance with the proposed project. The proposed project includes the adoption of the proposed VMT Reduction Program, which would not result in any physical improvements or change the distribution or intensity of the land uses within the project area. As such, the proposed project would result in a less-than-significant impact related to conversion of Important Farmland to a non-agricultural use, and no mitigation is necessary.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

4.2.4.3 Cumulative Impacts

The project is proposing to adopt a VMT Reduction Program which aims to establish mitigation for future projects that exceed the City's VMT thresholds in the form of a mitigation bank. The program would identify, quantify, and prioritize applicable mitigation measures, and relevant VMT-reducing

projects within Fresno to be funded by the proposed mitigation bank. The adoption of the proposed VMT Reduction Program would support future multi-modal or transportation improvements in accordance with the program. The project description does suggest identified improvements in areas within the project area that allow for multimodal improvements or are associated with existing transportation uses. Based on the analysis above, the adoption of the proposed VMT Reduction Program along with the project description's identified improvements, would not result in any physical improvements or change the distribution or intensity of the land uses within the project area, and, therefore, would not result in cumulative impacts to agricultural resources.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

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4.3 AIR QUALITY

This section describes the existing air quality setting in the project area and has been prepared using the methodologies and assumptions contained in the San Joaquin Valley Air Pollution Control District's (SJVAPCD) *Guidance for Assessing and Mitigating Air Quality Impacts* (GAMAQI).[1] In keeping with these guidelines, this section describes existing air quality and the regulatory framework for air quality. The section also describes the potential effects of the proposed project on air quality, including the effects of construction and operation of the proposed project on regional pollutant levels and health risks.

4.3.1 Existing Environment Setting

The city of Fresno is located in the county of Fresno in the San Joaquin Valley Air Basin (SJVAB). The Air Basin consists of Kings, Madera, San Joaquin, Merced, Stanislaus, and Fresno counties, as well as a portion of Kern county. The local agency with jurisdiction over air quality in the Basin is the San Joaquin Valley Air Pollution Control District (SJVAPCD). Regional and local air quality is impacted by topography, dominant airflows, atmospheric inversions, location, and season.

4.3.1.1 Study Area for Project Impacts

The study area for project impacts regarding air quality is the City of Fresno Planning Area and proximate sensitive receptors potentially impacted by a project within the Planning Area because the proposed project is limited to areas within the Planning Area.

4.3.1.2 Air Pollutants and Health Effects

Both State and federal governments have established health-based Ambient Air Quality Standards for six criteria air pollutants: carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead (Pb), and suspended 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 populace with a reasonable margin of safety. Two criteria pollutants, O_3 and NO_2, are considered regional pollutants because they (or their precursors) affect air quality on a regional scale. Pollutants such as CO, SO_2, and Pb are considered local pollutants that tend to accumulate in the air locally.

Occupants of facilities such as schools, daycare centers, parks and playgrounds, hospitals, and nursing and convalescent homes are considered to be 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

[1] San Joaquin Valley Air Pollution Control District (SJVAPCD). 2015. Final Draft - Guidance for Assessing and Mitigating Air Quality Impacts. Website: https://ww2.valleyair.org/media/g4nl3p0g/gamaqi.pdf (accessed May 2025).

sensitive compared to commercial and industrial uses due to greater exposure to ambient air quality conditions associated with exercise.

Air pollutants and their health effects, and other air pollution-related considerations are summarized in Table 4.3.A and are described in more detail below.

Table 4.3.A: Sources and Health Effects of Air Pollutants

Pollutants	Sources	Primary 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, woodstoves. 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, increased inhaler usage.
Particulate Matter Less than 10 Microns in Diameter (PM_{10})	Cars and trucks (especially diesels). Fireplaces, woodstoves. 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.

Ozone. Ozone is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving ROG and NOX. The main sources of ROG and NOX, 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 the single 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.** 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 (e.g., residents, schoolchildren, the elderly, and hospital patients). 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, such as those generated when a vehicle is running in an unventilated garage, can be fatal.**Particulate Matter.** Particulate matter is a class of air pollutants that consists of heterogeneous 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 the primary generators of particulates, through tailpipe emissions as well as brake pad, 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, and studies of children's health in California have demonstrated that particle pollution may significantly reduce lung function growth in children.[2] 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. 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. NO2 decreases lung function and may reduce resistance to infection.

[2] California Air Resources Board (CARB). 2025. *Inhalable Particulate Matter and Health ($PM_{2.5}$ and PM_{10})*. Website: ww2.arb.ca.gov/resources/inhalable-particulate-matter-and-health (accessed May 2025).

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 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.

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 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 the SJVAPCD. In 1998, the CARB identified particulate matter from diesel-fueled engines as a TAC. The CARB has completed a risk management process that identified potential cancer risks for a range of activities and land uses that are characterized by use of diesel-fueled engines.[3] 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 Diesel Risk Reduction Plan is intended to substantially reduce diesel particulate matter emissions and associated health risks through introduction of ultra-low-sulfur diesel fuel—a step

[3] California Air Resources Board (CARB). 2000. *Diesel Risk Reduction Plan*. September. Website: https://ww2.arb.ca.gov/our-work/programs/diesel-risk-reduction-plan (accessed May 2025).

already implemented—and cleaner-burning diesel engines.[4] The technology for reducing diesel particulate matter 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.

High Volume Roadways. 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 intra-urban spatial 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.

Valley Fever. Valley fever is a fungal infection caused by coccidioides 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. 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, chest pain, 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.

4.3.1.3 National and State Ambient Air Quality Standards

Both State and federal governments have established health-based ambient air quality standards for criteria air pollutants. Criteria pollutants are defined as those pollutants for which the federal and State governments have established ambient air quality standards, or criteria, for outdoor concentrations in order to protect public health.

Both the EPA and the CARB have established ambient air quality standards for the following common pollutants: CO, O_3, NO_2, SO_2, Pb, and suspended 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 populace with a reasonable margin

[4] California Air Resources Board (CARB). 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. October. Prepared by the Stationary Source Division and Mobile Source Control Division. Website: https://ww2.arb.ca.gov/sites/default/files/classic/diesel/documents/rrpfinal.pdf (accessed May 2025).

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.[5] State and federal standards for the criteria air pollutants are listed in Table 4.3.B.

4.3.1.4 Existing Climate and Air Quality

The following provides a discussion of the local and regional air quality and climate in the project area.

Regional and Local Air Quality. Air quality is a function of both local climate and local sources of air pollution. The amount of a given pollutant in the atmosphere is determined by the amount of the pollutant released and the atmosphere's ability to transport and dilute the pollutant. The major determinants of transport and dilution are wind, atmospheric stability, terrain, and for photochemical pollutants, sunshine.The project site is within the SJVAB and is under the jurisdiction of the 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 SJVAB is composed of approximately 25,000 square miles and covers eight counties including Fresno, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare, and the western portion of Kern. The SJVAB is defined by the Sierra Nevada in the east (8,000 to more than 14,000 feet in elevation), the Coast Ranges in the west (averaging 3,000 feet in elevation), and the Tehachapis 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 Strait, where the Sacramento-San Joaquin River Delta empties into San Francisco Bay. An aerial view of the SJVAB would simulate a "bowl" opening only to the north. These topographic features restrict air movement through and out of the SJVAB.

Although marine air generally flows into the SJVAB from the Sacramento-San Joaquin River Delta, the Coast Range hinders wind access into the SJVAB from the west, the Tehachapis prevent southern 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 SJVAB. As a result, the SJVAB is highly susceptible to pollutant accumulation over time. Most of the surrounding mountains are above the normal height of summer inversion layers (1,500 to 3,000 feet).

[5] United States Environmental Protection Agency (EPA). 2017. Criteria Air Pollutants. October. Website: www.epa.gov/criteria-air-pollutants (accessed May 2025).

Table 4.3.B: Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [1]		Federal Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (O_3)[8]	1-Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.07 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
Respirable Particulate Matter (PM_{10})[9]	24-Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		–		
Fine Particulate Matter ($PM_{2.5}$)[9]	24-Hour	–		35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12.0 µg/m^3		
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m^3)	–	Non-Dispersive Infrared Photometry (NDIR)
	1-Hour	20 ppm (23 mg/m^3)		35 ppm (40 mg/m^3)		
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		–	–	
Nitrogen Dioxide (NO_2)[10]	Annual Arithmetic Mean	0.03 ppm (57 µg/m^3)	Gas Phase Chemi-luminescence	53 ppb (100 µg/m^3)	Same as Primary Standard	Gas Phase Chemi-luminescence
	1-Hour	0.18 ppm (339 µg/m^3)		100 ppb (188 µg/m^3)	–	
Lead (Pb)[12,13]	30-Day Average	1.5 µg/m^3	Atomic Absorption	–	–	High-Volume Sampler and Atomic Absorption
	Calendar Quarter	–		1.5 µg/m^3 (for certain areas)[l]	Same as Primary Standard	
	Rolling 3-Month Average [i]	–		0.15 µg/m^3		
Sulfur Dioxide (SO_2)[11]	24-Hour	0.04 ppm (105 µg/m^3)	Ultraviolet Fluorescence	0.14 ppm (for certain areas)	–	Ultraviolet Fluorescence; Spectro-photometry (Pararosaniline Method)
	3-Hour	–		–	0.5 ppm (1300 µg/m^3)	
	1-Hour	0.25 ppm (655 µg/m^3)		75 ppb (196 µg/m^3)[11]	–	
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas)[11]	–	
Visibility-Reducing Particles [12]	8-Hour	See footnote [14]	Beta Attenuation and Transmittance through Filter Tape	No Federal Standards		
Sulfates	24-Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride [10]	24-Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

Source: Ambient Air Quality Standards (California Air Resources Board 2016).

Table notes continued on the following page

[1] 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.

[2] 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 µg/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 EPA for further clarification and current national policies.

[3] 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.

[4] Any equivalent measurement method which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.

[5] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[6] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[7] Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.

[8] On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

[9] On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m^3 to 12.0 µg/m^3. The existing national 24- hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m^3, as was the annual secondary standard of 15 µg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

[10] To attain the 1-hour national standard, the three-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.

[11] 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 three-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 nonattainment 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.

[12] The 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.

[13] The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/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 nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

[14] In 1989, the 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
µg/m^3 = micrograms per cubic meter
CARB = California Air Resources Board
mg/m^3 = milligrams per cubic meter
ppb = parts per billion
ppm = parts per million
EPA = United States Environmental Protection Agency

Local climatological effects, including wind speed and direction, temperature, inversion layers, precipitation and fog, can exacerbate the air quality in the SJVAB. Wind speed and direction play an important role in dispersion and transport of air pollutants. Wind at the surface and aloft can

disperse pollution by mixing vertically and by transporting it to other locations. For example, in the summer, wind usually originates at the north end of the SJVAB and flows in a south-southeastern direction through the SJVAB, through Tehachapi Pass, into the Southeast Desert Air Basin. In the winter, the wind direction reverses and flows in a north-northwestern direction. In addition to the seasonal wind flow, a sea breeze flows into SJVAB during the day and a land breeze flowing out of the SJVAB at night. The diversified wind flow enhances the pollutant transport capability within SJVAB.

The annual average temperature varies throughout the SJVAB, 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. Temperature data from the Fresno Yosemite International Airport Station (043257), a climatological station within the project area, was assessed to find representative temperature levels for the project area. The monthly average maximum temperature recorded at this station from January 1948 to June 2016 ranged from 54.6°F in January to 98.3°F in July, with an annual average maximum of 76.5°F. The monthly average minimum temperature recorded at this station ranged from 35.3°F in December to 65.7°F in July, with an annual average minimum of 50.4°F.[6] January and December are typically the coldest months and July is typically the warmest month in this area of the SJVAB.

The majority of annual rainfall in the SJVAB 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 SJVAB and along the Sierra Nevada to the east. Average monthly rainfall during that period varied from 0.01 inch in July and August to 2.09 inches in January, with an annual total of 10.89 inches.[7] Patterns in monthly and yearly rainfall totals are predictable due to the recognizable differences in seasons within the valley.

The vertical dispersion of air pollutants in the SJVAB 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 SJVAB, preventing low-pressure systems that might otherwise bring rain and winds that clean the air.

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

6 Western Regional Climate Center. n.d. Fresno Yosemite International Airport (043257), Period of Record Monthly Climate Summary. Website: https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca3257 (accessed May 2025).

7 Western Regional Climate Center. n.d. Fresno Yosemite International Airport (043257), Period of Record Monthly Climate Summary. Website: https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca3257 (accessed May 2025).

carbon monoxide. 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 mixing space.

Surface or radiation inversions form 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 transfers 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.

The 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 the CARB designate air basins where ambient air quality standards are exceeded as "nonattainment" 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."National nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards. 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. Table 4.3.C shows the current attainment designations for the SJVAB.

Table 4.3.C: San Joaquin Valley Air Basin Air Quality Attainment Status

Pollutant	State	Federal
Ozone (1-hour)	Severe/Nonattainment	Not Applicable
Ozone (8-hour)	Nonattainment	Extreme Nonattainment
PM_{10}	Nonattainment	Attainment (Maintenance)
$PM_{2.5}$	Nonattainment	Nonattainment
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: *Ambient Air Quality Standards & Attainment Status - San Joaquin Valley Attainment Status*.(San Joaquin Valley Air Pollution Control District, n.d.).

Air Quality Monitoring Results. Air quality monitoring stations are located throughout the nation and 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 nonattainment depending on whether the regions met the requirements stated in the primary National Ambient Air Quality Standards (NAAQS). 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. 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 nonattainment, due to lack of information, or a conclusion cannot be made with the available data.

The SJVAPCD, together with CARB, maintains ambient air quality monitoring stations in the SJVAB. The air quality monitoring stations closest to the project site are the stations at 4706 East Drummond Street in Fresno, 2482 Foundry Park Avenue in Fresno, and 3727 North First Street in Fresno.

Pollutant monitoring results for years 2020 to 2022 at the Fresno monitoring stations, shown in Table 4.3.D, indicate that air quality in Fresno has generally been moderate. As indicated in the monitoring results, the federal PM_{10} standard was exceeded once in 2020 and an unknown number of times in 2021 and 2022. The State PM_{10} standard was exceeded 25 times in 2020, 20 times in 2021, and 133 times in 2022. The federal $PM_{2.5}$ standard had 48 exceedances in 2020, 36 exceedances in 2021, and 21 exceedances in 2022. The State 1-hour ozone standards were exceeded 11 times in 2020, 9 times in 2021, and 3 times in 2022. The State 8-hour ozone standards were exceeded 27 times in 2020, 41 times in 2021, and 8 times in 2022. The federal 8-hour standards were exceeded 27 times in 2020, 39 times in 2021, and 8 times in 2022. The CO, SO_2, and NO_2 standards were not exceeded in this area during the 3-year period.

Table 4.3.D: Ambient Air Quality in the Project Vicinity

Pollutant	Standard	2020	2021	2022
Carbon Monoxide (CO)[1]				
Maximum 1-hour concentration (ppm)		2.3	2.6	3.4
Number of days exceeded:	State: > 20 ppm	0	0	0
	Federal: > 35 ppm	0	0	0
Maximum 8-hour concentration (ppm)		2.0	2.2	2.5
Number of days exceeded:	State: > 9 ppm	0	0	0
	Federal: > 9 ppm	0	0	0
Ozone (O_3)[2]				
Maximum 1-hour concentration (ppm)		0.123	0.125	0.111
Number of days exceeded:	State: > 0.09 ppm	11	9	3
Maximum 8-hour concentration (ppm)		0.092	0.100	0.089
Number of days exceeded:	State: > 0.07 ppm	27	41	8
	Federal: > 0.07 ppm	27	39	8

Table 4.3.D: Ambient Air Quality in the Project Vicinity

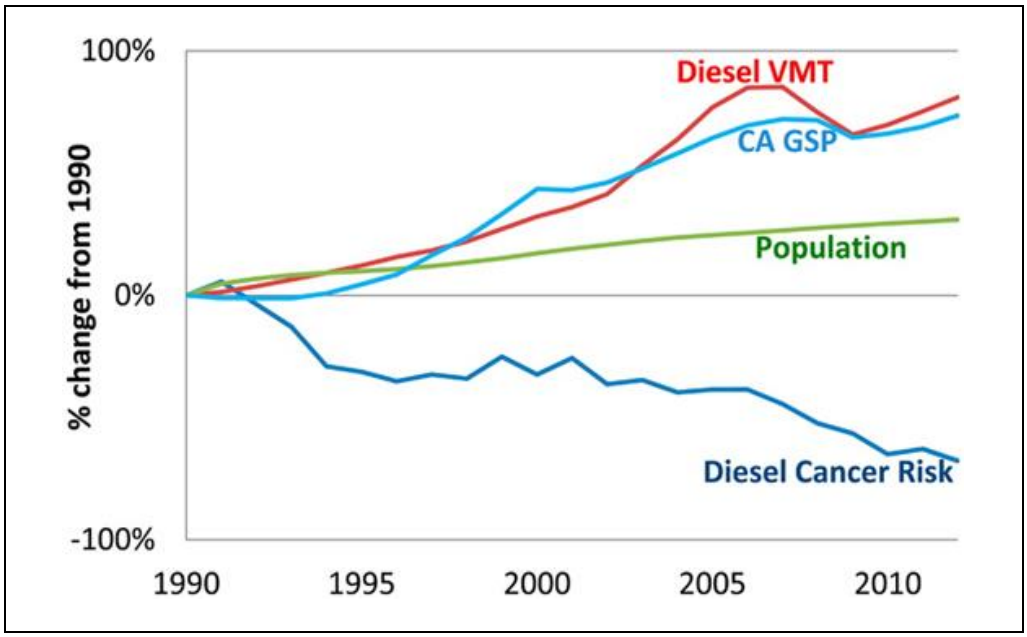
Pollutant	Standard	2020	2021	2022
Coarse Particulates (PM_{10})[2]				
Maximum 24-hour concentration (µg/m^3)		350.4	151.8	166.4
Number of days exceeded:	State: > 50 µg/m^3	25	20	133
	Federal: > 150 µg/m^3	1	ND	ND
Annual arithmetic average concentration (µg/m^3)		59.9	43.8	31.2
Exceeded for the year:	State: > 20 µg/m^3	Yes	Yes	Yes
	Federal: > 50 µg/m^3	Yes	No	No
Fine Particulates ($PM_{2.5}$)[1]				
Maximum 24-hour concentration (µg/m^3)		157.2	85.2	54.6
Number of days exceeded:	Federal: > 35 µg/m^3	48	36	21
Annual arithmetic average concentration (µg/m^3)		20.3	17.2	14.8
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)		0.067	0.065	0.058
Number of days exceeded:	State: > 0.250 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.013	0.011	0.012
Exceeded for the year:	Federal: > 0.053 ppm	No	No	No
Sulfur Dioxide (SO_2)[3]				
Maximum 1-hour concentration (ppm)		0.0162	0.0075	0.0034
Number of days exceeded:	State: > 0.25 ppm	0	0	0
Maximum 24-hour concentration (ppm)		0.0022	0.0027	0.0012
Number of days exceeded:	State: > 0.04 ppm	0	0	0
	Federal: > 0.14 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.00046	0.00043	0.00034
Exceeded for the year:	Federal: > 0.030 ppm	No	No	No

Sources: CARB (2023) and EPA (2024).
[1] Data taken from the 4706 East Drummond Street Monitoring Station.
[2] Data taken form the 2482 Foundry Park Avenue Monitoring Station.
[2] Data taken form the 3727 North First Street Monitoring Station.
µg/m^3 = micrograms per cubic meter
CARB = California Air Resources Board
ND = No data. There were insufficient (or no) data to determine the value.
ppm = parts per million
EPA = United States Environmental Protection Agency

Toxic Air Contaminant Trends. In 1984, the 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.[8] Concentrations of DPM, a key TAC, declined by 68 percent between 1990 and 2012, despite a 31 percent increase in State population and an 81 percent increase in diesel vehicle miles traveled (VMT), as shown on Figure 4.3-1, below.

[8] 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: https://pubs.acs.org/doi/epdf/10.1021/acs.est.5b02766?ref=article_openPDF (accessed May 2025).

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.



Source: Ambient and Emission Trends of Toxic Air Contaminants in California (Propper, Ralph, et al. 2015).

Figure 4.3-1: California Population, Gross State Product (GSP), Diesel Cancer Risk, and Diesel Vehicle Miles Traveled (VMT) Regulatory Context

4.3.2 Regulatory Setting

The EPA and the CARB regulate direct emissions from motor vehicles. The SJVAPCD is the regional agency primarily responsible for regulating air pollution emissions from stationary sources (e.g., factories) and indirect sources (e.g., traffic associated with new development), as well as monitoring ambient pollutant concentrations.

The following discusses the applicable federal, State, regional, and local regulatory framework.

4.3.2.1 Federal Policies and Regulations

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

The FCAA required the EPA to establish primary and secondary NAAQS and required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The FCAA Amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. The EPA has responsibility to review all state SIPs to determine conformity with the mandates of the FCAA and determine if implementation will

achieve air quality goals. If the EPA determines a SIP to be inadequate, a Federal Implementation Plan (FIP) may be prepared for the nonattainment area, which imposes additional control measures. 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.

4.3.2.2 State Policies and Regulations

The CARB is the lead agency for implementing air quality regulations in the State. Key efforts by the State are described below.

California Clean Air Act. In 1988, the California Clean Air Act (CCAA) required that all air districts in the State endeavor to achieve and maintain California Ambient Air Quality Standards for CO, O_3, SO_2, and NO_2 by the earliest practical date. The CCAA provides districts with authority to regulate indirect sources and mandates that air quality districts focus particular attention on reducing emissions from transportation and area-wide emission sources. Each nonattainment district is required to adopt a plan to achieve a 5 percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each nonattainment pollutant or its precursors. A Clean Air Plan shows how a district would reduce emissions to achieve air quality standards. Generally, the State standards for these pollutants are more stringent than the national standards.Legal authority for California to regulate sources of air pollution is found in federal and State law. The CARB is charged with coordinating regional and local efforts to attain and maintain State and nation air quality standards. The CARB has been given authority to regulate many sources that would normally be pre-empted by federal regulations through the issuance of waivers.

Pursuant to these authorities, CARB has adopted the world's most stringent standards for passenger cars, light-duty trucks, and medium-duty vehicles. CARB has also adopted regulations establishing standards for heavy-duty vehicles, offroad vehicles and engines, offroad recreational vehicles, off-road diesel engines and equipment, offroad gasoline and liquefied petroleum gas engines and equipment, and marine pleasure craft. Descriptions of these regulations are provided below.

Low-Emission Vehicle Program. The 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 State Implementation Plan (SIP). In 2012, CARB adopted the LEV III amendments to California's LEV regulations. These amendments include more stringent emission standards for both criteria pollutants and greenhouse gases for new passenger vehicles.**On-Road Heavy-Duty Vehicle Program.** The CARB has adopted standards for emissions from various types of new on-road heavy-

duty vehicles. Section 1956.8, Title 13, California Code of Regulations contains California's emission standards for on-road heavy-duty engines and vehicles, and test procedures.[9] CARB has also adopted programs to reduce emissions from in-use heavy-duty vehicles including the Heavy-Duty Diesel Vehicle Idling Reduction Program, the Heavy-Duty Diesel In-Use Compliance Program, the Public Bus Fleet Rule and Engine Standards, and the School Bus Program and others.In addition, the CARB's Truck and Bus regulation was established to meet federal attainment standards. This regulation requires heavy-duty diesel vehicles that operate in California to reduce TAC emissions from their exhaust. Diesel exhaust is responsible for 70 percent of the cancer risk from airborne toxics. Therefore, by January 1, 2023, nearly all trucks and buses were required to have 2010 or newer model year engines to reduce PM and NO_x emissions. To help ensure that the benefits of this regulation are achieved, starting in 2020, only vehicles compliant with this regulation will be registered by the California Department of Motor Vehicles.[10]

Air Quality Land Use Handbook. The CARB has developed an Air Quality and Land Use Handbook[11] (CARB Handbook), 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, recent 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 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)
- 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. 2021. *On-Road Heavy-Duty Current Standards, Test Procedures and Regulatory Documents*. Website: https://ww2.arb.ca.gov/resources/documents/road-heavy-duty-current-standards-test-procedures-and-regulatory-documents (accessed May 2025).

[10] California Air Resources Board. 2023. *Truck and Bus Regulation.* Website: https://ww2.arb.ca.gov/our-work/programs/truck-and-bus-regulation (accessed May 2025).

[11] California Air Resources Board. 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)

- 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.

4.3.2.3 Regional Policies and Regulations

San Joaquin Valley Air Pollution Control District. The SJVAPCD is responsible for controlling emissions primarily from stationary sources. The SJVAPCD maintains air quality monitoring stations throughout the basin. The SJVAPCD, in coordination with the eight county transportation agencies, is also responsible for developing, updating, and implementing air quality attainment plans for the Air Basin. The SJVAPCD also has roles under CEQA.

Guide for Assessing and Mitigating Air Quality Impacts. The SJVAPCD provides guidance and thresholds for CEQA air quality and greenhouse gas analyses. The result of this guidance as well as State regulations to control air pollution is an overall improvement in the Basin. In particular, the SJVAPCD's GAMAQI states:

The SJVAPCD's Air Quality Attainment Plans include measures to promote air quality elements in county and city general plans as one of the primary means of reducing indirect emissions such as those from land use development projects. The approved General Plan is the primary long range planning document used by cities and counties to direct development. Since air districts have no authority over land use decisions, it is up to cities and counties to ensure that their general plans help achieve air quality goals. Section 65302.1 of the California Government Code requires cities and counties in the San Joaquin Valley to amend appropriate elements of their general plans to include data, analysis, comprehensive goals, policies, and feasible implementation strategies to improve air quality in their next housing element revisions. This was completed for Fresno County with the adoption of the Fresno County General Plan Policy Document, General Plan Update adopted October 3, 2020, which includes an air quality policy section. The City of Fresno's General Plan includes a Resource Conservation and Resilience Element that addresses air quality and greenhouse gas emissions.

The SJVAB is classified nonattainment for ozone, PM_{10}, and $PM_{2.5}$. The SJVAPCD had adopted project level thresholds based on a cumulative contribution of ozone precursors ROG and NO_x of 10 tons per year and thresholds for PM_{10} and $PM_{2.5}$ of 15 tons per year. Although these thresholds are project-specific, a conservative interpretation of this threshold would apply the annual emission thresholds to annual emissions generated during implementation of the approved General Plan. As such, the combined annual emissions of projects during construction and operation would then be compared to the annual threshold. As mentioned, this would provide a conservative approach to assessing project-level impacts through cumulative contributions.

Current 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. The SJVAPCD does not have one single AQMP for criteria pollutants, rather the SJVAPCD address each criteria pollutant with its own Plan. The SJVAPCD has the following AQMPs:

- 2024 Plan for the 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
- 2016 Moderate Area Plan for the 2012 $PM_{2.5}$ standard
- 2016 Plan for the 2008 8-Hour Ozone Standard
- 2013 Plan for the Revoked 1-Hour Ozone Standard
- 2007 PM_{10} Maintenance Plan
- 2004 Revision to the California State Implementation Plan 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 blow.

Ozone Plans. The SJVAPCD's Governing Board approved the 2016 Plan for the 2008 8-Hour Ozone Standard on June 16, 2016. The comprehensive strategy in this plan will reduce NO_x emissions by more than 60 percent between 2012 and 2031 and will bring the San Joaquin Valley into attainment of EPA's 2008 8-hour ozone standard as expeditiously as practicable, no later than December 31, 2031. The SJVAPCD adopted the 2022 Plan for the 2015 8-Hour Ozone Standard on December 15, 2022 to satisfy Clean Air Act requirements and ensures expeditious attainment of the 70 parts per billion 8-hour ozone standard.

Particulate Matter Plans. The SJVAPCD adopted the 2007 PM_{10} Maintenance Plan in September 2007 to assure the SJVAB's continued attainment of the EPA's PM_{10} standard. The EPA designated the valley as an attainment/maintenance area for PM_{10}.

The 2008 $PM_{2.5}$ Plan builds upon the comprehensive strategy adopted in the 2007 Ozone Plan to bring the Basin into attainment of the 1997 national standards for $PM_{2.5}$. The EPA has identified NO_x and SO_2 as precursors that must be addressed in air quality plans for the 1997 $PM_{2.5}$ standards. The 2008 $PM_{2.5}$ Plan is a continuation of the SJVACPD's strategy to improve the air quality in the SJVAB.

The SJVAPCD prepared the 2012 $PM_{2.5}$ Plan to bring the San Joaquin Valley into attainment of the EPA's most recent 24-hour $PM_{2.5}$ standard of 35 $\mu g/m^3$. The CARB approved the SJVAPCD's 2012 $PM_{2.5}$ Plan at a public hearing on January 24, 2013. The plan, approved by

the SJVAPCD Governing Board on December 20, 2012, intended to bring the Valley into attainment of EPA's 1997 $PM_{2.5}$ standard as expeditiously as practicable, but no later than, December 31, 2020. On January 28, 2022, the EPA determined that the Valley attained the 1997 24-hour PM2.5 standard by the attainment date of December 31, 2020.

On November 15, 2018, the SJVAPCD the adopted the 2018 Plan for the 1997, 2006, and 2012 $PM_{2.5}$ Standards. This plan addressed the EPA federal 1997 annual $PM_{2.5}$ standard of 15 µg/m³ and 24-hour $PM_{2.5}$ standard of 65 µg/m³; the 2006 24-hour $PM_{2.5}$ standard of 35 µg/m³; and the 2012 annual $PM_{2.5}$ standard of 12 µg/m³. The 2018 plan demonstrates attainment of the federal $PM_{2.5}$ standards as expeditiously as practicable. Additionally, the SJVAPCD adopted the 2024 Plan for the 2012 Annual $PM_{2.5}$ Standard on June 20, 2024. This Plan addresses the EPA federal 2012 annual $PM_{2.5}$ standard of 12 µg/m³.

Rules and Regulations. The SJVAPCD rules and regulations that may apply to projects that will occur during implementation of the proposed project include but are not limited to:

- **Rule 2260—Registration Requirements for Equipment Subject to California's Oil and Gas Regulation.** The purpose of this rule is to provide a registration mechanism that satisfies the requirements of and will ensure compliance with California's Oil and Gas Regulation.

- **Rule 2280—Portable Equipment Registration.** Portable equipment used at project sites for less than six 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 3156 – Fees for Equipment Subject to Rule 2260 Registration Requirements for Equipment Subject to California's Oil and Gas Regulation.** The purpose of this rule is to recover the District's costs of developing and maintaining an effective registration program, as required by Rule 2260 (Registration Requirements for Equipment Subject to California's Oil and Gas Regulation).

- **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 4601 – Architectural Coatings.** The purpose of this rule is to limit volatile organic compound (VOC) emissions from architectural coatings. Emissions are reduced by limits on VOC content and providing requirements on coatings storage, cleanup, and labeling.

- **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, the 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 material 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 to reduce emissions of NO_x, VOC, and PM. 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 to reduce emissions through onsite mitigation, offsite SJVAPCD administered projects, or a combination of the two. Compliance with SJVAPCD Rule 9510 reduces emissions impacts through incorporation of onsite measures as well as payment of an offsite fee that funds emission reduction projects in the Air 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 on residential areas and other sensitive receptors, such as hospitals, day-care 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. Although 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 the SJVAPCD.

Two situations create a potential for odor impact. The first occurs when a new odor source is near an existing sensitive receptor. The second occurs when a new sensitive receptor locates 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 are shown in Table 4.3.E.

Table 4.3.E: Screening Levels for Potential Odor Sources

Odor Generator	Distance
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.

Community Emissions Reductions Program: Assembly Bill 617. AB 617 requires the 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.

South Central Fresno and the City of Shafter are the first Valley communities selected by the California Air Resources Board for investment of additional resources under AB 617. The SJVAPCD has established a steering committee for each of these communities comprising community residents, businesses, community advocates, and government representatives to assist in the development and implementation of community air monitoring and emission reduction programs. Fresno's CERP was adopted by CARB and is now in the implementation phase.

The South Central Fresno CERP identifies sources of pollution that are of particular concern to the community and possible strategies for reducing pollution impacts from these sources, including incentive funding measures, public engagement strategies, enforcement strategies, regulatory strategies, and strategies that will be completed in partnership with other agencies and local

organizations. The CERP anticipates investing $44.3 million in emission reduction incentives for cleaner cars and trucks, and a variety of other clean air projects in the South Central Fresno area. Additional measures have been developed as part of the CERP to reduce exposure to air pollution for sensitive receptors, including schools and residences. These efforts are projected to achieve approximately 278 tons of $PM_{2.5}$ reductions and 1,662 tons of NO_x reductions as well as significant reductions in air toxics emissions in the community, particularly with respect to diesel particulate matter from mobile sources, the main contributor to community air toxics health risk.

Fresno Council of Governments. Fresno Council of Governments (FCOG) is responsible for regional transportation planning in Fresno county and participates in developing mobile source emission inventories used in air quality attainment plans.

Regional Transportation Plan/Sustainable Communities Strategy. Regional Transportation Plans (RTPs) are State-mandated plans that identify long-term transportation needs for a region's transportation network. Fresno Council of Governments' (Fresno COG) 2022 RTP charts the long-range vision of regional transportation in Fresno county through the year 2046. The RTP identifies existing and future transportation related needs, while considering all modes of travel, analyzing alternative solutions, and identifying priorities for the anticipated available funding for the 1,100 projects and multiple programs included within it. 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 a Sustainable Communities Strategy (SCS) as an integrated element of the RTP that is to be updated every four years. The SCS is intended to show how integrated land use and transportation planning can lead to lower greenhouse gas (GHG) emissions from autos and light trucks. Fresno COG has included the SCS in its 2022 RTP.

Transportation Conformity. FCOG 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 State Implementation Plan, which is to meet the NAAQS. Meeting the NAAQS often requires emissions reductions from mobile sources. According to the Clean Air Act, 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. The FCOG 2019 Conformity Analysis determined that 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 such, the conformity tests are satisfied.

4.3.2.4 Local Policies and Regulations

City of Fresno General Plan. The City of Fresno's General Plan Resources Conservation and Resilience Element includes objectives and policies that work to achieve and maintain compliance with State and federal air quality standards for criteria pollutants. Several additional General Plan elements include objectives and policies that foster reduction in vehicle miles traveled and commensurate reductions in criteria pollutants as well as greenhouse gas emissions. The following General Plan goals and policies would be applicable to the proposed project:

Urban Form, Land Use, and Design Element

Policy UF-12-e: Access to Activity Centers. Promote adoption and implementation of standards supporting pedestrian activities and bicycle linkages from surrounding land uses and neighborhoods into Activity Centers and to transit stops. Provide for priority transit routes and facilities to serve the Activity Centers.

Objective UF-14: Create an urban form that facilitates multi-modal connectivity.

Commentary: Multi-modal connectivity creates the opportunity for people to travel through a variety of modes of transportation, including biking, walking, driving, and using public transit.

Policy UF-14-a: Design Guidelines for Walkability. Develop and use design guidelines and standards for a walkable and pedestrian-scaled environment with a network of streets and connections for pedestrians and bicyclists, as well as transit and autos.

Commentary: These guidelines will highlight how to achieve these design ideas and avoid barriers to access, such as:

- Walls and fences that separate related uses or isolate neighborhoods;
- Over reliance on cul-de-sacs and dead end streets that cut off access within neighborhoods;
- Disconnected bike and pedestrian paths;
- Wide streets that lack pedestrian support, such as sidewalks, median strips, and a landscaped strip that separates pedestrians from the street;
- Street front parking lots that separate pedestrian from commercial operations;
- Retail centers that are exclusively auto-oriented;
- Transit stops that are not easily accessible from an individual's starting point and destination; and
- Long blocks that discourage walking.

Objective LU-2: Plan for infill development that includes a range of housing types, building forms, and land uses to meet the needs of both current and future residents.

Policy LU-2-a: Infill Development and Redevelopment. Promote development of vacant, underdeveloped, and re-developable land within the City Limits where urban services are available by considering the establishment and implementation of supportive regulations and programs.

Policy LU-8-b: Access to Public Facilities. Ensure that major public facilities and institutions have adequate multi-modal access and can be easily reached by public transit.

Resource Conservation and Resilience Element

Policy RC-4-b: Conditions of Approval. Develop and incorporate air quality maintenance requirements, compatible with Air Quality Attainment and Maintenance Plans, as conditions of approval for General Plan amendments, community plans, Specific Plans, neighborhood plans, Concept Plans, and development proposals.

Policy RC-4-c: Evaluate Impacts with Models. Continue to require the use of computer models used by SJVAPCD to evaluate the air quality impacts of plans and projects that require such environmental review by the City.

Policy RC-4-f: Municipal Operations and Fleet Actions. Continue to control and reduce air pollution emissions from vehicles owned by the City and municipal operations and facilities by undertaking the following:

- Expand the use of alternative fuel, electric, and hybrid vehicles in City fleets.
- Create preventive maintenance schedules that will ensure efficient engine operation.
- Include air conditioning recycling and charging stations in the City vehicle maintenance facilities, to reduce Freon gases being released into the atmosphere and electrostatic filtering systems in City maintenance shops, when feasible or when required by health regulations.
- Use satellite corporation yards for decentralized storage and vehicle maintenance.
- Convert City-owned emergency backup generators to natural gas fuels whenever possible, and create an advanced energy storage system.

Policy RC-4-g: FAX Actions. Continue to improve Fresno Area Express (FAX) bus transit system technical performance, reduce emission levels, streamline system operations, and implement BRT where supportive land uses are proposed by Figure LU-1: Land Use Diagram.

Objective RC-8: Reduce the consumption of non-renewable energy resources by requiring and encouraging conservation measures and the use of alternative energy sources.

Policy RC-8-c: Energy Conservation in New Development. Consider providing an incentive program for new buildings that exceed California Energy Code requirements by fifteen percent.

Mobility and Transportation Element.

Objective MT-1: Create and maintain a transportation system that is safe, efficient, provides access in an equitable manner, and optimizes travel by all modes.

Policy MT-1-a: Transportation Planning Consistent with the General Plan. Continue to review local, regional and inter-regional transportation plans and capital improvement plans, and advocate for the approval and funding of State highway and rail projects, consistent with the General Plan and discourage projects inconsistent with the General Plan.

Policy MT-1-g: Complete Streets Concept Implementation. Provide transportation facilities based upon a Complete Streets concept that facilitates the balanced use of all viable travel modes (pedestrians, bicyclists, motor vehicle and transit users), meeting the transportation needs of all ages, income groups, and abilities and providing mobility for a variety of trip purposes, while also supporting other City goals.

Implementation actions will include:

- Meeting the needs of all users within the street system as a whole; each individual street does not need to provide all modes of travel, but travel by all modes must be accommodated throughout the Planning Area;
- Continuing to adopt refined street cross-section standards as appropriate in response to needs identified;
- Encouraging conversion of one-way streets to two-way streets to improve location circulation, access, and safety;
- Considering the impact of streets on public health by addressing storm water runoff quality, air quality, and water conservation among other factors; and
- Adhering to the water efficient landscape standards adopted by the City for median and streetscape plantings and irrigation methods.

Policy MT-1-j: Transportation Improvements Consistent with Community Character. Prioritize transportation improvements that are consistent with the character of surrounding neighborhoods and supportive of safe, functional and Complete Neighborhoods; minimize negative impacts upon sensitive land uses such as residences, hospitals, schools, natural habitats, open space areas, and historic and cultural resources.

- In implementing this policy, the City will design improvements to:

- Facilitate provision of multi-modal transportation opportunities;
- Provide added safety, including appropriate traffic calming measures;
- Promote achievement of air quality standards;
- Provide capacity in a cost effective manner; and
- Create improved and equitable access with increased efficiency and connectivity.

Objective MT-4: Establish and maintain a continuous, safe, and easily accessible bikeways system throughout the metropolitan area to reduce vehicle use, improve air quality and the quality of life, and provide public health benefits.

Policy MT-4-b: Bikeway Improvements. Establish and implement property development standards to assure that projects adjacent to designated bikeways provide adequate right-of-way and that necessary improvements are constructed to implement the planned bikeway system shown on Figure MT-2 to provide for bikeways, to the extent feasible, when existing roadways are reconstructed; and alternative bikeway alignments or routes where inadequate right-of-way is available.

Policy MT-4-c: Bikeway Linkages. Provide linkages between bikeways, trails and paths, and other regional networks such as the San Joaquin River Trail and adjacent jurisdiction bicycle systems wherever possible.

Policy MT-4-d: Prioritization of Bikeway Improvements. Prioritize bikeway components that link existing separated sections of the system, or that are likely to serve the highest concentration of existing or potential cyclists, particularly in those neighborhoods with low vehicle ownership rates, or that are likely to serve destination areas with the highest demand such as schools, shopping areas, recreational and park areas, and employment centers.

Policy MT-4-e: Minimum Bike Lane Widths. Provide not less than 10 feet of street width (five feet for each travel direction) to implement bike lanes for designated Class II bikeways along roadways. Strive for 14 feet of street width (seven feet for each travel direction) for curbside bike lanes where right-of-way is available.

Policy MT-4-i: Bicycling and Public Transportation. Promote the integration of bicycling with other forms of transportation, including public transit. Continue to provide bike racks or space for bicycles on FAX buses.

Objective MT-5: Establish a well-integrated network of pedestrian facilities to accommodate safe, convenient, practical, and inviting travel by walking, including for those with physical mobility and vision impairments.

Policy MT-5-a: Sidewalk Development. Pursue funding and implement standards for development of sidewalks on public streets, with priority given to meeting the needs of persons with physical and vision limitations; providing safe routes to school; completing pedestrian improvements in established neighborhoods with lower vehicle ownership rates; or providing pedestrian access to public transportation routes.

Policy MT-5-b: Sidewalk Requirements. Assure adequate access for pedestrians and people with disabilities in new residential developments per adopted City policies, consistent with the California Building Code and the Americans with Disabilities Act.

Policy MT-5-d: Pedestrian Safety. Minimize vehicular and pedestrian conflicts on both major and non-roadways through implementation of traffic access design and control standards addressing street intersections, median island openings and access driveways to facilitate accessibility while reducing congestion and increasing safety. Increase safety and accessibility for pedestrians with vision disabilities through the installation of Accessible Pedestrian Signals at signalized intersections.

Objective MT-6: Establish a network of multi-purpose pedestrian and bicycle paths, as well as limited access trails, to link residential areas to local and regional open spaces and recreation areas and urban Activity Centers in order to enhance Fresno's recreational amenities and alternative transportation options.

Policy MT-6-g: Path and Trail Development. Require all projects to incorporate planned multi-purpose path and trail development standards and corridor linkages consistent with the General Plan, applicable law and case-by-case determinations as a condition of project approval.

Commentary: This should be done pursuant to Figure MT-2: Paths and Trails, and the adopted ATP, as may amended.

Policy MT-6-i: Path and Trail Design Standards. Designate and design paths and trails in accordance with design standards established by the City that give consideration to all path and trail users (consistent with design, terrain and habitat limitations) and provide for appropriate widths, surfacing, drainage, design speed, barriers, fences, signage, visibility, intersections, bridges, and street cleaning.

Commentary: Trail improvements and characteristics (e.g. accessibility, continuity, width and location, and surface treatment) within the Fancher Creek water conveyance and riparian corridor, and other alignments immediately adjacent to existing or planned residential land, will be determined by the City Council after providing for appropriate public participation.

Policy MT-6-j: Variety in Path and Trail Design. Provide for different levels and types of usable pedestrian and bicycle corridors, including broad, shaded sidewalks; jogging paths; paved and all terrain bicycle paths; through-block passageways; and hiking trails. Where a designated multi-purpose path route is adjacent to a public right-of-way which

accommodates bike lane, allow for flexibility in path design, so that bike lanes may be substituted for the bicycle component of the multi-purpose path where it is safe and appropriate to do so.

Commentary: This should be done pursuant to Figure MT-2: Paths and Trails, and the adopted ATP, as may amended.

Policy MT-6-l: Environmentally Sensitive Path and Trail Design. Develop paths and trails with minimum environmental impact by taking the following actions:

- Surface paths and trails with materials that are conducive to maintenance and safe travel, choosing materials that blend in with the surrounding area;
- Design paths and trails to follow contour lines where the least amount of grading (fewest cuts and fills) and least disturbance of the surrounding habitat will occur;
- Beautify path and trail rights-of-way in a manner consistent with intended use, safety, and maintenance;
- Use landscaping to stabilize slopes, create physical or visual barriers, and provide shaded areas; and
- Preserve and incorporate native plant species into the landscaping.

Objective MT-8: Provide public transit options that serve existing and future concentrations of residences, employment, recreation and civic uses and are feasible, efficient, safe, and minimize environmental impacts.

Commentary: Public transit services must meet accessibility standards for individuals with disabilities as required by applicable state and federal regulations.

Policy MT-8-a: Street Design Coordinated with Transit. Coordinate the planning, design, and construction of the major roadway network with transit operators to facilitate efficient direct transit routing throughout the Planning Area.

Commentary: Neighborhoods with circuitous and discontinuous streets are more difficult for public transit to serve efficiently than those with consistently spaced linear or semi-grid patterns.

Policy MT-8-d: Coordination of Transportation Modes. Plan, design, and implement transportation system improvements promoting coordination and continuity of transportation modes and facilities, such as shared parking or park and ride facilities at Activity Centers.

4.3.3 Impacts and Mitigation Measures

The following section presents a discussion of the impacts related to air quality that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds to determine if an impact is significant. The latter part of this section presents the impacts associated with implementation of the proposed project and the recommended mitigation measures. Mitigation measures are recommended, as appropriate, for significant impacts to eliminate or reduce them to a less-than-significant level. Cumulative impacts are also addressed.

4.3.3.1 Significance Criteria

Based on CEQA Guidelines Appendix G, the proposed project would have a significant impact on air quality if it would:

a. Conflict with or obstruct implementation of the applicable air quality plan;

b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project is nonattainment under an applicable federal or state ambient air quality standard;

c. Expose sensitive receptors to substantial pollutant concentrations; or

d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Regional Emissions Thresholds. A threshold of significance is defined by the SJVAPCD in its GAMAQI[12] as an identifiable quantitative, qualitative, or performance level of a particular environmental effect. Non-compliance with a threshold of significance means the effect will normally be determined to be significant. Compliance with a threshold of significance means the effect normally will be determined to be less than significant. 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.

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: Guidance for Assessing and Mitigating Air Quality Impacts (SJVAPCD, March 19, 2015).

The emissions thresholds in the SJVAPCD GAMAQI were established based on the attainment status of the air 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

[12] San Joaquin Valley Air Pollution Control District, 2015, op. cit.

safety, these emission thresholds are regarded as conservative and would overstate an individual project's contribution to health risks.

Health Risk Thresholds. Both the State and federal governments have established health-based ambient air quality standards (AAQS) for seven air pollutants. For other 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 maximum exposed individual (MEI) contracting cancer as a result of exposure to TACs over a period of 30 years for adults and 9 years for children in residential locations, 350 days per year. The SJVAPCD's *Update to the District's Risk Management Policy to Address the OEHHA Revised Risk Assessment Guidance Document* states that emissions of TACs are considered significant if an 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. The chronic HI calculations include multi-pathway consideration when applicable. The 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. The 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.

4.3.3.2 Project Impacts

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

AIR-1 The project would not conflict with or obstruct implementation of the applicable air quality plan.

The proposed project was assessed to determine if the impacts from future transportation improvement projects included under the proposed VMT Reduction Program would conflict with or obstruct the implementation of the applicable attainment plan. The VMT Reduction Program includes a broad range of VMT-reducing transportation improvements that could be funded through the proposed program. The pace of development within Fresno and timing for development of VMT-reducing improvements cannot be determined at this time. Therefore, construction-related

emissions associated with future transportation improvements that may occur at any one time are speculative and cannot be accurately determined at this stage of the planning process.

Therefore, it is necessary to assess the project's consistency with the SJVAPCD's Air Quality Attainment Plans as well as the General Plan and growth forecasts. The purpose of the consistency finding is to determine if a project is inconsistent with the assumptions and objectives of the regional air quality plans, and thus, if it would interfere with the region's ability to comply with federal and State air quality standards. It is important to note that even if a project is found consistent it could still have a significant impact on air quality under CEQA. Consistency with plans means that a project is consistent with the goals, objectives, and assumptions in the respective plan to achieve the Federal and State air quality standards.

The proposed VMT Reduction Program would be consistent with the General Plan as it would preserve acceptable air quality and would improve a transportation network that is sensitive to environmental issues, such as air quality. The proposed project would not affect Fresno's growth projections because the proposed project does not include any development that would introduce population or substantial employment in Fresno. As such, the proposed project would not exceed the housing and population growth forecasts for Fresno.

The project's short-term construction and long-term operational emissions impacts would be less than significant, and the proposed project, and future projects implemented under the proposed project would be required to comply with all SJVAPCD rules and regulations to improve air quality. Therefore, the proposed project would not conflict with or obstruct implementation of the applicable air quality plan. A less than significant impact would occur.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

AIR-2 The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project is nonattainment under an applicable federal or state ambient air quality standard.

The intent of the proposed project is to streamline the SB 743 compliance process for development projects while funding future VMT improvement projects to reduce VMT throughout Fresno. As identified in Table 3.A, Potential VMT-Reducing Improvements, future transportation improvements would include, but are not limited to new buses, increased bus service, pedestrian improvements, and bikeways.

The SJVAPCD has adopted project level quantitative thresholds for ozone precursors reactive organic gases ROG and NO_x of 10 tons per year and recommends quantitative thresholds for PM_{10} and $PM_{2.5}$ of 15 tons per year. Although these thresholds are intended for use on individual development projects, no other quantitative plan level threshold has been adopted.

Construction-related emissions are described as short-term or temporary in duration and have the potential to represent a significant impact with respect to air quality. The proposed improvements

would likely be small-scale transportation improvement projects in Fresno. The future construction-related activities associated with the proposed VMT Reduction Program in Fresno would result in emissions of criteria air pollutants and precursors from site preparation (e.g., excavation, grading, and clearing); exhaust from off-road equipment, material delivery trucks, and worker commute vehicles; vehicle travel on roads; and other miscellaneous activities (e.g., asphalt paving).

The proposed VMT Reduction Program would provide a broad range of VMT-reducing transportation improvements that could be funded through the program. The pace of development within Fresno and timing for development of VMT-reducing improvements cannot be determined at this time. Therefore, construction-related emissions associated with future transportation improvements that may occur at any one time are speculative and cannot be accurately determined at this stage of the planning process. The construction activities would occur throughout Fresno as funding becomes available. Although the rate of VMT-reducing improvement projects cannot be determined, each individual improvement project would be small-scale with a limited construction duration, and it is not anticipated that such improvements would have the capacity to exceed SJVAPCD project level thresholds. Furthermore, all future individual VMT-reducing improvement projects within Fresno, including those implemented as part of development projects, would require separate environmental review under CEQA (e.g., preparation of a Categorical Exemption, Mitigated Negative Declaration, or Environmental Impact Report) and be analyzed at a project-specific level.

Construction activities associated with these individual VMT-reducing improvement projects result in an increase in criteria pollutants. However, these construction-related emissions would be analyzed on a case-by-case basis. All transportation improvements, including those implemented as part of development projects, would be required to undergo separate environmental review under CEQA to evaluate project-specific impacts and any required mitigation. As a result, a less-than-significant impact related to criteria pollutants would occur.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

AIR-3 The project would not expose sensitive receptors to substantial pollutant concentrations.

The analysis below addresses exposure to sensitive receptors from both stationary sources and mobile sources. Proposed projects associated with the proposed VMT Reduction Program that emit TACs would require review under SJVAPCD rules and regulations or review under CEQA, especially if located near sensitive receptors. 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 the CARB and SJVAPCD, exposure to elevated levels of TACs contribute to elevated health risks. The ARB recommends that buffers should be included to avoid exposure of sensitive receptors to TAC sources. Risk levels drop dramatically beyond 500 feet from a source due to dispersion of emissions with distance.

It is important to note that CEQA generally does not require analysis or mitigation of the impact of existing environmental conditions on a project, including a project's future users or residents.

However, as with other laws and regulations enforced by other agencies that protect public health and safety, the City, as the lead agency, has authority other than CEQA to institute policies that aim to protect public health and safety.

Implementation of the proposed VMT Reduction Program would not directly generate operational emissions as the transportation improvements funded by the proposed program would result in a net decrease in VMT throughout and Fresno associated mobile source operational emissions. In alignment with SB 743, the project would allow implementation of TDM strategies and VMT-reducing improvements that contribute towards reducing Citywide VMT, resulting in beneficial operational air quality impacts. Additionally, the proposed program itself would not involve any building construction or land uses that may generate stationary or mobile source emissions. As a result, in a less-than-significant impact related to exposing sensitive receptors to substantial operation-related pollutant concentrations.

Stationary sources of TACs within Fresno include the stationary sources permitted by the SJVAPCD. Emissions of TACs would be controlled through permits issued by SJVAPCD and would be subject to further study and health risk assessment prior to the issuance of any necessary air quality permits. Since it is not possible to determine the amount of TAC concentrations at the time of this analysis, it is not possible to calculate the risks for a particular health effect within the Planning Area. The proposed project is a programmatic project and until specific future projects are proposed, the associated TAC emissions cannot be determined or modeled at this time. Future development projects subject to environmental review under CEQA would be required to analyze potential TAC emissions and include mitigation as appropriate.

As noted above, implementation of the propose VMT Reduction Program would not result in long-term operation of any stationary sources of TACs and would have a decrease in mobile source emissions as the project would cause a decrease in Citywide VMT. However, construction of the various potential transportation improvements may result in temporary increases in emissions of diesel particulate matter (DPM) associated with the use of off-road diesel equipment. However, potential increase in pollution concentrations would be analyzed on a case-by-case basis. All transportation improvements, including those implemented as part of development projects, would be required to undergo separate environmental review under CEQA to evaluate project-specific impacts and any required mitigation. As a result, a less-than-significant impact related to substantial pollution concentrations would occur.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

AIR-4 The project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

The city of Fresno 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.

The proposed VMT Reduction Program does not propose any demolition or development activities within Fresno. Individual transportation improvements within the Fresno would occur in incremental phases over time, based largely on available funding. Transportation improvements may also occur as part of development projects (e.g., improvements along a project frontage). The phasing and exact details of each improvement would be evaluated by the City on a case-by-case basis as the funding becomes available. Construction activities associated with these improvements may generate detectable odors from heavy-duty equipment exhaust and paving. However, these construction-related odors would be analyzed on a case-by-case basis. All transportation improvements, including those implemented as part of development projects, would be required to undergo separate environmental review under CEQA to evaluate project-specific impacts and any required mitigation. In addition, the improvements within Fresno would be required to comply with the California Code of Regulations, Title 13, Sections 2449(d)(3) and 2485, which minimizes the idling time of construction equipment either by shutting it off when not in use or by reducing the time of idling to no more than five minutes. This would further reduce the detectable odors from heavy-duty equipment exhaust. As a result, a less-than-significant impact related to odors would occur.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

4.3.3.3 Cumulative Impacts

AIR-5 The project, in combination with other projects, would not contribute to a significant cumulative impact related to air quality.

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. The cumulative study area analyzed for potential air quality impacts is the Basin. Each project in the Basin is required to comply with SJVAPCD rules and regulations and is subject to independent review.

The Basin is currently designated as a nonattainment area for the federal ozone standard and $PM_{2.5}$ standard and as a nonattainment area for the State ozone, PM_{10}, and $PM_{2.5}$ standard. Thus, the Basin has not met the federal and State standards for these air pollutants. Future development that may occur under the approved General Plan would contribute criteria pollutants to the area during project construction and operation. However, future development under the proposed VMT Reduction Program project would be required to comply with CARB motor vehicle standards, SJVAPCD regulations from stationary sources and architectural coatings, Title 24 energy efficiency standards, and the approved General Plan and policies. While the approved General Plan policies and regulations are intended to reduce impacts associated with air quality violations, specific standard conditions for future project developments that implement these policies and regulations are identified as mitigation measures to ensure that the intended environmental protections are achieved. Implementation of the approved General Plan could contribute to an increase in frequency or severity of air quality violations. However, compared to existing conditions, implementation of the proposed VMT Reduction Program would result in a decrease in Citywide

VMT and associated mobile source operational emissions. Therefore, cumulative construction and operational impacts associated with implementation of the proposed VMT Reduction Program would be considered less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

4.4 BIOLOGICAL RESOURCES

This section describes the existing biological resources of the project area and evaluates the potential impacts associated with the proposed project on biological resources, including vegetation communities, special-status plant and wildlife species and their associated habitats, and special-status natural communities, including riparian communities and wetlands.

4.4.1 Existing Environment Setting

The study area for project impacts is the Planning Area for the City of Fresno.

4.4.1.1 Existing Conditions

Vegetation Communities. The following discussion of vegetation communities known to occur in the Planning Area is based on a review of information in the California Natural Diversity Database (CNDDB) in 2025.

- Annual Grassland
- Barren
- Deciduous Orchard
- Irrigated Row and Field Crops
- Lacustrine
- Pasture
- Riverine
- Urban
- Valley Foothill Riparian
- Valley Oak Woodland
- Northern Claypan Vernal Pool

The majority of the Planning Area consists of previously disturbed urban/developed areas containing residential, commercial and industrial development and associated roads and infrastructure.

For the purposes of this evaluation, vegetation communities are classified according to the CDFW's Natural Communities List and cross-referenced to descriptions provided in Holland's Preliminary Descriptions of the Terrestrial Natural Communities of California and Oberbauer's update to those descriptions.[1] The CDFW does not maintain narrative description of these vegetation communities, so the descriptions provided below have been adapted from Holland and Oberbauer.

The vegetation maps produced for this evaluation do not imply regulatory jurisdictional determinations under Section 404 of the Federal Clean Water Act, Section 10 of the Rivers and Harbors Act, or Section 1600 of the California Fish and Game Code (Lake and Streambed Alteration Program), or the lack thereof. Such determinations usually require a site visit to assess the current conditions on the ground and to map boundaries. Similarly, terms such as "riparian" and "wetland" in the vegetation keys and type descriptions may inform, but do not imply or assert, regulatory jurisdiction or the lack thereof.

Annual Grassland. The Planning Area contains annual grassland, located primarily along the northern and western borders of the Planning Area boundary. Annual grassland in the Planning Area includes a mix of native and non-native, annual grasses, which often occur in association

[1] Holland, R.F. 1986 (updated 1996). Preliminary Descriptions of the Terrestrial Natural Communities of California. Non-game Heritage Program. California Department of Fish and Game. Sacramento, California.

with ruderal herbs and occasional native annual forbs. The dominant plant species within the annual grassland vegetation community typically include black needlegrass (*Nasella* sp.), fescue (*Vulpia* sp.), brome (*Bromus* sp.), and wild oats (*Avena* spp.), with mustard (*Brassica nigra*), dove weed (*Eremocarpus setigerus*), and poppy (*Eschscholzia* sp.). These grasses germinate with the fall rains, grow during the winter and spring, and wither in the early summer.

Special-status species with a potential to occur in the Planning Area and associated with annual grassland habitats include:

- American Badger
- Burrowing owl
- California horned lark
- California linderiella
- California tiger salamander
- Fresno kangaroo rat
- Pallid bat
- San Joaquin kit fox
- San Joaquin pocket mouse
- Swainson's hawk
- Western mastiff bat
- Western spadefoot
- Hartweg's golden sunburst
- Caper-fruited tropidocarpum
- California jewel-flower
- Dwarf downingia
- Spiny-sepaled button-celery
- Succulent owl's clover
- Greene's tuctoria

Barren. Barren lands include areas in which the vegetative cover comprises less than 10 percent of the surface area (disregarding natural rock outcrops) and where there is evidence of soil surface disturbance and compaction from previous legal human activity, and/or areas in which the vegetative cover is greater than 10 percent, soils surface compaction is evident, and building foundations and debris are present (e.g., irrigation piping, fencing, old wells, abandoned farming or mining equipment) from legal activities (as opposed to illegal dumping). Barren land occurs in the northwest corner of the Planning Area, adjacent to the San Joaquin River corridor. Vegetation within barren land has a high predominance of non-native or weedy species that are indicators of soil disturbance, including Russian thistle (*Salsola tragus*), telegraph weed (*Heterotheca grandiflora*), horehound (*Marrubium vulgare*), and sow thistle (*Sonchus oleraceus*), and a sub-dominance of non-native grasses. Barren land only provides moderately suitable habitat for one special-status species, California horned lark.

Deciduous Orchard. Deciduous orchard communities are located along the western, southern and eastern margins of the Planning Area, where there are flat alluvial soils on valley floors, rolling foothills and relatively steep slopes. Orchard communities are typically comprised of artificially irrigated habitat dominated by one, sometimes several, tree or shrub species planted for cultivation. Trees are typically low and bushy, and the understory is open, with little groundcover. In the Planning Area, deciduous orchards include a variety of fruit trees (e.g., apples, apricots, cherries, citrus, kiwi, peaches, nectarines, pears, persimmons, plums, pluots, pomegranates, etc.) and/or nut trees and shrubs (e.g., almonds, olives, pistachios, walnuts, etc.). Understory species generally consist of short native and non-native grasses and other herbaceous species.

Deciduous orchard is a relatively disturbed vegetation community and contains very little groundcover and planted trees that provide moderately suitable habitat for only one special-status species, California horned lark.

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

Since irrigated row and field crops contain active agriculture, and are therefore significantly disturbed with altered substrates, this vegetation community does not provide suitable habitat for any special-status plant species and limited habitat for special-status wildlife species. Special-status wildlife species with a potential to occur within this vegetation community include:

- burrowing owl
- California horned lark
- Swainson's hawk

Lacustrine. Lacustrine communities consist of standing/open waters in topographic depressions (i.e., lakes) or dammed river channels. Lacustrine communities lack persistent emergent vegetation, but may have submerged or floating-leaved aquatic vegetation. Generally, lacustrine systems are surrounded by hydrophytic plants, grasses, and trees. Lacustrine systems are located near the San Joaquin River, within the isolated southwestern most portion of the Planning Area, and within the isolated basins and ponds that are interspersed throughout the city. Special-status species with a potential to occur within a lacustrine community include:

- western spadefoot
- tricolored blackbird
- hoary bat
- spotted bat
- western pond turtle
- dwarf downingia
- Sanford's arrowhead

Pasture. Pasture lands occur along the northwest corner of the Planning Area, near deciduous orchards and other irrigated row and field crops. Pasture lands form a dense habitat with nearly 100 percent cover; usually monoculture crops are planted in these areas, which are irrigated, artificially seeded, and frequently maintained. Characteristic species include non-native grasses such as oat (Avena sp.), bermuda grass (Cynodon sp.), barley (Hordeum sp.), Sorghum grass, as well as clover (Medicago sp.). Often times, this land contains significant areas of bare ground due to livestock grazing and movement across acres of this vegetation community. Special-status species with a potential to occur within this vegetation community include:

- burrowing owl
- California horned lark
- San Joaquin kit fox
- Swainson's hawk

Riverine. Riverine systems consist of linear aquatic communities of flowing, non-tidal waters with a distinct channel and little to no persistent emergent vegetation. Riverine systems may also include areas with abundant submerged or floating-leaved aquatic vegetation. Vegetation communities abutting riverine systems tend to be dominated by trees, shrubs, persistent emergent vegetation, and/or emergent mosses and lichens. This vegetation community occurs near or depends upon a nearby freshwater source or areas with fresh water flow during all or part of the year. Riverine communities are predominately located along the northern boundary, within the San Joaquin River system. Special-status species that are known to occur in riverine habitat include:

- western yellow-billed cuckoo
- tricolored blackbird
- hardhead
- hoary bat
- spotted bat
- western pond turtle
- California satintail

Urban. Urban (or developed) lands have been constructed upon or otherwise covered with a permanent, unnatural surface (e.g., concrete, asphalt, buildings, homes, etc.) or large amount of debris or other materials. The Planning Area consists predominately of urban areas, which are concentrated in the central portion of the Planning Area, within the Fresno city limits. Urban land is less common within the rural and agricultural portions of the Planning Area. Urban land provides poor quality habitat for any special-status species. Special-status species are unlikely to occur within this vegetation community.

Valley Foothill Riparian. Valley foothill riparian communities occur primarily within mature riparian forests along the San Joaquin River corridor. Valley foothill riparian communities typically have a 20 to 80 percent canopy cover with trees that are winter deciduous. Wild grape (*Vitis californica*) often provides 30 to 50 percent ground cover. There is very little herbaceous understory with the exception of disturbed openings in the canopy cover. The understory typically consists of leaf-litter, fallen limbs, and is often impenetrable for smaller herbaceous plants. Tree canopy species within this community typically includes cottonwood (*Populus fremontii*), California sycamore (*Platanus racemosa*), and valley oak (*Quercus lobata*). Subcanopy species often includes white alder (*Alnus rhombifolia*), boxelder (*Acer negundo*), and Oregon ash (*Fraxinus latifolia*). Typical understory shrub layer plants include wild grape, California blackberry (*Rubus ursinus*), blue elderberry (*Sambucus caerulea*), poison oak (*Toxicodendron diversilobum*), and willows (*Salix sp.*). Special-status species with a potential to occur within valley foothill riparian habitat includes:

- western spadefoot
- western yellow-billed cuckoo
- California horned lark
- hoary bat
- spotted bat
- pallid bat
- western mastiff bat
- valley elderberry longhorn beetle
- California satintail

Valley Oak Woodland. The Valley Oak Woodland is a special-status natural community. The Planning Area includes valley oak woodland located primarily within the San Joaquin River corridor. Valley oak woodland communities vary from open-canopy savanna-like woodlands to partially closed canopy woodlands but mostly consist of winter-deciduous, broad-leaved species. Valley oak (*Quercus lobata*), a winter-deciduous species and California's largest broad-leaved tree, is usually the only tree species present, although blue oak (*Q. douglasii*) may also be present. Mature valley oaks can reach heights of 50 to 100 feet (about 15 to 35 meters). Valley oak woodlands typically occur on deep, well-drained alluvial soils in valley bottoms that have a higher summer moisture content. This community intergrades with valley oak riparian near rivers and with blue oak woodlands on drier slopes. Characteristic understory species include creeping wild rye (*Elymus triticoides*), wild oats (*Avena* sp.), brome (*Bromus* sp.), barley (*Hordeum* zp.), needlegrass (*Nassella* sp.) and poison oak (*Toxicodendron diversilobum*). Special-status species known to occur within valley oak woodland habitat includes:

- western spadefoot
- spotted bat
- pallid bat
- western mastiff bat
- San Joaquin pocket mouse
- Hartweg's golden sunburst
- Madera leptosiphon

Northern Claypan Vernal Pool. The northern claypan vernal pool is a special-status natural community. The Planning Area includes northern claypan vernal pool along the northwest boundary of the Planning Area. Typically, these pools are located within the lower elevations of the main San Joaquin Valley. These areas are typically associated with a series of small mima mounds with interspersed pools. Typically, these pools have highly alkaline and may display whitish salt deposits in non-vegetated centers of dry pools. These vernal pools are dominated by a high percentage of non-native species. Special-status species known to occur within northern claypan vernal pool includes:

- California tiger salamander
- vernal pool fairy shrimp
- California linderiella
- molestan blister beetle

- midvalley fairy shrimp
- succulent owl's clover
- Green's tuctoria

Special-Status Natural Communities. As described above, the Planning Area contains two special-status natural communities: valley oak woodland and northern claypan vernal pool. Based on a review of the CNDDB, there are three additional special-status natural communities located in the vicinity of the Planning Area. These three special-status natural communities include the northern hardpan vernal pool, great valley mixed riparian forest, and sycamore alluvial woodland. Each of these three special-status natural communities are associated with stream courses, waterways, drainages, wetlands, and seasonal pools; however, these have not been recorded to occur within the Planning Area and are, therefore, not likely to occur.

Special-Status Species. The Planning Area contains potentially suitable habitat for a total of 40 special-status species (including 8 plant species and 32 wildlife species). Each of the special-status species with potential to occur (or that are known to occur) within the Planning Area is described in more detail below.

Listed Plant Species. Eight listed plant species have the potential to occur within the Planning Area. Impacts to these species should be avoided to the greatest extent possible. Consultation with state and/or federal agencies would be required in the event that a proposed project had the potential to affect a listed plant species.

Table 4.4.A: Special-Status Plant Species Recorded in the Project Vicinity

Common Name	Scientific Name	Rare Plant Rank[1]
California jewelflower	*Caulanthus californicus*	1B.1
San Joaquin Valley Orcutt grass	*Orcuttia inaequalis*	1B.1
hairy Orcutt grass	*Orcuttia pilosa*	1B.1
succulent owl's-clover	*Castilleja campestris var. succulenta*	1B.2
Greene's tuctoria	*Tuctoria greenei*	1B.1
California satintail	*Imperata brevifolia*	2B.1
Madera leptosiphon	*Leptosiphon serrulatus*	1B.2
Sanford's arrowhead	*Sagittaria sanfordii*	1B.2

Notes:
[1] California Native Plant Society (CNPS) California Rare Plant Rank
1B Plants rare, threatened, or endangered in California and elsewhere.
2B Plants rare, threatened, or endangered in California but more common elsewhere.
Threat Ranks:
.1 Seriously threatened in California (over 80% of occurrences threatened/high degree any immediacy of threat).
.2 Moderately threatened in California (20 to 80 percent of occurrences threatened/moderate degree and immediacy of threat).
Source: California Native Plant Society, Inventory of Rare and Endangered Plants of California (online edition, v9.5.1a), http://www.rareplants.cnps.org/, accessed April 2025.

California Jewel-Flower. California jewel-flower (*Caulanthus californicus*) is a state and federally listed endangered species and a CNPS list 1B.1 species. California jewel-flower occurs within chenopod scrub in valley and foothill grasslands and pinyon-juniper woodlands. It is historically

known from various valley habitats in both the Central Valley and Carrizo Plain from 65 to 900 meters. There is one historical known location within the Planning Area, but it is located within an area that appears to have already been converted to urban use.

San Joaquin Valley Orcutt Grass. San Joaquin Valley orcutt grass (*Orcuttia inaequalis*) is a state endangered species, a federally threatened species, and a CNPS list 1B.1 species. This species is restricted to vernal pools at elevations from 30 to 755 meters above sea level. There is one historic known location within the Planning Area, near the central/western portion, just west of Highway 99.

Hairy Orcutt Grass. Hairy orcutt grass (*Orcuttia pilosa*) is state and federally endangered species and a CNPS list 1B.1 species. This species is restricted to vernal pools surrounded by annual grasslands. It is specifically known to occur within the northern hardpan vernal pool community, on San Joaquin fine sandy loam. There are no historic/known locations of this species within the Planning Area.

Succulent Owl's Clover. Succulent owl's clover (*Castilleja campestris ssp. succulenta*) is a state endangered species, a federally threatened species, and a CNPS list 1B.2 species. Succulent owl's clover is isolated to vernal pools in valley and foothill grasslands. Microhabitat requirements include moist places with acidic soils, from 25 to 750 meters. There is one historic/known location in the Planning Area, located within the county of Fresno (and outside of the City of Fresno sphere of influence), just south of the San Joaquin River corridor.

Table 4.4.B: Special-Status Wildlife Species within the Project Vicinity

Common Name	Scientific Name	Federal Status	State Status	CDFW Status
American badger	Taxidea taxus	None	None	SSC
American bumble bee	Bombus pensylvanicus	None	None	
Antioch efferian robberfly	Efferia antiochi	None	None	
black-crowned night heron	Nycticorax nycticorax	None	None	
burrowing owl	Athene cunicularia	None	Candidate Endangered	SSC
California glossy snake	Arizona elegans occidentalis	None	None	SSC
California horned lark	Eremophila alpestris actia	None	None	WL
California linderiella	Linderiella occidentalis	None	None	
California tiger salamander - central California DPS	Ambystoma californiense pop. 1	Threatened	Threatened	WL
coast horned lizard	Phrynosoma blainvillii	None	None	SSC
Crotch's bumble bee	Bombus crotchii	None	Candidate Endangered	
double-crested cormorant	Nannopterum auritum	None	None	WL
Fresno kangaroo rat	Dipodomys nitratoides exilis	Endangered	Endangered	
great egret	Ardea alba	None	None	
hardhead	Mylopharodon conocephalus	None	None	SSC
hoary bat	Lasiurus cinereus	None	None	
Hurd's metapogon robberfly	Metapogon hurdi	None	None	
least Bell's vireo	Vireo bellii pusillus	Endangered	Endangered	
molestan blister beetle	Lytta molesta	None	None	
Northern California legless lizard	Anniella pulchra	None	None	SSC

Table 4.4.B: Special-Status Wildlife Species within the Project Vicinity

Common Name	Scientific Name	Federal Status	State Status	CDFW Status
northwestern pond turtle	Actinemys marmorata	Proposed Threatened	None	SSC
pallid bat	Antrozous pallidus	None	None	SSC
San Joaquin kit fox	Vulpes macrotis mutica	Endangered	Threatened	
San Joaquin pocket mouse	Perognathus inornatus	None	None	
snowy egret	Egretta thula	None	None	
Swainson's hawk	Buteo swainsoni	None	Threatened	
tricolored blackbird	Agelaius tricolor	None	Threatened	SSC
valley elderberry longhorn beetle	Desmocerus californicus dimorphus	Threatened	None	
vernal pool fairy shrimp	Branchinecta lynchi	Threatened	None	
western mastiff bat	Eumops perotis californicus	None	None	SSC
western spadefoot	Spea hammondii	Proposed Threatened	None	SSC
western yellow-billed cuckoo	Coccyzus americanus occidentalis	Threatened	Endangered	

Notes:
SSC Species of Special Concern – any species, subspecies, or distinct population of fish, amphibian, reptile, bird, or mammal native to California that currently satisfies one or more of the following criteria:
- is extirpated from California or, in the case of birds, in its primary seasonal or breeding role;
- is listed as Federally-, but not State-, threatened or endangered; meets the State definition of threatened or endangered but has not formally been listed.
- is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status; or
- has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for State threatened or endangered status.

WL Watch List - taxa that were previously designated as "Species of Special Concern" but no longer merit that status, or which do not yet meet SSC criteria, but for which there is concern and a need for additional information to clarify status.

Greene's Tuctoria. Greene's tuctoria (*Tuctoria greenei*) is a federally endangered species, a California Rare species, and a CNPS list 1B.1 species. This species is known to occur within vernal pools surrounded by valley and foothill grasslands. Specifically this species is located on dry bottoms of vernal pools from an elevation range of 30 to 1,065 meters. There are no historic/known locations of this species within the Planning Area.

Other Special-Status Plant Species. In addition to the five listed plant species, there are three "other" special-status plant species have the potential to occur in the Planning Area: California satintail (*Imperata brevifolia*), Madera leptosiphon (*Leptosiphon serrulatus*), and Sanford's arrowhead (*Sagittaria sanfordii*). Direct take of these species should be avoided wherever possible.

Listed Wildlife Species. A total of seven listed wildlife species have the potential to occur or are known to occur within the Planning Area. Project impacts to these species should be avoided to the greatest extent possible.

California Tiger Salamander. The California tiger salamander is federally threatened within the Central Valley in California. The Central Valley species is known to occur within grasslands and oak savannas and along the edges of mixed woodland and lower elevation coniferous forests.

This species is endemic to California, but most of the historic range is not well known because it has been fragmented. Currently most populations in the Central Valley have been eliminated, and the remainder are found in the surrounding foothills from Tulare county north to Yolo county, and from Santa Barbara county to the Sacramento Valley.

The California tiger salamander is nocturnal and fossorial, spending most of its time underground in animal burrows, especially those of California ground squirrels and valley pocket gophers. Breeding occurs within vernal pools or other seasonal waters. The California tiger salamander emerges at night with the fall rains, sometimes in early November. This species needs both suitable upland terrestrial habitat and temporary breeding ponds in order to survive.

Fresno Kangaroo Rat. Fresno kangaroo rat (*Dipodomys nitratoides exilis*) is state and federally listed as endangered. This species excavates burrows in gently undulating to level terrain with sandy loam soils that are mildly to moderately alkaline and characterized by herbaceous vegetation with scattered shrubs. Herbaceous vegetation with scattered shrubs is common aboveground cover. Burrow systems cover a surface area from about 7-feet by 7-feet to 12-feet by 12-feet. Some burrow systems included short dead-end tunnels, apparently used to escape predators.

San Joaquin Kit Fox. San Joaquin kit fox (*Vulpes macrotis mutica*) is a state threatened species and a federally endangered species that is in population decline, particularly in California, largely due to widespread habitat loss from agriculture and urbanization. The species occurs from the San Joaquin Valley north to Contra Costa and Alameda counties. This species generally prefers open, level areas with loose-textured soils supporting scattered, shrubby vegetation with little human disturbance.

The San Joaquin kit fox is a small grayish fox about two and one half feet in length and weighing up to five and one half pounds. The kit fox is distinguished from other foxes by its large ears. The fox preys on rodents, rabbits, and lizards, and in turn is preyed upon by larger carnivores, particularly coyote.

Swainson's Hawk. Swainson's hawk (*Buteo swainsoni*) is a state threatened species that breeds regularly from southwestern Canada to northern Mexico. Typical habitat includes open desert, grassland, or croplands near scattered, large trees or small groves. This species nests in open riparian habitat or in scattered trees or small groves in sparsely vegetated flatlands. While it typically roosts in large trees, it will also roost on the ground in areas of suitable habitat, if no large trees are available. The nesting/breeding period for this species is from late March to mid-August, with peak activity in late May to late July. Swainson's hawks build their nests on a platform of sticks, bark, and fresh leaves in a tree, bush, or utility pole from 1.3 to 30 meters (4-100 feet) above ground. The Swainson's hawk forages in shrub-steppe habitats and agricultural lands. Swainson's hawk populations have declined markedly since the 1920s, with steep declines in the 1950s. In some areas there have been losses of 90 to 95 percent of past populations.

Valley Elderberry Longhorn Beetle. Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) is a federally threatened species. The beetle's current distribution is patchy throughout the remaining riparian forests of the Central Valley, between Redding and

Bakersfield. The beetle is locally common (i.e., found in population clusters that are not evenly distributed across the Central Valley). The species is nearly always found on or close to its host plant, elderberry (*Sambucus* sp.). Females lay their eggs on the bark and larvae hatch and burrow into the stems. The larval stage may last 2 years, after which the larvae enter the pupal stage and transform into adults. Adults are active from March to June, feeding and mating. It appears that in order to serve as habitat, the shrubs must have stems that are 1.0 inch or greater in diameter at ground level. Use of the plants by the animal is rarely apparent.

Vernal Pool Fairy Shrimp. Vernal pool fairy shrimp (*Branchinecta lynchi*) is a federally threatened species. Populations of this species are known to live in ephemeral freshwater habitats, such as vernal pools and swales. None are known to occur in running or marine waters or other permanent bodies of water. This species has a sporadic distribution within vernal pool complexes, wherein the majority of pools in a given complex typically are not inhabited by the species.

Although the vernal pool fairy shrimp has a relatively wide range, the majority of known populations inhabit vernal pools with clear to tea-colored water, most commonly in grass or mud bottomed swales, or basalt flow depression pools in unplowed grasslands, but one population occurs in sandstone rock outcrops and another population in alkaline vernal pools. They are ecologically dependent on seasonal fluctuations in their habitat, such as absence or presence of water during specific times of the year, duration of inundation, and other environmental factors that include specific salinity, conductivity, dissolved solids, and pH levels. Water chemistry is one of the most important factors in determining the distribution of fairy shrimp. The vernal pool fairy shrimp occurs at temperatures between 6-20 degrees C, in soft and poorly buffered waters.

Western Yellow-Billed Cuckoo. Western Yellow-billed cuckoo (*Coccyzus americanus occidentalis*) is a federally threatened species and a state endangered species. The yellow-billed cuckoo breeds in large blocks of riparian habitat (willow and cottonwood stands in river floodplains). This bird feeds primarily on large insects, including caterpillars and cicadas, and occasionally on small frogs and lizards. Breeding coincides with the emergence of cicadas and tent caterpillar. Historically, yellow-billed cuckoos nested primarily in coastal counties from San Diego county, near the Mexican border, to Sonoma county, to the Central Valley from Kern through Shasta Counties, and along the lower Colorado River. Primary threats to its habitat include conversion of riparian habitat to agriculture, urban development, and flood control, as well as disease, predation and lack of regulatory mechanisms.

Other Special-Status Wildlife Species. In addition to the seven listed wildlife species, there are nine "other" special-status wildlife species that have the potential to occur or are known to occur within the Planning Area. Direct take of these species should be avoided and significant reductions in suitable habitat and project impacts that result in significant population decline should be avoided to the maximum extent feasible.

American Badger. American badger (*Taxidea taxus*) is a California Species of Special Concern that is known to occur within a variety of open, arid habitats, most commonly associated with grasslands, savannas, mountain meadows, and open areas of desert scrub. Principle habitat

requirements include sufficient prey base, friable soils, and relatively open, uncultivated ground. They typically occur at elevation ranges from below sea level to over 12,000 feet above mean sea level. American badger habitat is threatened by habitat conversion to urban and agricultural uses, farming operations, shooting and trapping, poisoning, and reduction of prey base because of rodent control activities. This species occurs as far north as Canada, and as far south as central Mexico. In the United States, it currently extends east from the Pacific coast to Texas, Oklahoma, Missouri, Illinois, Indiana, and Ohio. In California, American badger is an uncommon, permanent resident throughout most of the state, with the exception of the North Coast area.

Burrowing Owl. Burrowing owl (*Athene cunicularia*) is designated as a California Species of Special Concern. Burrowing owls require large open expanses of sparsely vegetated areas on gently rolling or level terrain with an abundance of active small mammal burrows. Typical habitat associated with the species includes short-grass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), prairies, coastal dunes, desert floors, and some artificial, open areas as a year-round resident. Burrowing owls may also use golf courses, cemeteries, road easements and rights-of-way within cities, airports, vacant lots in residential areas, and irrigation ditches. Burrowing owls often use existing rodent burrows (or other burrows) for roosting and nesting. They may also use pipes and culverts where burrows are scarce. If left undisturbed, a burrowing owl pair will use the same burrow year after year for nesting.

Hardhead. Hardhead (*Mylopharodon conocephalus*), a fish, is a California Species of Special Concern that occurs in low to mid-elevation streams in the Sacramento-San Joaquin drainage and the Russian River. Microhabitat requirements include clear, deep pools with a mix of sand, gravel and boulder bottoms with slow water velocity. This species is not found where exotic centrarchids (commonly known as sunfish) predominate. Populations of this species are well established in mid-elevation reservoirs used exclusively for hydroelectric power generation, such as the Redinger and Kerkhoff Reservoirs on the San Joaquin River in Fresno county. Hardhead is a bottom feeder that forages for benthic invertebrates and aquatic plant material in quiet water. They will also occasionally feed on plankton and surface insects. This species is in decline due to predation by smallmouth bass, and damming of large to medium-sized warm water streams with natural flow regimes.

Pallid Bat. The pallid bat (*Antrozous pallidus*) is a California Species of Special Concern and a High Priority species as designated by the Western Bat Working Group. This species ranges throughout California and occurs within a wide range of habitat types, typically below 6,000 feet above mean sea level. Pallid bats are non-migratory and hibernate during the winter, during which they experience very little activity. Pallid bats occur in a variety of habitats throughout the State and are most abundant in xeric ecosystems. Pallid bats roost alone and in both large and small groups. Day and night roosts include crevices in rocky outcrops and cliffs, caves, mines, trees, and human structures such as bridges, barns, porches, bat boxes, and buildings. This species also has been found roosting on or near the ground under stone piles, rags, and baseboards. Pallid bat is a gregarious species and often roost in colonies of 20 to several hundred individuals. The tendency to roost gregariously, combined with a relative sensitivity to disturbance, makes it vulnerable to mass displacement. Pallid bats are generalists that surface

glean for arthropods and capture insects on the wing. Breeding occurs from October to February. Pups are born from late April to July and are Volant at 4 to 6 weeks of age. Breeding colonies disperse between August and October.

Spotted Bat. The spotted bat (*Euderma maculatum*) is a California Species of Special Concern and a High Priority species as designated by the Western Bat Working Group. The spotted bat is easily identifiable by its unique coloration of dorsal black fur with three white spots, white ventral surface and long, pink ears. In addition to being found in California, the species is known to occur in all of the states west of (and including) Montana, Wyoming, Colorado, New Mexico and Texas. The species generally occurs in arid, low desert habitats to high elevation conifer forests. Prominent rock features appear to be a necessary feature for roosting. The winter range and hibernacula are unknown for most of its range, though the species has been captured year-round in the southern part of its range. This species likely breeds in late summer with females giving birth to a single pup in early summer (May or June). They appear to be solitary animals but occasionally roost or hibernate in small groups. Roost sites are cracks, crevices, and caves usually high in fractured rock cliffs. In general, the long-term persistence of this bat, as well as most bats, is threatened by the loss of clean, open water; modification or destruction of roosting and foraging habitat, and disturbance or destruction of hibernacula.

Tricolored Blackbird. The tricolored blackbird (*Agelaius tricolor*) is a California Species of Special Concern (CSC) that commonly occurs throughout central and coastal California. The species is often found near fresh water, as it prefers emergent wetlands with tall, dense cattails or tules, but it can also be found in thickets of willow, blackberry, wild rose, and other tall herbs. Tricolored blackbird is known to forage on the ground in croplands, grassy fields, flooded land, and along the edges of ponds. The tricolored blackbird diet generally consists of insects and spiders as a juvenile, and seeds and cultivated grains, such as rice and oats, as an adult. The breeding season for this colonial breeding species generally ranges from mid-April to late July.

Western Mastiff Bat. The western mastiff bat (*Eumops perotis*) is a California Species of Special Concern and a High Priority species as designated by the Western Bat Working Group. The western mastiff bat occurs throughout California in a wide range of habitat types, typically below 9,000 feet in elevation. Distribution is correlated with suitable rock features required for roosting. Western mastiff bats are non-migratory; however, they may move short distances within their home ranges. This bat species does not hibernate and is active periodically throughout the winter. Western mastiff bat is generally a cliff-dwelling species, but also uses building crevices for day roosts. This species forages most frequently in broad open areas such as flood plains, chaparral, oak woodland, open ponderosa pine forest, grassland, montane meadows, and agricultural areas, and requires large lakes or ponds at least 100 feet long for drinking. Western mastiff bat generally roosts high above the ground, allowing a clear vertical drop of at least 7 feet for flight. Maternity colonies range from 30 to several hundred individuals and generally include adult males. This species has an audible echolocation call and is easily detected while foraging. This bat forages primarily on moths, but also takes crickets and katydids. Breeding occurs from October to March, from which pups are born primarily in July and are Volant at 4 to 6 weeks of age.

Western Pond Turtle. The western pond turtle (*Emys marmorata*) is a California Species of Special Concern that inhabits ponds, lakes, rivers, streams, creeks, marshes and irrigation ditches containing abundant vegetation and either rocky or muddy bottoms in woodlands, forests and grasslands. It can be found basking on logs, rocks, cattail mats, and exposed banks within brackish water and seawater. This turtle feeds primarily on aquatic plants, invertebrates, worms, frog and salamander eggs and larvae, crayfish, carrion, and occasionally frogs and fish. It mates in April and May, eggs are laid sometime between April and August, and hatchlings emerge in early fall or overwinter in the nest.

Western Spadefoot. Western spadefoot (*Spea hammondii*), a California Species of Special Concern, can be found primarily in grassland habitats and valley-foothill hardwood woodlands. It prefers open areas with sandy or gravelly soils in sandy washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Vernal pools and rain pools that do not contain bullfrogs, fish or crayfish are necessary for breeding. The species can be found from sea level up to 4,500 feet. Western spadefoot eats a variety of invertebrates, including adult beetles, larval and adult moths, crickets, flies, ants, and earthworms. This species is nocturnal and almost completely terrestrial, entering water only to breed. It can burrow underground to escape hot, arid environments, and will spend most of its life underground. The species is typically active between October and May.

Other Wildlife Species for Consideration. Species that are not state or federally listed, and are not afforded additional state or federal protection include: California horned lark (*Eremophila alpestris actia*), hoary bat (*Lasiurus cinereus*), San Joaquin pocket mouse (*Perognathus inornatus inornatus*), California linderiella (*Linderiella occidentalis*), Antioch efferian robberfly (*Efferia antiochi*), molestan blister beetle (*Lytta molesta*), Hurd's metapogon robberfly (*Metapogon hurdi*), and midvalley fairy shrimp (*Branchinecta mesovallensis*).

4.4.2 Regulatory Setting

4.4.2.1 Federal Policies and Regulations

Federal Endangered Species Act. The United States Fish and Wildlife Service (USFWS) administers the Federal Endangered Species Act (ESA). The ESA provides a process for listing species as either threatened or endangered and methods of protecting listed species. The ESA 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 the ESA, "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 U.S.C.A. § 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 the ESA, 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 US Army Corps of Engineers (USACE) administers Section 404 of the federal Clean Water Act (CWA). This section regulates the discharge of dredge and fill material into waters of the United States. "Discharge of fill material" is defined as the addition of fill material into waters of the United States, including, but not limited to, the following: placement of fill that is necessary for the construction of any structure or impoundment requiring rock, sand, dirt, or other material for the structure's construction; site development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and fill for intake and outfall pipes and sub-aqueous utility lines (33 C.F.R. §328.2[f]).

The USACE has established a series of nationwide permits that authorize certain activities in waters of the United States, if a proposed activity can demonstrate compliance with standard conditions. Normally, USACE requires an individual permit for an activity that will affect an area equal to or in excess of 0.5 acre of waters of the United States. Projects that result in impacts to less than 0.5 acre can normally be conducted pursuant to one of the nationwide permits, if consistent with the standard permit conditions. USACE also has discretionary authority to require an Environmental Impact Statement for projects that result in impacts to an area between 0.1 and 0.5 acre. Use of any nationwide permit is contingent on the activities having no impacts to endangered species.

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 U.S.C.A. § 1341(a)(1)). Therefore, before the USACE will issue a Section 404 permit, applicants must apply for and receive a Section 401 water quality certification from the RWQCB.

Waters of the United States. USACE has primary federal responsibility for administering regulations that concern "waters of the U.S." The Corps acts under two statutory authorities, the Rivers and Harbors Act (Sections 9 and 10), which governs specified activities in "navigable waters of the U.S.," and the Clean Water Act (CWA) (Section 404), which governs specified activities in "other waters of the U.S.," including wetlands. The Corps 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 U.S." below the ordinary high-water mark in non-tidal waters. The U.S. Environmental Protection Agency (USEPA), USFWS, NMFS, and several other agencies can provide comments on Corps 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.

"Other waters of the U.S." 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 U.S. 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 created water treatment facilities.

Migratory Bird Treaty Act. The Migratory Bird Treaty Act (MBTA) protects all common wild birds found in the United States (U.S.) except the house sparrow, starling, 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 U.S.C.A. § 703(a)).

4.4.2.2 State Policies and Regulations

California Endangered Species Act. The California Department of Fish and Wildlife (CDFW) administers the California Endangered Species Act (CESA). CESA applies to "endangered" or "threatened" birds, mammals, fish, amphibians, reptiles, and plants, but does not apply to insects (see 81 Cal. Op. Att'y 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 Fish and Game Code § 2067).

Section 2080 of the Fish and Game Code prohibits "take" of any species that the 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 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 (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 the 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 Department of Fish and Wildlife "Species of Special Concern." A Species of Special Concern (SSC) is a species, subspecies, or distinct population of an animal (i.e., fish, amphibian, reptile, bird and mammal) native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria:

- is extirpated from the State or, in the case of birds, in its primary seasonal or breeding role;
- is listed as Federally-, but not State-, threatened or endangered;
- meets the State definition of threatened or endangered but has not formally been listed;
- is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status;
- has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for State threatened or endangered status.

SSCs tend to have a number of factors in common, including that they:

- occur in small, isolated populations or in fragmented habitat, and are threatened by further isolation and population reduction;
- show marked population declines;
- depend on a habitat that has shown substantial historical or recent declines in size and/or quality or integrity;
- have few California records, or which historically occurred in the State but for which there are no recent records; and
- occur largely in areas where current management practices are inconsistent with the animal's persistence.

"Species of Special Concern" 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 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.

California Native Plant Protection Act. In 1977, the Legislature formally recognized the status of rare or endangered plants with the passage of the Native Plant Protection Act (NPPA) (Fish and Game Code, Section 1900 et seq.). The NPPA directed the CDFW to preserve, protect, and enhance rare and endangered plants in California. The NPPA also authorized the Fish and Game Commission to designate native plants as "rare" or "endangered" and to require permits for collecting, transporting, or selling such plants.

Under Section 1901 of the Fish and Game Code, "native plant" means a plant growing in a wild uncultivated state, which is normally found native to the plant life of this state. A species, subspecies, or variety is considered "endangered" when its prospects of survival and reproduction are in immediate jeopardy from one or more causes. A species, subspecies, or variety is considered "rare" when, although not presently threatened with extinction, it is in such small numbers throughout its range that it may become endangered if its present environment worsens.

Under Section 1913(c) of the NPPA, the owner of land where a rare or endangered native plant is growing is required to notify the department at least 10 days in advance of changing the land use to allow for salvage of plant.

Fish and Wildlife Protection - California Fish and Game Code, Sections 1600 to 1603. The California Fish and Game Code mandates that "it is unlawful for any person to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds, without first notifying the department of such activity." CDFW jurisdiction includes ephemeral, intermittent, and perennial watercourses, including dry washes, characterized by the presence of hydrophytic vegetation, the location of definable bed and banks, and the presence of existing fish or wildlife resources.

Furthermore, CDFW jurisdiction is often extended to habitats adjacent to watercourses, such as oak woodlands in canyon bottoms or willow woodlands that function as part of the riparian system. Historic court cases have further extended CDFW jurisdiction to include watercourses that seemingly disappear, but re-emerge elsewhere. Under the CDFW definition, a watercourse need not exhibit evidence of an OHWM to be claimed as jurisdiction. However, CDFW does not regulate isolated wetlands; that is, those that are not associated with a river, stream, or lake.

Porter-Cologne Water Quality 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 Water Quality 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)).

Regional Water Quality Control Board Regulated Activities. Under Section 401 of the CWA, the RWQCB regulates all activities that are regulated by the USACE. Additionally, under the Porter-Cologne Water Quality Act, the RWQCB regulates all activities, including dredging, filling, or

discharge of materials into waters of the state that are not regulated by the USACE due to a lack of connectivity with a navigable water body and/or lack of an OHWM.

California Fish and Game Code - Section 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.

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 creating of a defined Reserve System provides certainty to the public and to 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 the CESA and the federal ESA. The City of Fresno does not occur within any NCCP/HCP designated area.

California Native Plant Society. The California Native Plant Society (CNPS) maintains a list of plant species native to California that have low numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Plants of California. Potential impacts to populations of CNPS-listed plants require consideration under CEQA. The following identifies the definitions of the California Rare Plant Ranks (formerly known as the CNPS lists):

- California Rare Plant Rank 1A: Plants believed extirpated in California and either rare or extinct elsewhere.
- California Rare Plant Rank 1B: Plants rare, threatened, or endangered in California and elsewhere.
- California Rare Plant Rank 2A: Plants presumed extirpated in California, but more common elsewhere.
- California Rare Plant Rank 2B: Plants rare threatened or endangered in California but more common elsewhere.

- California Rare Plant Rank 3: Plants about which more information is needed - a review list.
- California Rare Plant Rank 4: Plants of limited distribution – a watch list.

The CNPS Threat Rank is an extension added onto the California Rare Plant Rank, which designates the level of threats by a 1 to 3 ranking, with 1 being the most threatened and 3 being the least threatened. Each threat rank is defined as follows:

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

4.4.2.3 Local Policies and Regulations

County of Fresno. The County of Fresno Open Space and Conservation Element of the General Plan is concerned with protecting and preserving natural resources, preserving open space areas, managing the production of commodity resources, protecting and enhancing cultural resources, and providing recreational opportunities.

The Open Space and Conservation Element sets out goals, policies, and implementation measures under three main headings: Productive Resources, Natural Resources, and Recreation and Cultural Resources. Productive Resources encompasses three sections: Water Resources, Forest Resources, and Mineral Resources. Natural Resources encompass four sections: Wetland and Riparian Areas, Fish and Wildlife Habitat, Vegetation and Air Quality. The Recreation and Cultural Resources sections encompass: Parks and Recreation, Recreational Trails, Cultural, Geologic Resources, Scenic Resources, and Scenic Roadways.

City of Fresno Regulations. The guidelines outlined in the City of Fresno General Plan and Municipal Code ensure project level compliance with all applicable state and federal regulations.

General Plan

Parks, Open Space, and Schools Element

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

Policy POSS-5-c: Buffers for Natural Areas. Require development projects, where appropriate and warranted, to incorporate natural features (such as ponds, hedgerows, and wooded strips) to serve as buffers for adjacent natural areas with high ecological value.

Policy POSS-5-d: Guidelines for Habitat Conservation. Establish guidelines for habitat conservation and mitigation programs, including:

- Protocols for the evaluation of a site's environmental setting and proposed design and operating parameters of proposed mitigation measures.
- Methodology for the analysis depiction of land to be acquired or set aside for mitigation activities.
- Parameters for specification of the types and sources of plant material used for any re-vegetation, irrigation requirements, and post-planting maintenance and other operational measures to ensure successful mitigation.
- Monitoring at an appropriate frequency by qualified personnel and reporting of data collected to permitting agencies.

Objective POSS-6. Maintain and restore, where feasible, the ecological values of the San Joaquin River corridor.

Policy POSS-6-b: Effects of Stormwater Discharge. Support efforts to identify and mitigate cumulative adverse effects on aquatic life from stormwater discharge to the San Joaquin River.

- Avoid discharge of runoff from urban uses to the San Joaquin River or other riparian corridors.
- Approve development on sites having drainage (directly or indirectly) to the San Joaquin River or other riparian areas only upon a finding that adequate measures for preventing pollution of natural bodies of water from their runoff will be implemented.
- Periodically monitor water quality and sediments near drainage outfalls to riparian areas. Institute remedial measures promptly if unacceptable levels of contaminant(s) occur.

Objective POSS-7. Support the San Joaquin River Conservancy in its collaborative, multiagency efforts to develop the San Joaquin River Parkway.

Policy POSS-7-d: Buffer Zones near Intensive Uses. Protect natural reserve areas and wildlife corridor areas in the San Joaquin River corridor whenever more intensive human uses exist or are proposed on adjacent lands. Use buffer zones to allow multiple uses on parts of the parkway while still protecting wildlife and native plants.

- Require studies of appropriate buffer widths to be approved by State and federal wildlife agencies before variances from standard buffer zone widths are granted.

- Maintain natural riparian buffer zones with appropriate native plants (seed material and cuttings locally derived).

- Incorporate open space uses such as pasture, low-intensity agricultural activities, and the "rough" or marginal areas of golf courses, into buffer zones when they constitute an improvement in habitat over a previous use or degraded area. Evaluate and address the potential impacts of construction, cultural, and operational practices (such as grading, number of livestock per acre, lighting, and use of pesticides, herbicides, and fertilizers) before these uses are be approved for buffering.

- For nearby areas of the San Joaquin River corridor outside of the exclusive jurisdiction of the City, support efforts to work with other jurisdictions to achieve this policy.

Municipal Code. ***Chapter 13, Article 3 Street Trees and Parkways.*** This section of the municipal code provides guidelines and requirements for the preservation and protection existing street trees, as well as guidelines establishing the installation of city-owned trees along streets.

4.4.3 Impacts and Mitigation Measures

The following section presents a discussion of the impacts related to biological resources that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds to determine if an impact is significant. The latter part of this section presents the impacts associated with implementation of the proposed project and the recommended mitigation measures, if required. Mitigation measures are recommended, as appropriate, for significant impacts to eliminate or reduce them to a less-than-significant level. Cumulative impacts are also addressed.

4.4.3.1 Significance Criteria

Based on CEQA Guidelines Appendix G, the proposed project would have a significant impact on biological resources if it would:

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;

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 US Fish and Wildlife Service;

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;

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;

5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;

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.

4.4.3.2 Project Impacts

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

BIO-1 The proposed project could have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

As stated above, several special-status plant and wildlife species have been recorded within Fresno. The proposed program would establish a VMT mitigation mechanism for future development projects that exceed the City's VMT thresholds in the form of a mitigation fee. As such, the program would fund VMT-reducing transportation improvements within the City. Potential improvements would primarily occur within existing rights-of-way or within the development footprint of future development projects and thus, would likely avoid adverse impacts to sensitive special-status species. While future transportation improvement projects funded by the program would be largely focused within developed areas, the proposed improvements could still adversely impact sensitive special-status species. Future transportation improvements would be City-initiated projects or implemented as part of future development projects and would require environmental review under CEQA (e.g., preparation of a Categorical Exemption, Mitigated Negative Declaration, or Environmental Impact Report). Additionally, per Mitigation Measure BIO-1, a Biological Resources Assessment may be required, as determined by the City, to evaluate potential impacts to on-site biological resources, including sensitive or special-status species. As such, future VMT-reducing improvements would be evaluated on a project-specific level with site-specific analysis and mitigation measures would be identified, as needed. Thus, the proposed program would not result in significant impacts to sensitive special-status species.

Mitigation Measure BIO-1 Transportation improvements funded by the proposed Vehicle Miles Traveled Reduction Program subject to California Environmental Quality Act (CEQA) review, and with the potential to reduce or eliminate habitat for native plant and wildlife species or sensitive habitats, shall provide a Biological Resources Assessment prepared by a qualified biologist for review and approval by the City of Fresno. The assessment shall include biological field survey(s) of the project site to characterize the extent and quality of habitat that

would be impacted by development. Surveys shall be conducted by qualified biologists and/or botanists in accordance with California Department of Fish and Wildlife and/or United States Fish and Wildlife Services survey protocols for target species. If no special status/sensitive species, sensitive habitats/natural communities, or federally protected wetlands are observed during the field survey, then no further mitigation will be required. If biological resources are documented on the project site, the project proponent shall comply with the applicable requirements of the regulatory agencies and shall apply mitigation determined through the agency permitting process.

Level of Significance: Less Than Significant Impact with Mitigation Incorporated.

BIO-2 The proposed project could have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.

Several locations within the Planning Area support riparian or wetland vegetation. As stated, the majority of future transportation improvements funded by the proposed program would occur within existing disturbed rights-of-way and thus, avoid impacts to riparian habitat or other sensitive natural communities within Fresno. While future transportation improvement projects funded by the program would be largely focused within developed areas, the proposed improvements could still have the potential to adversely impact riparian habitat or other sensitive natural communities. All future transportation improvements, including those implemented as part of future development projects, would be required to undergo environmental review under CEQA. Additionally, as stated, a Biological Resources Assessment may be required, as determined by the City, to evaluate potential impacts to on-site biological resources, including riparian habitat or other sensitive natural communities; refer to Mitigation Measure BIO-1. Thus, future improvements funded by the proposed mitigation program would be evaluated on a project-specific level with site-specific analysis and implement mitigation measures, as needed. Impacts to riparian habitat or other sensitive natural communities associated with the proposed program would be less than significant.

Mitigation Measures: Refer to Mitigation Measure BIO-1.

Level of Significance: Less Than Significant Impact with Mitigation Incorporated.

BIO-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.

As stated, several locations within the project area support riparian or wetland vegetation. The majority of future transportation improvements funded by the proposed program would occur within existing rights-of-way in developed areas of the City and not impact Federally protected

wetlands. Nevertheless, all future transportation improvements, including those implemented as part of future development projects, would be required to undergo project-level environmental review under CEQA and be evaluated on a project-specific level with site-specific analysis and implement mitigation measures, as needed. A Biological Resources Assessment may be required, as determined by the City, to evaluate potential impacts to on-site biological resources, including Federally protected wetlands; refer to Mitigation Measure BIO-1. Impacts to wetland habitat are regulated by the USACE pursuant to Section 404 of the CWA, RWQCB in accordance with Section 401 of the CWA, and CDFW under Section 1600 of California Fish and Game Code. Thus, future transportation improvements would be required to comply with existing regulatory requirements in this regard. Overall, impacts to Federally protected wetlands from the proposed VMT Reduction Program would be less than significant.

Mitigation Measures: Refer to Mitigation Measure BIO-1.

Level of Significance: Less Than Significant Impact with Mitigation Incorporated.

BIO-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.

Wildlife corridors are key features for wildlife movement between habitat patches and are generally defined as those areas that provide opportunities for individuals or local populations to conduct seasonal migrations, permanent dispersals, or daily commutes. Wildlife corridors are typically larger expanses of undeveloped areas. The majority of future transportation improvements funded by the proposed program would occur within existing rights-of-way in developed areas of the City and thus, would not adversely impact wildlife corridors or nursery sites. However, future transportation improvements implemented as part of future development projects may occur on sites with trees or be located adjacent to trees that could serve as nesting habitat for migratory birds. Therefore, there is potential to impact nesting birds if construction occurs during the avian nesting season (generally from February 1 through August 31). The MBTA, enforced by the USFWS, makes it unlawful "by any means or in any manner, to pursue, hunt, take, capture, [or] kill" any migratory bird or attempt such actions, except as permitted by regulation. Thus, compliance with existing regulatory requirements would reduce impacts in this regard. Additionally, Mitigation Measure BIO-2 would require a pre-construction nesting bird clearance survey be conducted prior to ground disturbing activities associated with future transportation improvements. As stated, all future transportation improvements would also be required to undergo project-level environmental review under CEQA, be evaluated on a site-specific basis, and implement mitigation, as needed.

Mitigation Measure BIO-4 A pre-construction nesting bird clearance survey shall be conducted by a qualified biologist no more than fourteen (14) days prior to the start of any vegetation removal or ground disturbing activities associated with a transportation improvement project. The survey shall be conducted by a qualified biologist and cover all suitable nesting habitat within the project impact area, and areas within a biologically defensible buffer zone surrounding the project impact area. Further, if an active bird nest is found, the qualified biologist

should identify the specific bird species and establish a "no-disturbance" buffer around the active nest to avoid potential direct and indirect impacts. It is further recommended that the qualified biologist periodically monitor any active bird nests to determine if project-related activities disturb the birds and if the "no disturbance" buffer should be increased. Once the young have fledged and left the nest, or the nest otherwise becomes inactive under natural conditions, project activities within the "no-disturbance" buffer may occur following an additional survey by the qualified biologist to search for any new nests in the restricted area.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

BIO-5 The project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Several local policies and ordinances protect biological resources within the project area, including the General Plan and Municipal Code. The majority of future transportation improvements funded by the proposed program would occur within existing rights-of-way in developed areas of the City. Future transportation improvements, including those implemented as part of future development projects, would be required to undergo separate environmental review under CEQA with project-specific analysis and mitigation measures, as needed. Thus, compliance with existing regulatory requirements related to the protection of biological resources would reduce impacts to less than significant levels.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

BIO-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.

The Planning Area is not located within the boundaries of any approved or draft Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other adopted local, regional or state HCP. Therefore, development within the Planning Area would not result in any impacts to an adopted HCP or NCCP.

The Pacific Gas & Electric (PG&E) San Joaquin Valley Operation and Maintenance (O&M) Habitat Conservation Plan (HCP)[2] was approved in 2007 and covers portions of nine counties, including Fresno county and the city of Fresno. This HCP covers PG&E activities which occur as a result of ongoing O&M that would have an adverse impact on any species covered by the HCP. The HCP also

[2] Pacific Gas & Electric. 2007. *PG&E San Joaquin Valley Operation & Maintenance Habitat Conservation Plan*. November.

provides incidental take coverage from the USFWS and CDFW. The project site is not located within the covered area of any other HCP, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Mitigation Measures recommended in this EIR are largely consistent with the PG&E HCP in that site-specific analysis would be required to avoid and/or minimize potential impacts resulting from implementation of the proposed VMT Reduction Program and the PG&E HCP.[3]

Because project specific analysis would be required for future transportation improvements, site-specific analysis is required under the small-scale temporary effects required for operation and maintenance activities under the PG&E HCP. Therefore, the proposed VMT Reduction Program would not conflict with the provisions of the PG&E HCP and the proposed project and would have a less-than-significant impact.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

4.4.3.3 Cumulative Impacts

CEQA Guidelines Section 15355 requires an analysis of cumulative impacts, which are defined as, "two or more individual effects which, when considered together, are considerable, or which compound or increase other environmental impacts." The cumulative analysis below considers the proposed project's impacts in conjunction with future buildout of the General Plan; refer to Table 4-1, *General Plan 2030 – GPCAC Preferred Land Use Plan Alternative Buildout*.

BIO-7 The project, in combination with other projects, could contribute to a significant cumulative impact related to biological resources.

Cumulatively Considerable Impacts to Candidate, Sensitive, or Special Status Species or Riparian Habitat in Local or Regional Plans, Policies, or Regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

Future cumulative development projects developed in accordance with the General Plan would be required to undergo project-specific environmental review under CEQA and the City's discretionary review process to determine potential impacts to sensitive special-status species and any required mitigation. As stated, all future transportation improvements funded by the proposed VMT Reduction Program would similarly require separate environmental review under CEQA. Additionally, per Mitigation Measure BIO-1, a Biological Resources Assessment may be required, as determined by the City, to evaluate potential impacts to on-site biological resources, including sensitive or special-status species, riparian habitat and sensitive natural communities.

[3] Ibid.

As a result, the proposed VMT Reduction Program itself would not result in cumulatively considerable impacts to sensitive special-status species. Impacts in this regard would be less than significant.

Cumulatively Considerable Impacts to Federally Protected Wetlands.

Future cumulative development projects developed in accordance with the General Plan would be required to undergo project-specific environmental review under CEQA and the City's discretionary review process to determine potential impacts to Federally protected wetlands and any required mitigation. Similar to the proposed project, cumulative projects would also be required to comply with existing regulatory requirements governed by the USACE under Section 404 of the CWA, RWQCB under Section 401 of the CWA, and CDFW under Section 1600 of California Fish and Game Code. As stated, all future transportation improvements funded by the proposed program would be required to undergo separate environmental review under CEQA. Additionally, a Biological Resources Assessment may be required, as determined by the City, to evaluate potential impacts to on-site biological resources, including Federally protected wetlands; refer to Mitigation Measure BIO-1. Thus, the proposed program would not result in cumulatively considerable impacts to Federally protected wetlands and impacts in this regard would be less than significant.

Cumulatively Considerable Impacts to the Movement of Native Resident or Migratory Fish Or Wildlife Species.

Future cumulative development projects developed in accordance with the General Plan would be required to undergo project-specific environmental review under CEQA and the City's discretionary review process to determine potential impacts to the movement of native resident or migratory fish or wildlife species and any required mitigation. Future projects would also be required to comply with existing regulation requirements, including the MBTA. As stated, all future transportation improvements funded by the proposed program would be required to undergo separate environmental review under CEQA. Mitigation Measure BIO-2 would require a pre-construction nesting bird clearance survey be conducted prior to construction activities associated with future transportation improvements. Thus, upon compliance with existing regulations and Mitigation Measure BIO-2, future transportation improvements, in conjunction with cumulative projects, would result in less than significant cumulative impacts.

Conflict with Local Policies or Ordinances Protecting Biological Resources

Future cumulative development projects developed in accordance with the General Plan would be required to undergo project-specific environmental review under CEQA and the City's discretionary review process to determine potential impacts to local policies or ordinances protecting biological resources and any required mitigation. Similar to future transportation improvements implemented in accordance with the proposed program, cumulative project would also be required to comply with existing local policies protecting biological resources. As stated, all future transportation improvements funded by the proposed program would be required to undergo separate environmental review under CEQA and comply with existing local policies protecting biological resources. Thus, cumulative impacts in this regard would be less than significant.

Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

As discussed in under BIO-6, cumulative development resulting from continued implementation of the approved General Plan within the PG&E HCP would not result in any impacts to the HCP. Therefore, the proposed project would result in no cumulative impacts regarding HCPs.

Mitigation Measures: Refer to Mitigation Measure BIO-1 and Mitigation Measure BIO-2.

Level of Significance: Less Than Significant Impact with Mitigation Incorporated.

4.5 CULTURAL RESOURCES AND TRIBAL CULTURAL RESOURCES

This section describes the baseline conditions for cultural resources in the project area, identifies potentially significant impacts to cultural resources that may result from project implementation, and recommends mitigation measures to reduce the severity of potentially significant impacts. 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. Appendix G of the *State CEQA Guidelines* separates the resource topic areas of Cultural Resources and Tribal Cultural Resources. This Environmental Impact Report (EIR) combines these two resource topic areas to provide the reader one condensed location with pertinent information.

4.5.1 Existing Environment Setting

The study area for cultural resources for the proposed project is the City of Fresno Planning Area, given that implementation of the proposed project would be limited to areas within the Planning Area.

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 the analytical perspective, temporal and geographic considerations help to define the historical context of the Planning Area. The importance or significance of a cultural resource is in part described by the context in which it originated or developed. National Park Service Bulletin 16a[1] describes a historic context as "information about historic trends and properties grouped by an important theme in prehistory or history of a community, state, or the nation during a particular period of time." A context links an existing property to important historic trends and this allows a framework for determining the significance of a property. Given this, a major goal of the historian is to determine accurate themes of analysis, a task that can only be undertaken by a thorough review of previous researchers' thoughts and ideas, as well as reviewing the literature of the resources.

In California, historians have divided the past into broad categories based on climate models, archaeological dating and written histories. Paleontologists divide time into much larger segments, with defined and named periods of time shortening in timespan as the modern era is reached. For the purposes of this analysis, these periods in history have been summarized below.

4.5.1.1 Prehistoric Era

To better understand the past, archaeologists develop models of prehistoric resource chronologies and description of lifestyles based on data collected at the archaeological sites they investigate. Models of prehistoric lifeways were developed from archaeological research and ethnographic information. As more archaeological data is brought forth, the models are refined and reinterpreted.

[1] National Park Service. 1997. Bulletin 16a. Available online at: www.nps.gov/subjects/nationalregister/upload/NRB16A-Complete.pdf (accessed December 10, 2024).

Unfortunately, prehistoric archaeological investigations are very limited in the Fresno area. Indeed, the San Joaquin River section of the middle and lower San Joaquin Valley is identified by many researchers to be one of the least understood areas of the State.[2] For this reason, the prehistoric background review in this section is derived from several regional reports of recent publication. General information associated with Fresno County and San Joaquin Valley regional archaeology has been derived from several sources.[3,4,5] Prehistoric background information regarding near-city cultural resource projects has been derived several sources, as well.[6,7,8]

Bennyhoff and Fredrickson's Central California Taxonomic System[9] has in the past been used to form descriptions of the temporal background for certain projects in Fresno County. A more generalized systemic description is provided here because many of the archaeological elements supporting the CCTS have not been uncovered in the Planning Area. Part of the challenge associated with archaeological research in this area is that the eastern side of the San Joaquin Valley has been farmed for generations and farming tends to destroy the surface signatures of most prehistoric sites.

Terminal Pleistocene (13,500 to 11,000 BP [Before Present]). About 14,000 years ago, California was a much wetter and cooler place, but with the retreat of continental Pleistocene glaciers, the whole of California except the northwest coast saw a warming and drying trend. Large shallow lakes filled with glacial meltwater were located in the Central Valley and used by populations of large game animals, most of which are now extinct. The waters in these pluvial lakes rose and fell with the season, but were unlikely to have dried completely. A few prehistoric sites have been discovered near the southwestern shore of Tulare Lake, but none in or near the Planning Area and none in the middle San Joaquin Valley. Native American populations were probably widely dispersed hunter-gatherers, and their archaeological assemblages would have consisted of large projectile points with distinctive "fluted" styles and deeply buried features with animal fragments. Such sites would likely be discovered on Late Pleistocene-dated ground surfaces. Within the city, these surfaces are not exposed at the ground surface and would quite probably be deeply buried.

Early and Middle Holocene (11,000 to 7,000 BP - 7,000 to 3,800 BP). Historical analysis set forth the argument that land located between the floodplain of the middle and lower San Joaquin Valley and the lower foothills is covered with a recent and thick blanket (30 feet or more) of alluvium derived

2 Rosenthal, Jeffrey S., et al. 2007. The Central Valley: A View from the Catbird's Seat. *In* California Prehistory: Colonization, Cultural, and Complexity.
3 Moratto, Michael J. 1984. California Archaeology.
4 Fagan, Brian. 2003. Before California. Landham, MD: Rowman & Littlefield.
5 Arnold, et al. 2004. The Archaeology of California. Journal of Archaeological Research 12:1-73.
6 Rosenthal, Jeffrey S., et al. 2007. The Central Valley: A View from the Catbird's Seat. *In* California Prehistory: Colonization, Cultural, and Complexity.
7 San Joaquin River Restoration Program (SJRRP). 2011. *San Joaquin River Restoration Program Draft Program Environmental Impact Statement/Environmental Impact Report*. Available online at: www.usbr.gov/mp/nepa/includes/documentShow.php?Doc_ID=7557 (accessed December 10, 2024).
8 California High Speed Rail Authority. 2012. *California High-Speed Train Project EIR/EIS Merced to Fresno Section*.
9 Hughes, Richard E. 1994. Toward a New Taxonomic Framework for Central California Archaeology: Essays by James A. Bennyhoff and David A. Frederickson. Contributions of the University of California Archaeological Research Facility, No. 52. Berkeley.

from a post-Pleistocene erosion of the western Sierras. Thus, while a few sites from the early Holocene periods are found in upland environments, there are no such dated sites in or very near the Planning Area.

Sites in the nearby foothills exhibit groundstone assemblages suggesting that acorns and pine nuts were harvested when ripe by bands of mobile groups. Comparative ethnographic data suggests that mobile peoples with a seasonal round may have created a home base (village) in winter during these periods, then travelled to exploit pockets of certain resources in temporary encampments. This type of lifeway was likely common for most California peoples except those on the North Coast, and probably continued in a like fashion throughout the Early and Middle Holocene. Differences in lowland and upland sites emerged about 4,500 BP giving the regional populations distinct patterns. Lowland groups may have predominated in the Fresno area during the late Middle Holocene and archaeological sites dated to this time would likely exhibit foodstuff and processing tools more focused on lakeshore resources than grinding implements seen in upland sites. Soil strata found in the northwestern portion of the city has been defined as a Late Pleistocene non-marine alluvial fan covered with a veneer of late Holocene soil. In general, early and Middle Holocene alluvial deposits with cultural resources in them would typically be exposed only after several feet of soil has been removed. Soils near active stream channels are younger and are less likely to exhibit sites from this period except on intact dunes and at some depth. Thus, sites from this period are likely located in the Planning Area, but are more likely to be found at depth after a disturbed topsoil horizon has been removed.

Late Holocene (3,800 to 1,500 BP). This period saw an increase in the number of sites and evidence for an increased sophistication in the toolkit of the local prehistoric groups. Archaeologists often interpret increases in the number of sites dated to a certain period as reflecting an increase in population. Populations existing on flatter areas between braided stream channels near the city and those along the major riverine systems in the middle San Joaquin Valley probably concentrated their lifeways on marsh-based resources. Evidence for trading networks between nearby groups is robust.

The quantity of sites near the south bank of the San Joaquin River (in and near the city limits) is large and several have been investigated.[10] Archaeologists seldom excavate buried sites exhibiting data that might allow a determination of whether or not a prehistoric site "belongs" to one ethnographic group or another, but at the end of this period cultural groups possessing Great Basin-style toolkits began to arrive in California and appear to have begun influencing and/or merging with the existing populations. Local sites saw changes in the toolkit with an overall reduction of projectile point size suggestive of bow and arrow technologies. Previous studies suggest that at about 2,300 years ago, large villages were clustered along the banks of the San Joaquin River and other watersheds (winter villages).[11] Structured social hierarchies are inferred in the archaeological data. Evidence for Late Holocene deposits in and very near the city limits is likely. These would lie upon buried alluvial fans and riverine deposits at shallow depths, and possibly near the exposed surface of vacant properties.

[10] Rosenthal, Jeffrey S., et al. 2007. The Central Valley: A View from the Catbird's Seat. *In* California Prehistory: Colonization, Cultural, and Complexity.

[11] Ibid.

Late Prehistoric (1,500 BP to Contact with the Spanish). With the introduction of Great Basin populations into the Eastern Sierras of California at the beginning of the Late Prehistoric, many of the ancestral California tribes were influenced by their toolkits and lifestyles. Part of this interpretation is derived from linguistic studies. The Yokuts were Penutian speakers, which appear to have arrived earlier, and many of the tribes to the east and southeast were newly arrived Takic or Uto-Aztecan speakers.[12] The Takic speakers exhibited toolkits and lifeways adapted to desert climates. Bow and arrow technologies and the use of pottery are found in sites dating to this period. This period was the zenith of prehistoric California life, with an increase in sophisticated lifestyles, extensive trade networks, and a burgeoning population. The end of the period saw the introduction of Europeans and their diseases of which the local tribes had little defense or resistance. For more information on the Yokuts, see the ethnographic section below.

4.5.1.2 Ethnographic Overview

At the time of European contact, most of the San Joaquin Valley and the foothills of the western slope of the Sierra Nevada were occupied by 40 or so groups classified together as the Yokuts with a Foothills division and a Valley division of language dialects.[13] The Yokuts were recognized as having three major subgroups: the Northern Valley, the Foothill, and the Southern Valley. Each of these ethnolinguistic groups was composed of autonomous, culturally and linguistically related tribes or tribelets. Ethnographic evidence suggests the city is located in part of the Southern Valley Yokuts territory.

Alfred Kroeber divided a Yokuts classification system into Valley Divisions and Foothill Divisions based on ethnographic lines, geographic habitat, and dialect.[14] Here, the Foothill Division's worldview and economy were influenced more by their Shoshonean neighbors than the Valley Division Yokuts. Later, William Wallace divided the Yokuts into three subgroups, Southern Valley, Northern Valley, and Foothill, and shifted the known tribelets among these divisions.[15] The following is a review of ethnographic information associated with the Southern Valley Yokuts.

The Southern Valley Yokuts occupied a rich environment with abundant water resources from the nearby sloughs, lake basins, and river systems. Swamps and tule marshes surrounded the waterways and teemed with wildlife, including aquatic mammals, fish, and waterfowl. Adjacent grasslands provided food for herds of elk, antelope, and (in the winter) deer. The regional flora was equally, if not more, diverse and was used as a main staple of the Yokuts diet. The Southern Valley Yokuts dietary base relied on a mixed strategy of fishing, waterfowl hunting, shellfish, and plant collecting, with less emphasis on large-game hunting. Important vegetal resources included cattail roots,

12 Kroeber. A. L. 1925. *Handbook of the Indians of California* (1976 Diver Edition). Bureau of American Ethnology Bulletin 76, Smithsonian Institution, Washington D.C.

13 Wallace, William J. 1978. Southern Valley Yokuts. *In* Handbook of North American Indians, Vol 8, California. Smithsonian Institution, Washington D.C.

14 Kroeber. A. L. 1925. *Handbook of the Indians of California* (1976 Diver Edition). Bureau of American Ethnology Bulletin 76, Smithsonian Institution, Washington D.C.

15 Wallace, William J. 1978. Southern Valley Yokuts. *In* Handbook of North American Indians, Vol 8, California. Smithsonian Institution, Washington D.C.

grasses, nuts, seeds, tule, and bulbs. The resource-rich environment allowed for permanent village sites, which typically were occupied throughout the year.

Resources not found in the local environment were obtained through an extensive trade network, which had begun to develop during the Late Holocene. Quality stone and wood were lacking in the Valley environment and were often acquired through trade with nearby tribes. Imported items included acorns, salt, obsidian, and seashells, which were exchanged for locally available asphaltum, steatite, and animal skins. The material culture of the Southern Valley Yokuts included structures, watercraft, basketry, weapons, and tools fashioned primarily from local resources. The ubiquitous tule was the primary component used for house construction and other fiber crafts such as basketry, mats, and cradles. Rafts were central to the economy base because of the abundance of waterways, which made watercraft the preferred mode of transportation. Wood, stone, and bone were commonly used to manufacture a variety of tools and weapons. Sweathouses were common to every settlement and, in the case of the Southern Valley Yokuts, were used exclusively by men on a daily basis.

The Southern Valley Yokuts were divided into true tribes, with individual tribelets having their own name, dialect, and territory. Typically, a tribelet was ruled by a central chief who inherited the position, was assisted by one or more aides, and lived in the largest village. The chief's duties included decisions that affected the well-being of the entire tribelet, sanctioning trade, entertaining guests, and arbitration of intra-tribal disputes. Marriage was typically informal, and patrilocality was the accepted practice following marriage. Thus, if a family had numerous sons, a circle of extended family members would inhabit the area immediately adjacent to the patriarch's home. Polygamy was not objected to, but it was practiced solely by men. There is scant evidence that the Southern Valley Yokuts participated in a large number of organized religious ceremonies.

4.5.1.3 Historic Era

Gabriel Moraga was one of the first Europeans to see and explore the Central Valley of California. In 1805, he was ordered by the Spanish Governor to send his cavalry into the Modesto area and Calaveras Rivers, naming both.[16] In 1806, he travelled past the Kings, Merced and Stanislaus watersheds, naming each river. In 1808, he was ordered into the Central Valley once again in search of potential new Mission sites and runaway neophytes. He named a tributary of the San Joaquin during this trip (San Joaquin Creek). It was later discovered that the creek fed into a larger river, which was named San Joaquin River. As Spanish California passed to Mexican control, American trappers increasing began to exploit the region's resources and once gold was discovered, the population rush into California began, with mineral exploration in the mountains and foothills east of the Planning Area. During the latter half of the 19th century, the size of all Yokuts populations dwindled dramatically, due to the spread of European settlements and the diseases the Europeans brought with them.

Mexican Period. With the declaration of Mexican independence in 1821, Spanish control of Alta California ended, although little change actually occurred. Political change did not take place until

[16] Bancroft, Hubert Howe. 1884-1890. *History of California*, 7 vols. The History Company, San Francisco, California.

mission secularization in 1834, when Native Americans were released from missionary control and the mission lands were granted to private individuals. Researchers hypothesize that mission secularization removed the social protection and support on which Native Americans had come to rely. It exposed them to further exploitation by outside interests, often forcing them into a marginal existence as laborers for large ranchos. Following mission secularization, the Mexican population grew as the native population continued to decline. Anglo-American settlers began to arrive in Alta California during this period and often married into Mexican families, becoming Mexican citizens, which made them eligible to receive land grants. In 1846, on the eve of the Mexican-American War (1846 to 1848), the estimated population of Alta California was 8,000 non-natives and 10,000 natives. However, these estimates have been debated.[17] It is estimated that the Native American population was 100,000 in 1850; the U.S. Census of 1880 reports the Native American population as 20,385.

American Expansion. In 1848, California became a United States territory as a result of the Treaty of Guadalupe Hidalgo. Also in 1848, John Marshall found gold at Sutter's Mill, which marked the start of the Gold Rush. The influx of miners and entrepreneurs increased the non-native population of California from 14,000 to 224,000 in just four years. In 1854, gold was discovered in the upper reaches of the Kern River, which brought a tremendous influx of miners into eastern Kern County. This, in turn, stimulated commercial growth in the central and lower San Joaquin Valley as eager entrepreneurs set up business to support the miners and mining operations. Gold and silver were mined along the San Joaquin but the deposits were not large. When the Gold Rush was over, many of the miners settled in the Central Valley communities and established farms, ranches, and lumber mills.

Local History. Mining opportunities allowed the development of very small communities along rivers and streams in the foothills and mountains east and northeast of the city. In 1856, Fresno County was created and the first county seat was located in the foothill community of Millerton. In 1867, the San Joaquin River flooded Millerton and several other small towns along its banks, causing locals to look for a safer place to build a trade center that could serve the whole of the foothills. Named for the Spanish word for "ash tree," Fresno has its roots in the form of a large farm established in 1867 by A.Y. Easterby in an area of what is now central downtown. Moses Church, his partner, began building a water delivery system for this farm and others and began diverting water from the Kings River into the region via a series of ditches. By 1871, Easterby's 5,000-acre ranch featured plots of wheat irrigated by these river-fed "Church ditches." When Central Pacific Railroad Company officials, including Leland J. Stanford, saw the Easterby farm in 1871, legend has it that Stanford declared the area the site of a stop for the new Central California Railroad (Southern Pacific) line. This line was later referred to as the Southern Pacific line, as the Central Pacific Railroad Company became the Southern Pacific Railroad Company in 1884.

Because the railroad followed a northwest-southeast track, the first town site of Fresno Station was built on the Easterby farm paralleling the tracks in 1872, with the upslope portions (east) preferred for development. 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

[17] Cook, S.F. 1976. *The Population of the California Indians 1769-1970*. University of California Press. Berkeley, California.

put in along Section lines in cardinal directions. The need for water to irrigate the arid San Joaquin Valley became a priority for the economic development of Central Valley towns such as Fresno. Agriculture's dominance over ranching was exhibited in 1873 when the California State Legislature passed the "No Fence Law." Under this law, farmers were no longer obligated to put up fences to keep roaming livestock out of their crops; furthermore, any crop destruction became the responsibility of the rancher who owned the offending livestock. 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 20-40 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 Fresno County which drew farmers and their families from Scandinavia and from across the United States.

Church's Fresno Canal and Irrigation Company, a predecessor of the Fresno Irrigation District, began expanding in 1876 in response to locals moving into the area near the railroad stop; this became the first extensive irrigation system in the Central Valley. Agricultural colonies were developed and water rights for those colonies established. The expanding irrigation system led to a shift in both the types of crops grown and the size of a typical farm. Pioneers initially grew wheat and other grain crops or raised cattle. As irrigation water became more readily available, individual farmers realized that premium crops like grapes, citrus, and tree fruit could be profitably grown on lots as small as 20 acres.[18]

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; development was concentrated at Mariposa and H Street. Development of the infrastructure needed to support increases in agricultural and commercial industry soon followed and once diversity of industry began, immigrant populations also began to increase. Chinese, Japanese, Armenian and Volga Germans began to arrive and settle. By 1900, Fresno held 12,000 people.

Fresno County's first lumber mill was constructed in 1852, with 23 new mills following soon after. Wood flumes, some measuring more than 50 miles in length, were built by large lumber companies to transfer logs from the mills in the mountains to Fresno for rail transport. In 1921, the Sugar Pine Lumber Company (Sugar Pine) was incorporated: the goal was to harvest the vast sugar pine strands of the Sierra Nevada east of Fresno. Sugar Pine located its mill on a 574-acre tract overlooking the San Joaquin River north of Fresno. Fresno County historian Charles Clough called Pinedale "the largest [lumber mill] in the world at that time" with the capacity to cut 600,000-board feet and send out forty boxcars of lumber per day (Clough 1963, 1986).

As Fresno grew from its founding as a regional agricultural center, municipal infrastructure and amenities also increased. One of the first projects to build Fresno's infrastructure was the electric intra-urban railway. By 1905, Fresno Traction Company had laid 15.5 miles of track on Fresno streets before being purchased in 1910 by Southern Pacific Railroad. In addition, the Fresno Traction

[18] The Planning Center. 2010. *Fresno El Paseo Environmental Impact Report*. Prepared for the City of Fresno.

Company built an amusement park on eight acres of San Joaquin River bottomland eleven miles from downtown Fresno named Fresno Beach. They extended the tracks to the beach in 1913. The Fresno Beach route was terminated at Herndon Avenue in 1930 due to increasing automobile use. Fresno Traction Company continued to cut back all of its routes and in 1939 streetcar service in Fresno ended.

The founding and expansion of Fresno in the late 19th Century plus the extensive developments before World War I has left its mark on the setting of the city, its cultural and physical enclaves, the names of streets, and how the suburban areas of the city expanded and changed. Numerous project-level historical studies have taken place in the city during the last ten years (Bungalow Courts 2004; Chinatown Survey 2006; Germantown Historical Context 2006; Arts and Culture District 2006-7; Pinedale 2007; Mid-Century Modern Historic Context 2008; North Park 2008; South Stadium 2008; Wilson Island 2009; Downtown Fresno (Fulton Corridor) Historic Resources Survey 2011, amended 2014; Huntington Boulevard 2015; South Van Ness Industrial District Historic Survey 2015; Re-survey of Potential L Street Historic District 2018), and each have focused on the background history of specific areas in the city. Future historical research is likely to occur at neighborhood analytical levels because of the City's status as a NPS-SHPO Certified Local Government.

The first three decades of the 20th Century were a period of steady growth and increasing prosperity for Fresno during which the city established itself as the primary city of the San Joaquin Valley. The city's first electric streetcar was in use in 1902. By 1909, the first double-track streetcar line was installed along J Street (now Fulton Street). By the early 1920s, streetcar lines would radiate out from the central business district to the north, east, south, and west where farmland was being subdivided for suburban development. The expanding transit infrastructure, along with exponentially increasing private automobile ownership, made living further from the city center possible. Land within the central city increasingly became used for commercial and civic purposes.

By the end of the 1920s, Fresno had transformed into a thriving city at the center of the United States most productive agricultural region. The downtown was fully established as the San Joaquin Valley's primary marketplace offering office, retail, lodging, dining, and entertainment facilities. Adjacent industrial activity enabled agricultural goods to be processed and shipped to distant consumers. The central city's residential areas had largely been developed. Residential properties were increasingly redeveloped for commercial uses as the city's wide-ranging streetcar system and increased private automobile ownership allowed more of Fresno's citizens to live outside of the city center. Fresno, along with the nation, appeared increasingly prosperous. Then on November 24, 1929, the New York Stock Exchange crashed and millions of dollars in stock value vanished. The stock market crash exposed structural weaknesses in the banking and finance systems, key industries, and the economy as a whole, ushering in the Great Depression.

The Great Depression had a profound effect on the San Joaquin Valley. Farmers were forced to cut costs in the face of reduced demand for their products; many were forced into foreclosure. Along with the rest of the country, unemployment skyrocketed. The Valley's problems were exacerbated by the influx of migrant refugees or "Dust Bowl" migrants. It is believed that 2.5 million people migrated from the Midwestern Plains states between 1930 and 1940, with over 300,000 relocating to California just between 1930 and 1934. Thousands more would continue to arrive throughout the 1930s and many ended up in the Central Valley as migrant farm workers earning very low wages.

On December 7, 1941, the Japanese attacked Pearl Harbor and the United States officially entered World War II. The United States' entrance into the War effectively ended the Depression in California as all aspects of the national economy mobilized to serve the war effort. California received almost 12% of the government war contracts and produced 17% of all war supplies. California also acquired more military installations than any other state by a wide margin, and military bases were opened throughout the state. Aircraft, shipbuilding, and numerous other industries were booming due to the war effort, and unemployment was virtually eliminated.

Approximately 60,000 service members were stationed in and around Fresno during the War. Military activity was concentrated at two locations. One, the Hammer Field bomber base, was constructed in 1941 just beyond what was then the eastern boundary of the city. Today it is the site of Fresno Yosemite International Airport. The second, Camp Pinedale, was located six miles north of Downtown Fresno in the (then) unincorporated community of Pinedale on the site of the defunct Sugar Pine Lumber Company. The Army had acquired the site in March of 1942 for use as an Army Signal Training School.

Following World War II, the passage of the G.I. Bill enabled returning veterans to purchase homes and establish businesses, prompting another period of rapid expansion. The Mayfair subdivision, completed in 1947 northeast of the Project Area, included Fresno's first suburban shopping mall and ushered in an era of development at the suburban fringe. Between 1940 and 1950, the city's population grew by 30,000, with much of the growth accommodated in new auto-oriented suburbs. The Interstate Highway Act of 1956 served to spur development of suburbs, and ultimately led to the economic decline of many inner cities.

By the mid-1950s, however, the results of rapid suburbanization were becoming evident in Downtown Fresno as major retailers such as Sears & Roebuck relocated to newly developed suburban shopping centers such as Manchester Center (1955) and Fig Garden Village (1956). The downtown core was continually being bypassed as a place to locate new businesses. With Downtown unable to compete with burgeoning suburban development, construction of new buildings in Downtown Fresno came to a virtual halt.

Historic-Era Architectural Styles in Fresno. Fresno is home to a diversity of architectural styles that include Victorian, Period Revival (Colonial, Italian, Renaissance, Mission, Mediterranean, Spanish, and Tudor), Neoclassical, Craftsman Bungalow, Streamline Moderne, Beaux-Arts, Art Deco, International, Mid-Century Modern, and Ranch among others. While styles focus upon a collection of specific decorative features; types are based on form. Considered a distinctly American type, the Prairie Box—also known as the American Foursquare— was popular in Fresno in the early 20th Century.

Beginning in the early 20th century the city's downtown was completely transformed: the elegant "Victorian" style blocks and hotels were demolished or in the case of smaller buildings were eventually refaced with a "modern" storefront. What emerged was a more "rational" Classical Revival city, one influenced by the latest trends in architectural design emanating from American cities such as New York, Chicago, and San Francisco, as well as Paris, France. One of the first "high-rise" Neoclassical office buildings in Fresno was the Griffith-McKenzie Building, also known as the Helm Building, a 10-story steel frame structure constructed in 1914 and designed by the San

Francisco architect George Kelham. Other buildings of note include two buildings constructed in 1912: the Hotel Fresno, which is included on the National Register, and is a 7-story Neoclassical building; and the Rowell Building, a 6-story Renaissance Revival building.

Numerous office buildings followed suit, many of them designed and constructed by the R.F. Felchlin Company. The building boom in downtown was halted in mid-1930 as the Depression began to sink in. Many of the downtown buildings that survived relatively intact are listed on Fresno's Local Register of Historic Resources.[19] There are also 26 National Register-listed structures in the downtown core.

Although farming and ranching remain at the economic forefront, its place in central California means that Fresno is an excellent location for industrial complexes and distribution centers. In addition, its central location and less expensive housing prices offer opportunities for expansion.

4.5.1.4 Known Prehistoric Resources

Review of documents at the SSJVIC and from on-line sources show that no previous prehistoric site or artifact has been recorded within the Planning Area, which covers approximately 106,027 acres. Since prehistoric deposits are typically detected by surveying archaeologists during the planning stages of a project, the lack of recorded deposits is not surprising. Additional reviews of various historic newspaper archive websites shows that no references to a Native American discovery within the city limits has been noted in an archived newspaper, such as the Fresno Bee. This is somewhat unusual for a California city, but not unique. Review of studies prepared for development projects located within the city show that little information is provided regarding the possibility that prehistoric resources might be uncovered during construction-related earthmoving.

As shown above in the historical and geological setting of the city, except near the San Joaquin River, most parts of the City are clearly not conducive to deposition or preservation of surface prehistoric resources at the modern ground surface. Slawson and Kay identified that the City is located in areas that might have had good potential for archaeological deposits, and that such deposits may have been damaged by development and farming practices. Citywide, an accurate assessment of resource sensitivity for prehistoric resources cannot be established at the present time. Based on existing data, the sensitivity for prehistoric cultural resources to be uncovered within the Planning Area is not certain because there has been a limited amount (approximately 0.3 percent) of land in the Planning Area surveyed. Upstream and downstream of the Planning Area, the banks of the San Joaquin River are known to contain prehistoric archaeological sites. This is because the river channel has carved a 50-70 foot deep cut into the surrounding alluvium since the end of the Pleistocene, and the banks of permanent rivers in the Central Valley of California have a much greater chance to contain buried or otherwise undiscovered prehistoric resources compared to areas subject to regular flooding.

The portion of the Planning Area that extends from the south bank of the San Joaquin River to approximately one-mile south of the River is identified as having a high sensitivity for buried prehistoric resources. Because most lands in the remainder of the Planning Area have been built

[19] City of Fresno. Planning and Development, Historic Preservation. Website: https://www.fresno.gov/planning/historic-preservation/#database (accessed December 10, 2024).

upon or disturbed by farming, it is difficult to predict when prehistoric resources will be uncovered as a result of new development. Researchers have shown that when reliable water is available, prehistoric people may have lived nearby and exploited local resources. They could have built permanent villages. Based on the geological study provided in Appendix F, it may be possible to detect certain types of Pleistocene and Holocene ground surfaces once the disturbed horizons have been removed by earthmoving equipment during development activities. Finally, the Native American Heritage Commission characterized the city of Fresno as being "very sensitive" for potential impacts to Native American sacred sites and prehistoric deposits.

4.5.1.5 Known Historical Resources

The city of Fresno has experienced extensive growth since the 1800s when the railroad arrived and the broad plain between the Kings and San Joaquin Rivers was hand-cleared of brush and native grasses. As agricultural commerce strengthened, most of the downtown area was transformed from little farms and railroad-supply businesses, to a burgeoning agricultural center, then to the development of Victorian style blocks with grand hotels, to more modern styles evidenced in many Classical Revival buildings.

The City of Fresno retains many of its historically significant buildings and structures through listings on various registers; local and national. Within the Planning Area there are 33 historical resources listed on the National Register of Historic Places,[20] and 277 existing structures[21] that are designated by the City on the Local Register of Historic Resources. Additionally, there are 29 Heritage Properties, which are not Historic Resources for the purposes of the City's Historic Preservation Ordinance but could potentially be treated as historical resources for the purposes of CEQA at the City's discretion.[22] The City identifies four historic districts: the Porter Tract (near Fresno City College), the Wilson Island (located within the Tower District), Huntington Boulevard (near Roosevelt High School), and the Chandler Airfield/Fresno Municipal Airport.[23]

Unlike the analysis of prehistoric resources, a process for establishing the significance of individual buildings and historic districts was mandated by the City in 1979 in the form of a Historic Preservation Ordinance, which was updated in 1999. The Ordinance has resulted in the identification of over 2,000 older structures within the city limits, and as the city ages more historic era properties are added to the databases each year.

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20 National Register, 2024.

21 City of Fresno. Planning and Development, Historic Preservation. Website: https://www.fresno.gov/planning/historic-preservation/#database (accessed December 10, 2024).

22 Historic Fresno. 2019. A Guide to Historic Architecture in Fresno, California. Website: www.historicfresno.org/heritage/index.htm (accessed December 10, 2024).

23 City of Fresno. Planning and Development, Historic Preservation. Website: https://www.fresno.gov/planning/historic-preservation/#database (accessed December 10, 2024).

4.5.1.6 Native American Consultation

On June 16, 2025, the City sent notification letters to 12 tribes, including 2 tribes that have requested to be notified of projects in accordance with Assembly Bill (AB) 52. Appendix D includes the Native American consultation information.

4.5.2 Regulatory Setting

4.5.2.1 Federal Policies and Regulations

National Historic Preservation Act. The National Historic Preservation Act of 1966 (NHPA) is the most concise and effective federal law dealing with historic preservation. Federal preservation law does not apply to the purpose of this analysis but a short review of the legislation is needed because the State and Local requirements have been derived from this legislation. 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) which pertain to all projects that are funded, permitted, or approved by any federal agency and which have the potential to affect cultural resources. In addition, the NHPA authorizes the Secretary of the Interior to establish a National Register of Historic Places (The National Register). The Register 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 National Register is wholly maintained by the National Park Service, the Advisory Council on Historic Preservation, and the State Office of Historic Preservation (SHPO) and grants-in-aid programs.

According to the National Park Service (NPS) and the State Historic Preservation Office (SHPO), the City is a Certified Local Government (CLG). The CLG program is a preservation partnership between local, state and national governments focused on promoting historic preservation at the grass roots level. The program is jointly administered by NPS and SHPO, with each local community working through a certification process to become recognized as a CLG. CLG's become an active partner in the Federal Historic Preservation Program and the opportunities (and funding) it provides.

4.5.2.2 State Policies and Regulations

California Register of Historical Resources. The California Register of Historical Resources (California Register or CRHR) is an inventory of significant architectural, archaeological, and historical resources in the State of California. Important cultural resources can be listed in the California Register through a number of methods, and listing requires approval from the State Historical Resources Commission. Properties can be nominated to the California Register by local governments, private organizations, or citizens. State Historical Landmarks and National Register-listed properties gain automatic listing in the California Register. The evaluative criteria used by the California Register for determining eligibility are closely based on those developed by the National Park Service for the National Register of Historic Places. In order for a cultural resource to be significant, or in other words eligible, for listing in the California Register, 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.

- 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.

However, only significant historical resources need to be addressed. 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.
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]).

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 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 an 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 meet the requirements of PRC Sections 5020.1(k) and 5024.1(g).

Significant Historical Resources under CEQA Guidelines. In completing an analysis of a project under CEQA, it must first be determined if the project site possesses a historical resource. A site may qualify as a historical resource if it falls within at least one of four categories listed in CEQA Guidelines Section 15064.5(a). The four categories are:

1. A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code Section 5024.1, Title 14 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 Public Resources Code or identified as significant in an historical resource survey meeting the requirements of section 5024.1 (g) of the Public Resources Code, 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 which 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 an 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 California Register of Historical Resources (Pub. Res. Code SS5024.1, 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, 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 California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Pub. Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the Pub. Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Pub. Resources Code 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 California Register (Category 1) as an historical resource for CEQA purposes. In general, a resource that meets any of the other three criteria listed in 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."

State Health and Safety Code. The discovery of human remains is regulated according to California Health and Safety Code Section 7050.5, which states that 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 precontact, the Coroner will notify the NAHC, which will determine and notify the 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.

California Government Code 65352.3-5: Local Government-Tribal Consultation. California Government Code Sections 65092, 65351, 65352, 65352.3, and 65352.4, formally known as Senate Bill (SB) 18, regulate the consultation with California Native American tribes having traditional lands located within the jurisdiction of applicable cities and counties. The intent of the underlying legislation was to provide all California Native American tribes that are on the contact list maintained by the NAHC, an opportunity to consult with specific local governments for the purpose of preserving and protecting their sacred places. Such consultations apply to the preparation, adoption, and amendment of general plans.

Senate Bill 18. SB 18, signed into law in September 2004, requires local (city and county) governments to consult with California Native American tribes to aid in the protection of traditional tribal cultural places through local land use planning. 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. The consultation and notice requirements apply to adoption and amendment of both general plans (Government Code Section 65300 et seq.) and specific plans (Government Code Section 65450 et seq.). Specifically, Government Code Section 65352.3 requires local governments, prior to making a decision to adopt or amend a general plan, to consult with California Native American tribes identified by the NAHC for the purpose of protecting or mitigating impacts to cultural places. As previously discussed, the NAHC is the State agency responsible for the protection of Native American burial and sacred sites.

Assembly Bill 52. Assembly Bill (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 a Notice of Preparation (NOP) for an EIR or Notice of Intent (NOI) to adopt a Negative or Mitigated Negative Declaration on or after July 1, 2015. AB 52 adds tribal cultural resources (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 California Register, 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 Lead Agencies to consult with Native American tribes, if requested by the tribe, and sets the principles for conducting and concluding consultation.

4.5.2.3 Local Policies and Regulations

City of Fresno General Plan. The City of Fresno's General Plan Historic and Cultural Resources Element includes objectives and policies that work to identify and preserve Fresno's historic and cultural resources that reflect important cultural, social, economic, and architectural features. The following policies related to biological resources are applicable to the proposed project:

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

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

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

Policy HCR-2-a: Identification and Designation of Historic Properties. Work to identify and evaluate potential historic resources and districts and prepare nomination forms for Fresno's Local Register of Historic Resources and California and National registries, as appropriate.

Policy HCR-2-b: Historic Surveys. Prepare historic surveys according to California Office of Historic Preservation protocols and City priorities as funding is available.

Policy HCR-2-c: Project Development. Prior to project approval, continue to require a project site and its Area of Potential Effects (APE), without benefit of a prior historic survey, to be evaluated and reviewed for the potential for historic and/or cultural resources by a professional who meets the Secretary of Interior's Qualifications. Survey costs shall be the responsibility of the project developer. Council may, but is not required, to adopt an ordinance to implement this policy.

Policy HCR-2-d: Native American Sites. Work with local Native American tribes to protect recorded and unrecorded cultural and sacred sites, as required by State law, and educate developers and the community-at-large about the connections between Native American history and the environmental features that characterize the local landscape.

Policy HCR-2-f: Archaeological Resources. Consider State Office of Historic Preservation guidelines when establishing CEQA mitigation measures for archaeological resources.

Policy HCR-2-n: Property Database and Informational System. Identify all historic resources within the city designated on the Local, State, or National register, and potential significant

resources (building, structure, object or site) in existence for at least 45 years, and provide this information on the City's website.

Objective HCR-3: Promote a "New City Beautiful" ethos by linking historic preservation, public art, and planning principles for Complete Neighborhoods with green building and technology.

Policy HCR-3-c: Context Sensitive Design. Work with architects, developers, business owners, local residents and the historic preservation community to ensure that infill development is context-sensitive in its design, massing, setbacks, color, and architectural detailing.

Municipal Code

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

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

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

1. **Heritage Properties.** These are defined as a resource which is worthy of preservation because of its historical, architectural or aesthetic merit but which is not proposed for and is not designated as an Historic Resource under the ordinance.

2. **Historic Resources.** These are defined as any building, structure, object or site that has been in existence more than fifty years and possesses integrity of location, design, setting, materials, workmanship, feeling and association, and is associated with events that have made a significant contribution to the broad patterns of city history, or is associated with the lives of persons significant in our past, or embodies the distinctive characteristics of a type, period or method of construction, or represents the work of a master or possesses high artistic values; or has yielded, or may be likely to yield, important information in prehistory

or history; and has been designated as such by the Council pursuant to the provisions of the Ordinance.

3. **Local Historic Districts.** These are defined as any finite group of resources related to one another in a clearly distinguishable way or any geographically definable area which possesses a significant concentration, linkage or continuity of sites, buildings, structures or objects united historically or aesthetically by plan or physical development. The Local Historic District must be significant as well as identifiable and it must meet Local Register Criteria for listing on that Register. Contributors to Historic Districts are defined as any Historic Resource that contributes to the significance of the specific Local Historic District or a proposed National Register Historic District under the criteria set forth in the Ordinance.

4. **National Register Historic Districts**, which shall mean any finite group of resources related to one another in a clearly distinguishable way or any geographically definable area which possesses a significant concentration, linkage or continuity of sites, buildings, structures or objects united historically or aesthetically by plan or physical development. A National Register Historic District must be significant as well as identifiable and it must meet National Register Criteria for listing on that Register. Contributors to a National Register Historic District are defined as any individual Historic Resource which contributes to the significance of a National Register Historic District under the criteria set forth in the Ordinance.

4.5.3 Impacts and Mitigation Measures

The following section presents a discussion of the impacts related to cultural and tribal cultural resources that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds to determine if an impact is significant. The latter part of this section presents the impacts associated with implementation of the proposed project and the recommended mitigation measures. Mitigation measures are recommended, as appropriate, for significant impacts to eliminate or reduce them to a less than significant level. Cumulative impacts are also addressed.

4.5.3.1 Significance Criteria

Based on *State CEQA Guidelines* Appendix G, the proposed project would have a significant impact on cultural resources and tribal cultural resources if it would:

a. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5;

b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5;

c. Disturb any human remains, including those interred outside of dedicated cemeteries;

d. Result in a substantial adverse change in the significance of a TCR, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the

size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- Listed or eligible for listing in the California Register or in a local register of historical resources as defined in PRC Section 5020.1(k), or

- A resource determined by the Lead Agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the Lead Agency shall consider the significance of the resource to a California Native American tribe.

4.5.3.2 Project Impacts

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

CUL-1 The project could cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.

Known historical resources are located primarily in Downtown Fresno because this is the area where development of the city began in the mid-1800s. These known resources meet the definition of historical resource under CEQA Section 15064.5(a). As discussed previously, there are 33 historical resources listed on the National Register of Historic Places, 31 historical resources listed on the California Register of Historic Resources, and 277 existing structures that are on the Local Register of Historic Places. There are also 29 Heritage Properties, which are not Historic Resources for the purposes of the City's Historic Preservation Ordinance but could potentially be treated as historical resources for the purposes of CEQA at the City's discretion. In addition to the individual resources, there are four designated Local Historic Districts within the Planning Area. As additional surveys for potential historical resources are prepared, such as the surveys that were prepared for the Fulton Corridor Specific Plan in Downtown Fresno, additional resources may be added to the various lists. Many areas of Downtown, as well as other locations within the Planning Area, have not been surveyed. As a result, only a portion of the resources in the Planning Area are known.

As land uses are built out in accordance with the approved General Plan, the growth that would occur within the Planning Area would include infill development and buildout of rural, agricultural, and undeveloped areas. As the density and intensity increases in the existing urban areas, there is a possibility that the new development could result in demolition or substantial alterations of historical or potentially historical buildings and structures. In addition to land use development, infrastructure and other public works improvements could result in demolition or substantial alterations of historical resources.

To reduce the potential impacts on historical resources, there are federal, State, and local regulations. These regulations are discussed above in Section 4.5.2. The City of Fresno Historic Preservation Ordinance provides a process to preserve, promote, and improve the Historic Resources and Historic Districts within its jurisdiction. In addition to the Historic Preservation Ordinance, the approved General Plan includes the following objective HCR-1 and Policy HCR-1-c,

Objective HCR-2 and Policies HCR-2-a through HCR-2-d, HCR-2-f, HCR-2-g, Objective HCR-3, and Policy HCR-3-c to preserve historic resources.

Future transportation improvements funded by the proposed program would be City-initiated or implemented as part of future development projects. All future improvements would be required to undergo separate environmental review under CEQA (e.g., preparation of a Categorical Exemption, Mitigated Negative Declaration, or Environmental Impact Report). Thus, cultural resource assessments, including historical assessments, may be required to analyze project-specific impacts on historical resources as defined under CEQA Guidelines Section 15064.5; refer to Mitigation Measure CUL-1. Implementation of Mitigation Measure CUL-1 would ensure a historical resources assessment is conducted by a qualified architectural historian or historian to evaluate the site for any previously unrecorded potential historical resources that could be impacted by the transportation improvement. Thus, upon implementation of Mitigation Measure CUL-1, the proposed program would not result in significant impacts to historical resources.

Mitigation Measure CUL-1

To ensure identification and preservation of potentially historic resources (as defined by CEQA Guidelines Section 15064.5 as a resource listed in, eligible for listing in, or listing in the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), or local register), each transportation improvement funded by the proposed Vehicle Miles Traveled Reduction Program subject to California Environmental Quality Act (CEQA) review (meaning, subject to discretionary action and non-exempt from CEQA) shall be conditioned as follows: prior to any construction activities that could impact potential or previously identified historical resources, the project proponent shall provide a historical resources assessment performed by an architectural historian or historian who meets the Secretary of the Interior's Professional Qualification Standards for architectural history or history (as defined in 48 Code of Federal Regulations 44716) to the City of Fresno Planning and Development Department for review and approval. The historical resources assessment shall include a records search at the Southern San Joaquin Valley Information Center (SSJVIC) and a survey in accordance with the California Office of Historic Preservation (OHP) guidelines to identify any previously unrecorded potential historical resources that may be potentially affected by the proposed project. If a historical resource is identified on-site, the resource shall be avoided to the extent feasible.

If relocation, rehabilitation, or alteration of a historical resource is required, the project proponent shall utilize the Secretary of the Interior's Standards for the Treatment of Historic Properties to the maximum extent feasible to ensure the historical significance of the resource is not impaired.

If demolition or significant alteration of a historical resource is required, the resource shall be evaluated, and/or designated in the NRHP, CRHR, or local register, and recordation shall take the form of Historic American Buildings Survey (HABS), Historic American Engineering Record (HAER), or Historic American Landscape Survey (HALS) documentation, and shall be performed by an architectural historian or historian who meets the Secretary of the Interior's Professional Qualification Standards. Recordation shall meet the Secretary of the Interior's Standards and Guidelines for Architectural and Engineering, which defines the products acceptable for inclusion in the HABS/HAER/HALS collection at the Library of Congress. The specific scope and details of documentation shall be developed at the project level in coordination with the City of Fresno Planning and Development Department and performed prior to the first issuance of any demolition, building, or grading permits.

Level of Significance With Mitigation: Less Than Significant Impact with Mitigation Incorporated.

CUL-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.

As stated, several locations within the City and surrounding area have known archaeological resources. Based on previously completed cultural resource surveys historical/archaeological sites have been discovered within the General Plan Planning Area. While future transportation improvement projects funded by the VMT Reduction Program would be largely focused within developed areas and within or adjacent to existing rights-of-way, the proposed improvements could still adversely impact previously unknown archaeological resources. For example, resources may be preserved within native soils below disturbances associated with existing commercial, residential, or other developments.

Future transportation improvements funded by the proposed project would be required to undergo separate environmental review under CEQA. Depending on the nature of future improvements, the City may require preparation of a cultural resources assessment to evaluate project- and site-specific impacts on potential archaeological resources. Implementation of Mitigation Measure CUL-2.1 would ensure a cultural resources assessment is prepared, if required by the City, and that the potential impacts to unknown archaeological resources are reduced to the greatest extent feasible. Additionally, if a resource is unearthed during any excavation and grading activities, Mitigation Measure CUL-2.2 would require earth-disturbing activities to halt within a 100-meter radius of the find and the project proponent shall retain a qualified archaeologist to evaluate the significance of the find and appropriate course of action. As such, the proposed program would not result in significant impacts to archaeological resources. Impacts in this regard would be less than significant.

Mitigation Measure CUL-2.1 To ensure identification and preservation of archaeological resources within the City of Fresno, each transportation improvement funded by the proposed Vehicle Miles Traveled Reduction Program subject to California Environmental Quality Act

(CEQA) review (meaning, subject to discretionary action and non-exempt from CEQA) shall be screened by the City of Fresno Planning and Development Department to determine whether a Cultural Resources Assessment is required. Screening shall consider the type of project and whether ground disturbances will occur. Ground disturbances include activities such as grading, excavation, trenching, boring, or demolition that extend below the current grade. If there will be no ground disturbance, then a Cultural Resources Assessment shall not be required. If there will be ground disturbances, prior to issuance of any permits required to conduct ground disturbing activities, the City may require a Cultural Resources Assessment be conducted under the supervision of an archaeologist that meets the Secretary of the Interior's Professionally Qualified Standards in either prehistoric or historic archaeology.

The Cultural Resources Assessment shall include a California Historical Resources Information System (CHRIS) records search conducted through the Southern San Joaquin Valley Information Center (SSJVIC) and Sacred Land Files (SLF) search through the Native American Heritage Commission (NAHC), review of historical maps, and a Phase I (intensive) pedestrian survey to assess the likelihood for buried archaeological resources to occur. The Cultural Resources Assessment shall meet or exceed standards in the Office of Historic Preservation's Archaeological Resource Management Reports (ARMR): Recommended Contents and Format (1990) and Guidelines for Archaeological Research Designs (1991).

Mitigation Measure CUL-2.2 In the event that cultural resources are unearthed during excavation and grading activities of any future transportation improvement project funded by the proposed program, the construction contractor shall cease all earth-disturbing activities within a 100-meter radius of the find and the project proponent shall retain a qualified archaeologist that meets the Secretary of the Interior's Professionally Qualified Standards in either prehistoric or historic archaeology to evaluate the significance of the finding and appropriate course of action. Salvage operation requirements pursuant to Section 15064.5 of the CEQA Guidelines shall be followed. After the find has been appropriately mitigated, work in the area may resume.

Level of Significance With Mitigation: Less Than Significant Impact with Mitigation Incorporated.

CUL-3 The project would not disturb any human remains, including those interred outside of dedicated cemeteries.

The majority of future transportation improvements funded by the proposed program would occur within existing rights-of-way in developed areas of the City. As such, it is not anticipated that human remains, including those interred outside of formal cemeteries, would be encountered during earth removal or ground-disturbing activities. Nonetheless, if human remains are found, those remains would require proper treatment, in accordance with applicable laws. State of California Public Resources Health and Safety Code Section 7050.5 through 7055 describe the general provisions for human remains. Specifically, Health and Safety Code Section 7050.5 describes the requirements if any human remains are accidentally discovered during excavation of a site. As required by State law, the requirements and procedures set forth in Section 5097.98 of the California Public Resources Code would be implemented, including notification of the County Coroner, notification of the Native American Heritage Commission, and consultation with the individual identified by the Native American Heritage Commission to be the most likely descendant. If human remains are found during excavation, excavation must stop near the find and any area that is reasonably suspected to overlay adjacent remains until the County Coroner has been called out, the remains have been investigated, and appropriate recommendations have been made for the treatment and disposition of the remains. Following compliance with the aforementioned regulations, impacts related to the disturbance of human remains are less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

CUL-4 The project would not result in a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- **Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k), or**
- **A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.**

As previously described in Section 4.5.2.2, 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 California Register, or included in a local register of historical resources, or if the City of Fresno, acting as the lead agency, supported by substantial evidence, chooses at its discretion to treat the resources as a TCR.

On June 16, 2025, compliant with AB 52 the City provided formal notification to interested Native American tribes that may be culturally or traditionally affiliated with the project area and vicinity to

conduct consultation. The City sent formal notification to 12 tribes, including 2 tribes that have requested to be notified of projects in accordance with AB 52. None of the 12 tribes contacted responded via letter or telephone prior to publication of the Draft EIR. Consultation letters are included in Appendix D of this EIR.

As discussed under impact discussions CUL-1, CUL-2, and CUL-4, impacts from future development within Fresno could impact unknown archaeological resources including Native American artifacts and human remains. Impacts would be reduced to a less-than-significant level with implementation of Mitigation Measures CUL-1, CUL-2.1 and CUL-2.2.

While the proposed VMT Reduction Program does not involve any development, future transportation improvements implemented in accordance with the program could impact tribal cultural resources during ground-disturbing activities. All future transportation improvements funded by the proposed program would similarly require separate environmental review under CEQA (e.g., preparation of a Categorical Exemption, Mitigated Negative Declaration, or Environmental Impact Report). Should future projects require compliance with AB 52, consultation with Native American tribes would occur at a later date and project specific information (e.g., site plans and grading plans) would be available to more accurately determine whether the project could result in potentially significant impacts to tribal cultural resources and help identify appropriate mitigation measures. As such, impacts to tribal cultural resources associated with the adoption of the VMT Reduction Program itself would be less than significant.

Mitigation Measures: Refer to Mitigation Measure CUL-1 and Mitigation Measure CUL-2.

Level of Significance: Less Than Significant Impact with Mitigation Incorporated.

4.5.3.3 Cumulative Impacts

Future cumulative development projects developed in accordance with the General Plan would be required to undergo project-specific environmental review under CEQA and the City's discretionary review process to determine potential impacts to historical resources, archaeological resources, and tribal cultural resources and identify any required mitigation.

As stated, all future transportation improvements funded by the proposed program would similarly require separate environmental review under CEQA to evaluate project-level potential impacts to historical resources and to identify any required mitigation. Implementation of Mitigation Measure CUL-1, CUL-2.1, and CUL-2.2 would ensure a historical resources assessment is prepared to identify any previously unrecorded historic resources and evaluate impacts of future transportation improvements on such resources. Thus, the proposed program would not cumulatively contribute towards potentially significant impacts with other development in accordance with the General Plan, and less-than-significant cumulative impacts related to cultural resources and tribal cultural resources would occur.

Mitigation Measure: Refer to Mitigation Measures CUL-1, CUL-2.1, and CUL-2.2.

Level of Significance With Mitigation: Less Than Significant Impact with Mitigation Incorporated.

4.6 ENERGY

This section discusses energy use resulting from the proposed project and 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 Existing Environment Setting

4.6.1.1 Study Area for Project Impacts

The study area for project impacts regarding energy is the City of Fresno Planning Area.

4.6.1.2 Study Area for Cumulative Impacts

The study area for the analysis of cumulative energy impacts is the Pacific Gas and Electric's (PG&E) service area that spans approximately 70,000 square miles from Eureka in the north to Bakersfield in the south and from the Pacific Ocean in the west to the Sierra Nevada in the east.

4.6.1.3 Energy Resources

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, or nuclear resources) into energy. Electricity is used for a variety of purposes (e.g., lighting, heating, cooling, and refrigeration, and for operating appliances, computers, electronics, machinery, public transportation systems and electric vehicles).[1]

According to the most recent data available, in 2023, California's electricity was generated primarily by natural gas (43.68 percent), coal (0.1 percent), large hydroelectric (12.6 percent), nuclear (8.2 percent), and renewable sources (56.1 percent). Total electric generation in California in 2023 was 215,623 gigawatt-hours (GWh).[2]

Total system electric generation is the sum of all utility-scale in-state generation plus net electricity imports. In 2023, total generation for California was 281,140 gigawatt-hours (GWh), down 2.1 percent (6,080 GWh) from 2022. California's non-CO2 emitting electric generation categories (nuclear, large hydroelectric, and renewables) accounted for 58 percent of total generation, compared to 54 percent in 2022. California's wide variety of climate and weather systems play a large role in how the various generation resources shape the annual power mix.[3]

The project site receives its electricity from PG&E. According to the California Energy Commission (CEC), total electricity consumption in the PG&E service area in 2022 was 104,695.0 GWh (35,245.7

1 United States Energy Information Administration. 2023. Electricity Explained. Website: https://www.eia.gov/energyexplained/electricity/ (accessed April 2025).
2 California Energy Commission (CEC). 2023. 2023 Total System Electric Generation. Website: https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2022-total-system-electric-generation (accessed April 2025).
3 Ibid.

GWh for the residential sector and 69,449.3 GWh for the nonresidential sector).[4] Total electricity consumption in Fresno County in 2022 was 8,384.4 GWh (3,170.5 GWh for the residential sector and 5,213.9 for the nonresidential sector).[5]

Natural Gas. Natural gas is a non-renewable fossil fuel. Fossil fuels are formed when layers of decomposing plant and animal matter are exposed to intense heat and pressure under the surface of the Earth over many 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. Natural gas is used for a variety of uses (e.g., heating buildings, generating electricity, and powering appliances such as stoves, washing machines and dryers, gas fireplaces, hot water heaters and gas grills).[6]

According to the United States Energy Information Administration, in 2023, natural gas consumed in California was used for electricity generation (30.4 percent), residential uses (22.1 percent), industrial uses (30.6 percent), commercial uses (12.3 percent), and transportation uses (1.5 percent).[7]

PG&E is the natural gas service provider for the project site. According to the CEC, total natural gas consumption in the PG&E service area in 2022 was 4,421.6 million therms (1,856.1 million therms for the residential sector and 2,565.5 million therms for the nonresidential sector).[8] Total natural gas consumption in Fresno County in 2022 was 319.4 million therms (108.4 million therms for the residential sector and 211.0 million therms for the nonresidential sector).[9]

Fuel. Petroleum is also a non-renewable 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 and gasoline.

Gasoline is the most used transportation fuel in California, with 97 percent of all gasoline being consumed by light-duty cars, pickup trucks, and sport utility vehicles. According to the most recent data available, total gasoline consumption in California was 314,160 thousand barrels (13.9 billion gallons) or 1,586.1 trillion British thermal units (BTU) in 2023.[10] Of the total gasoline consumption,

4 California Energy Commission (CEC). 2021b. Electricity Consumption by Entity. Website: http://www.ecdms.energy.ca.gov/elecbyutil.aspx (accessed April 2025).

5 California Energy Commission (CEC). 2021c. Electricity Consumption by County. Website: http://www.ecdms.energy.ca.gov/elecbycounty.aspx (accessed April 2025).

6 United States Energy Information Administration. 2022b. Natural Gas Explained, Use of Natural Gas. Website: https://www.eia.gov/energyexplained/natural-gas/use-of-natural-gas.php (accessed April 2025).

7 United States Energy Information Administration. 2025. Natural Gas Consumption by End Use (Million Cubic Feet). Website: https://www.eia.gov/dnav/ng/ng_cons_sum_dcu_SCA_a.htm (accessed June 2025).

8 California Energy Commission (CEC). 2022. Gas Consumption by Entity. Website: http://www.ecdms.energy.ca.gov/gasbyutil.aspx (accessed April 2025).

9 California Energy Commission (CEC). 2022. Gas Consumption by County. Website: http://www.ecdms.energy.ca.gov/gasbycounty.aspx (accessed April 2025).

10 A British Thermal Unit (BTU) is defined as the amount of heat required to raise the temperature of one pound of water by one degree Fahrenheit.

296,948 thousand barrels (12.5 billion gallons) or 1,499.3 trillion BTU were consumed for transportation.[11]

4.6.2 Regulatory Setting

4.6.2.1 Federal Policies and Regulations

Energy Policy Act of 2005. The Energy Policy Act of 2005 seeks to reduce reliance on non-renewable 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.

Safer Affordable Fuel-Efficient Vehicles Rule. On March 21, 2020, the USEPA and National Highway Traffic Safety Administration (NHTSA) finalized the SAFE Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks (SAFE Vehicles Rule). The SAFE Vehicles Rule amends certain existing corporate average fuel economy (CAFE) and tailpipe CO_2 emissions standards for passenger cars and light trucks and establishes new standards, all covering model years 2021 through 2026. More specifically, the NHTSA set new CAFE standards for model years 2022 through 2026 and amended its 2021 model year CAFE standards, and the USEPA amended its CO_2 emissions standards for model years 2021 and later.

The current administration withdrew portions of the SAFE Rule, concluding that the SAFE Rule overstepped the agency's legal authority and finalized updated CAFE Standards for model years 2024 through 2026. The final rule establishes standards that would require an industry-wide fleet average of approximately 49 mpg for passenger cars and light trucks in model year 2026, by increasing fuel efficiency by 8 percent annually for model years 2024 and 2025, and 10 percent annually for model years 2026. The agency projects the final standards will save consumers nearly $1,400 in total fuel expenses over the lifetimes of vehicles produced in these model years and avoid the consumption of about 234 billion gallons of gas between model years 2030 to 2050. The NHTSA also projects that the standards will cut greenhouse gases from the atmosphere, reduce air pollution, and reduce the country's dependence on oil.

4.6.2.2 State Policies and 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

[11] United States Energy Information Administration. 2023. California State Profile and Energy Estimates, Table F10: Motor gasoline consumption, price, and expenditure estimates, 2023. Website: eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_mg.html&sid=CA (accessed April 2025).

21100(b)(3) and *State CEQA Guidelines* Section 15126.4 to require Environmental Impact Reports (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 for the California Energy Policy Report. 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 (ZEVs) 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 reports include the 2023 Integrated Energy Policy Report[12] and the 2024 Integrated Energy Policy Report Update.[13] The Integrated Energy Policy Report 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 Integrated Energy Policy Report provides the results of the CEC's assessments of a variety of energy issues facing California. Many of these issues will require action if the State is to meet its climate, energy, air quality, and other environmental goals while maintaining energy reliability and controlling costs.

Renewable Portfolio Standards. SB 1078 established the California Renewable Portfolio Standards program in 2002. 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 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 Renewable Portfolio Standards of 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. In 2018, SB 100 increased the

12 California Energy Commission (CEC). 2023. 2023 Integrated Energy Policy Report. Docket Number: 23-IEPR-01.

13 California Energy Commission (CEC). 2024. 2024 Integrated Energy Policy Report Update. Docket Number: 24-IEPR-01.

requirement to 60 percent by 2030 and required that all State's electricity to come from carbon-free resources by 2045. SB 100 took effect on January 1, 2019.[14]

Title 24, California Building Code. Energy consumption by new buildings in California is regulated by the Building Energy Efficiency Standards, embodied in Title 24 of the California Code of Regulations (CCR), known as the California Building Code (CBC). The CEC first adopted the Building Energy Efficiency Standards for Residential and Nonresidential Buildings in 1978 in response to a legislative mandate to reduce energy consumption in the State. The CBC is updated every 3 years, and the current 2022 CBC went into effect on January 1, 2023. The efficiency standards apply to both new construction and rehabilitation of both residential and non-residential 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 CCR Title 24. Title 24 standards are updated every 3 years and was most recently updated in 2022 to include new mandatory measures for residential as well as non-residential uses; the new measures took effect on January 1, 2023. The measures include both solar photovoltaic system and solar ready requirements that apply to new low-rise residential buildings. Requirements include energy storage systems and electric vehicle charging systems.

California Green Building Standards Code (CALGreen Code). In 2010, the California Building Standards Commission adopted Part 11 of the Title 24 Building Energy Efficiency Standards, referred to as the California Green Building Standards Code (CALGreen Code). The CALGreen Code took effect on January 1, 2011. The CALGreen Code is updated on a regular basis, with the most recent update consisting of the 2022 CALGreen Code standards that became effective January 1, 2023. The CALGreen Code established mandatory measures for residential and non-residential building construction and encouraged sustainable construction practices in the following five categories: (1) planning and design, (2) energy efficiency, (3) water efficiency and conservation, (4) material conservation and resource efficiency, and (5) indoor environmental quality. Although the CALGreen Code was adopted as part of the State's efforts to reduce greenhouse gas (GHG) emissions, the CALGreen Code standards have co-benefits of reducing energy consumption from residential and non-residential buildings subject to the standard.

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 were established by the CPUC in Decisions D.07-10-032 and D.07-12-051:

- All new residential construction will be zero net energy (ZNE) by 2020.
- All new commercial construction will be ZNE by 2030.
- 50 percent of commercial buildings will be retrofitted to ZNE by 2030.

[14] California Public Utilities Commission (CPUC). 2020. Renewables Portfolio Standard (RPS) Program. Website: https://www.cpuc.ca.gov/rps/ (accessed April 2025).

- 50 percent of new major renovations of State buildings will be ZNE by 2025.

In 2011, the Energy Efficiency Strategic Plan was updated to include the Lighting Chapter that requires that its strategies be incorporated into energy efficiency program planning and implementation starting in 2011.

4.6.2.3 Local Policies and Regulations

City of Fresno General Plan. The City of Fresno's General Plan Resource and Conservation Element includes objectives and policies that work to reduce the consumption of non-renewable energy resources by requiring and encouraging conservation measures and the use of alternative energy sources. The following policies related to energy are applicable to the proposed project:**Policy RC8-b: Energy Reduction Targets.** Strive to reduce per capita residential electricity use to 1,800 KWh per year and non-residential electricity use to 2,700 KWh per year per capita by developing and implementing incentives, design and operation standards, promoting alternative energy sources, and cost-effective savings.

> **Policy RC-8-c: Energy Conservation in New Development.** Consider providing an incentive program for new buildings that exceed California Energy Code requirements by fifteen percent.
>
> **Policy RC8-i: Renewable Target.** Adopt and implement a program to increase the use of renewable energy to meet a given percentage of the city's peak electrical load within a given time frame.
>
> **Policy RC8-j: Alternative Fuel Network.** Support the development of a network of integrated charging and alternate fuel station for both public and private vehicles, and if feasible, open up municipal stations to the public as part of network development.

4.6.3 Impacts and Mitigation Measures

The following section presents a discussion of the impacts related to energy that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds to determine if an impact is significant. The latter part of this section presents the impacts associated with implementation of the proposed project and the recommended mitigation measures. Mitigation measures are recommended, as appropriate, for significant impacts to eliminate or reduce them to a less-than-significant level. Cumulative impacts are also addressed.

4.6.3.1 Significance Criteria

Based on *State CEQA Guidelines* Appendix G, the proposed project would have a significant impact related to energy if it would:

a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or

b. Conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

4.6.3.2 Project Impacts

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

EN-1 The project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

The proposed VMT Reduction Program would not include funding for development of any habitable structures or other uses that would result in building energy consumption, and therefore would not cause changes to the City's or County's electricity or natural gas consumption.

In addition, implementation of the proposed VMT Reduction Program would result in construction activities associated with VMT-reducing transportation improvements funded by the program, which would result in construction fuel consumption. However, construction details of these projects are unknown at this stage of the planning process and therefore, the associated construction fuel consumption cannot be quantified at this time. Each individual transportation improvement is expected to be small in scale (in the context of Citywide and Countywide energy consumption) with a limited construction duration, and would not significantly increase the City's or County's construction fuel consumption. Additionally, all future transportation improvements, including those implemented as part of development projects, would require separate environmental review under CEQA (e.g., preparation of a Categorical Exemption, Mitigated Negative Declaration, or Environmental Impact Report) to evaluate project-specific energy consumption impacts and identify any required mitigation.

Further, the intent of the proposed program is to reduce Citywide VMT, which would proportionally reduce Citywide operational fuel consumption. Since the details of the potential transportation improvements are unknown at this stage of the planning process, total operational fuel consumption reduction associated with the future transportation improvements cannot be quantified at this time. (CEQA Appendix F - Criterion 1).

Construction-Related Energy. During construction, the transportation improvements would consume energy in two general forms: (1) the fuel energy consumed by construction vehicles and equipment; and (2) bound energy in construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass. However, as stated, construction details of these improvements are unknown at this stage of the planning process, and these improvements could be built at any time in the future as funding provided by the proposed program becomes available. Therefore, construction-related energy consumption that may occur at any one time is speculative and cannot be accurately determined at this time. Additionally, as stated above, future transportation improvements, including those implemented as part of development projects would be subject to environmental review on a project-by- project basis, and specific mitigation measures would be implemented to reduce construction-related energy consumption impacts during construction, as needed.

Some incidental energy conservation would occur during construction through compliance with State requirements that equipment not in use for more than five minutes be turned off. Construction equipment would also be required to comply with the latest U.S. Environmental Protection Agency (EPA) and California Air Resources Board (CARB) engine emissions standards. These emissions standards require highly efficient combustion systems that maximize fuel efficiency and reduce unnecessary fuel consumption. In addition, because the cost of fuel and transportation is a significant aspect of construction budgets, contractors have a strong financial incentive to avoid wasteful, inefficient, and unnecessary consumption of energy during construction (CEQA Appendix F - Criterion 4).

Significant reductions in energy inputs for construction materials can be achieved by selecting construction materials composed of recycled materials that require less energy to produce than nonrecycled materials. The integration of resource-efficient construction materials can help reduce environmental impacts associated with the extraction, transport, processing, fabrication, installation, reuse, recycling, and disposal of these construction materials.[15] It is noted that construction fuel use is temporary and would cease upon completion of construction activities. There are no unusual characteristics associated with future transportation improvements funded by the proposed program that would necessitate the use of construction equipment, materials, or methods that would be less energy efficient than at comparable construction sites in the region or State. Therefore, fuel energy and construction materials consumed during construction would not represent a significant demand on energy resources (CEQA Appendix F - Criterion 5).

Overall, construction energy use associated with future VMT-reducing projects funded by the proposed program would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature. As a result, a less-than-significant impact would occur related to construction energy.

Operational Energy. Future transportation improvement projects funded by the proposed program may include new buses, increase in bus service, pedestrian improvements in underserved neighborhoods, among several improvements; refer to Table 3.A, Potential VMT-Reducing Improvements. Such improvements would require operational energy use. However, implementation of future transportation improvements funded by the proposed program, as a whole, would reduce Citywide VMT and associated fuel consumption, and therefore would not result in excessive long-term operational fuel consumption (CEQA Appendix F - Criterion 2). The lighting and other electric element required by the improvements would be minimal and would not cause additional peak and base period demands for electricity (CEQA Appendix F - Criterion 3). The key drivers of transportation-related fuel consumption are job locations/commuting distance and many personal choices on when and where to drive for various purposes. The increase in bus service, through new buses, efficient transportation demand management and increase in number of buses would encourage residents, workers, and visitors to use alternative transportation methods, including walking, biking, and transit, and contribute towards improving the overall traffic flow throughout Fresno. Therefore, implementation of the proposed program would contribute towards reducing Citywide fuel consumption (CEQA Appendix F - Criterion 4 and Criterion 6). Overall, fuel

[15] California Department of Resources Recycling and Recovery, Green Building, https://www.calrecycle.ca.gov/greenbuilding/ (accessed April 2025).

consumption associated with the proposed program would not be considered inefficient, wasteful, or unnecessary in comparison to other developments in the region. As a result, a less-than-significant impact would occur.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

EN-2 The project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Future transportation improvement projects funded by the proposed program would be required to comply with objectives and policies included in the approved General Plan that are aimed at reducing energy consumption in the Planning Area. In addition, where applicable, Future transportation improvement projects funded by the proposed program that require construction would be required to comply with the CALGreen Code (CCR Title 24, Part 11) and the California Energy Code (CCR Title 24, Part 6), which includes provisions related to insulation and design aimed at minimizing energy consumption.

Future projects facilitated by the proposed VMT Reduction Program would be required to comply with federal, State, and local regulations aimed at reducing energy consumption. Implementation of the proposed program is intended to reduce fuel consumption by reducing vehicle miles traveled. In addition, the City's General Plan includes several objectives and policies aimed at reducing energy consumption specifically within the Planning Area. These objectives and policies have been developed in accordance with federal and State energy regulations, such as the California Energy Code Building Energy Efficiency Standards (CCR Title 24, Part 6), the CALGreen Code (CCR Title 24, Part 11), and SB 743, which are also aimed at reducing energy consumption. Therefore, the implementation of the proposed project would be consistent with applicable State and local plans related to renewable energy and energy efficiency, and no mitigation would be required.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

4.6.3.3 Cumulative Impacts

CEQA Guidelines Section 15355 requires an analysis of cumulative impacts, which are defined as, "two or more individual effects which, when considered together, are considerable, or which compound or increase other environmental impacts." The cumulative analysis below considers the proposed project's impacts in conjunction with future buildout of the General Plan.

EN-3 The project, in combination with other projects, would not contribute to a significant cumulative impact related to energy.

Development of cumulative projects within the PG&E service area which encompasses 70,000 square miles would result in a substantial increase in electricity and natural gas demand as well as an increase in the consumption of fuel for vehicles. The jurisdictions throughout the PG&E service area

are working with the state to reduce the consumption of energy. Given that development within the Planning Area would be required to adhere to the policies identified in the approved General Plan, implementation of the proposed VMT Reduction Program would not contribute to potential cumulative impacts associated with the potential inefficient, wasteful and unnecessary consumption of energy within other parts of the PG&E service area. In addition, compliance with the objectives and policies identified above would not result in the inefficient, wasteful and unnecessary consumption of energy. The City's General Plan includes several policies to reduce the demand for electricity and natural gas. Furthermore, implementation of the approved General Plan includes intensive land uses and transit opportunities to reduce fuel consumption. Implementation of the proposed VMT Reduction Program would complement buildout of the approved General Plan by implementing several transportation improvements that would reduce energy use. As a result, implementation of the proposed project, in conjunction with the implementation of the approved General Plan would result in a less-than-significant cumulative impact related to the inefficient, wasteful and unnecessary consumption of energy.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

4.7 GEOLOGY AND SOILS

This section describes the regulatory framework and existing conditions in the project area related to geology and soils, and the potential impacts resulting from implementation of the proposed project.

4.7.1 Existing Environment Setting

The study area for project impacts regarding geology and soils is the City of Fresno Planning Area. given that implementation of the proposed project would be limited to areas within the Planning Area.

4.7.1.1 Regional Setting

The City of Fresno Planning Area is located along the eastern margin of the southern San Joaquin Valley portion of the Great Valley Geomorphic Province of California. The San Joaquin Valley is bordered to the north by the Sacramento Valley portion of the Great Valley, to the east by the Sierra Nevada, to the west by the Coast Ranges, and to the south by the Transverse Ranges. The San Joaquin sedimentary basin is separated from the Sacramento basin to the north by the buried Stockton arch and associated Stockton Fault. The 450-mile long Great Valley is an asymmetric structural trough that has been filled with a prism of Mesozoic and Cenozoic sediments up to 5 miles thick.

The Sierra Nevada, located east of the San Joaquin Valley, is a gently southwesterly tilted fault block comprised of igneous and metamorphic rocks of pre-Tertiary age that comprise the basement beneath the San Joaquin Valley. The Coast Ranges, located west of the San Joaquin Valley, are comprised of folded and faulted sedimentary and metasedimentary rocks of Mesozoic and Cenozoic age.

The San Joaquin River and the Kings River are the principal rivers in the Planning Area, with the alluvial fans formed by these rivers serving as the predominant geomorphic features in the area. The Planning Area is generally characterized by low alluvial fans and plains, which constitute a belt of coalescing alluvial fans of low relief between the dissected uplands, adjacent to the Sierra Nevada and the valley trough. Recent alluvial fan deposits from streams emerging from highlands surrounding the Great Valley and Pleistocene non-marine sedimentary deposits (Riverbank Formation) composed of older alluvium and dissected fan deposits underlain the subject site area.

Lithology. The thick accumulation of deposits within the San Joaquin Valley range in age from Jurassic to Holocene and include both marine and continental rocks and deposits. The 1965 Geologic Map of California, Fresno Sheet, indicates that the near-surface deposits in the City of Fresno Planning Area consist of Quaternary recent fan deposits and Quaternary Older alluvium (Pleistocene Nonmarine Sedimentary deposits).

The subsurface information available for the Planning Area indicates that the surface and near-surface deposits generally consist of sandy silts, silty sands, sands, clayey sands, sandy clays, and clayey silts. These observed deposits are consistent with those mapped in the Planning Area.

Structures and Faults. The City of Fresno Planning Area is underlain by a homoclinal series of Cenozoic deposits dipping four to six degrees to the southwest toward the center of the San Joaquin Valley. The contact between the Cenozoic and basement rocks dips nearly eight degrees southwest, or at a slightly greater inclination than does the on-lapping homoclinal Cenozoic sequence. No active faults are mapped within the Planning Area.

Adjacent to the San Joaquin Valley, the Sierra Nevada and Coast Ranges are geologically young mountain ranges that possess active and potentially active fault zones. Major active faults and fault zones occur at some distance to the east, west, and south of the Planning Area.

Numerous active faults are present within the central Coast Ranges west of the Planning Area including the San Andreas Fault located approximately 61 miles west of the area. The fault is considered active and serves as a primary concern in evaluating seismic hazards throughout western Fresno county. The 684-mile-long San Andreas Fault Zone is the principal element of the San Andreas Fault system, a network of faults with predominately dextral strike-slip displacement that collectively accommodates the majority of relative north-south motion between the North America and Pacific plates. The creeping section of the San Andreas Fault is approximately 61 miles from the Planning Area at its closest point. The San Andreas Fault Zone is considered to be the Holocene and historically active dextral strike-slip fault that extends along most of coastal California from its complex junction with the Mendocino Fault Zone to the north, southwest to the northern Transverse Range, and inland to the Salton Sea, where a well-defined zone of seismicity transfers the slip to the Imperial Fault along a right-releasing step.

Two major surface-rupturing earthquakes have occurred on the San Andreas Fault in historic time: the 1857 Fort Tejon and 1906 San Francisco earthquakes. Additional historic surface rupturing earthquakes include the unnamed 1812 earthquake along the Mojave section and the northern part of the San Bernardino Mountains section, and a large earthquake in the San Francisco Bay area that occurred in 1838 that was probably on the Peninsula section. Historic fault creep rates are as high as 32 millimeters per year for the 82-mile-long creeping section in central California, with creep rates gradually tapering to zero at the northwestern and southeastern ends of the section.

One of the nearest seismotectonic sources is the Great Valley Fault Zone (Coast Ranges-Central Valley boundary zone), located approximately 34 miles west of the Planning Area. The Great Valley Fault Zone is the geomorphic boundary of the Coast Ranges and the Central Valley and is underlain by a 300-mile long seismically active fold and thrust belt that has been the source of recent earthquakes, such as the 1983 magnitude 6.5 Coalinga and the 1985 magnitude 6.1 Kettleman Hills earthquakes. Nearly the entire thrust system is concealed or “blind.” The basal detachment of this thrust system dips at a shallow angle to the west. East-directed thrusting over ramps in the detachment and west-directed thrusting on backthrusts are responsible for the uplift along the eastern range front of the Coast Ranges. Based on earthquake focal mechanisms, movement on the thrust zone is generally perpendicular to the strike of the geomorphic boundary and trend of the San Andreas Fault system. Shortening along the geomorphic boundary is driven by a component of the Pacific-North American Plate motion that is normal to the plate boundary. The Great Valley Fault Zone is considered the dominant seismic feature with potential for affecting the Planning Area.

The Ortigalita Fault Zone is a major Holocene dextral strike-slip fault in the central Coast Ranges that is an eastern part of the larger San Andreas Fault system. The Ortigalita Fault Zone is approximately 54 miles west of the Planning Area. The Ortigalita Fault Zone extends from roughly 12.4 miles northwest of San Luis Reservoir southeast to the vicinity of Panoche Valley. The Ortigalita Fault Zone is characterized by echelon fault traces separated by pull-apart basins. The fault zone is divided into four sections. The Little Panoche Valley section is the southernmost section and is closest to the Planning Area. The Little Panoche Valley section is late Holocene active. Late Quaternary slip rates and recurrence intervals are unknown, although the recurrence interval for the entire Ortigalita Fault Zone is about 2,000 to 5,000 years.

Regional structure within the western Sierra Nevada north of the Planning Area is complex and generally consists of blocks separated by steeply eastward-dipping, north, and northwest striking reverse faults of the Foothills Fault system. The Foothills Fault system is located within approximately 32 miles north of the Planning Area. Based on mapping and historical seismicity, the seismicity of the Sierra Nevada foothills has been generally considered low by the scientific community. However, on August 1, 1975, a 5.7 Richter magnitude earthquake occurred near Oroville within the northern Sierra Nevada. Surface rupture along the Cleveland Hill Fault (part of the Foothills Fault System) was associated with the 1975 Oroville earthquake. As a result of this event, numerous studies were undertaken to evaluate further the seismicity of the Sierra Nevada foothills. Of particular note are the geologic and seismicity studies conducted by Woodward-Clyde Consultants (WCC) to evaluate the proposed Auburn Dam site. Based on these studies, WCC concluded that seismic events in the Sierra Nevada foothills are associated with very small, geologically infrequent, incremental displacements having minor geomorphic surface expression.

In addition, the eastern border of the southern San Joaquin Valley is cut by a series of en-eschelon range-front faults. These faults are mainly northwest trending normal faults, down dropped to the west and with a near vertical dip. One of the range-front faults, the Clovis Fault, is mapped extending from an area just south of the San Joaquin River to a few miles south of Francher Creek approximately six miles northeast of the Planning Area. No evidence has been found of historic ground movement along this feature. These range-front faults have generally been considered inactive, with no recognized Quaternary displacement. However, a September 1973 magnitude 4.4 earthquake that occurred approximately 4.3 miles north of the Planning Area may be related to this fault system.

The Nunez Fault is located approximately six to seven miles northwest of Coalinga and is roughly 48 miles southwest of the Planning Area. The fault is about 2.6 miles long and is considered active based on surface rupture associated with the 1983 Coalinga earthquake. The fault is divided into two north and south trending segments. Approximately 2.1 miles of right-reverse surface rupture occurred on the segments. Total displacement and timing of past fault movements are poorly constrained.

Tensional forces resulting in normal faults are reported to be related to crustal stress relief in the southeast portion of the San Joaquin Valley. Numerous relatively short, normal faults traverse this region. Creep activity is the prominent mode of slip on those faults in this region that are active. These movements have continued on an intermittent basis from the early Miocene to recent times.

This faulting is directly related to and controls the accumulation of oil in several oil fields within the westerly portion of the valley. Most authors agree that current creep movements can be ascribed to subsidence promoted by extensive withdrawal of petroleum, and in some cases, groundwater. Those faults considered to be active in the southern valley are Kern Front and Pond Faults located at least 70 miles south of the Planning Area.

The Sierra Nevada and Owens Valley Fault Zones bound the eastern edge of the Sierra Nevada block more than 90 miles east of the Planning Area. The Owens Valley Fault Zone branches to the east of the Sierra Nevada Fault Zone approximately 2 miles south of the Alabama Hills. The Owens Valley Fault Zone is roughly 75 miles long and extends to the west side of Owens Lake to a few miles north of Big Pine. The maximum width of the fault zone is about 2 miles. The Owens Valley Fault generated one of California's greatest historical earthquakes (Owens Valley Earthquake of 1872) and poses a significant hazard to the communities on the eastern side of the Sierra Nevada Mountains. The White Wolf Fault, responsible for a 1952 earthquake that caused extensive damage in the greater Bakersfield area, is located in the tectonically active Tehachapi Mountains at the southerly terminus of the valley, over 100 miles south of the Planning Area.

4.7.1.2 Planning Area Setting

General Setting and Surface Features. The City of Fresno Planning Area encompasses an approximate 166 square miles, just south of the San Joaquin River, in the central portion of Fresno county, California. The natural topography within the Planning Area generally trends from the northeast towards the southwest. The historically natural, agricultural, and manmade flow for drainage channels predominately follows the northeast to southwest trend. However, because the Planning Area was historically developed for agricultural use, there are also many subchannels designed to transport water in a northwest-southeast direction.

Surface faulting is absent within the Planning Area and the majority of the area is relatively flat. However, slopes associated with the San Joaquin River bluff are on the order five feet to greater than 100 feet high. The bluff slopes in the vicinity of existing developments were generally well maintained and appeared to be relatively stable. However, the bluff slopes in predominately undeveloped and/or agricultural areas are in relatively good to poor condition with varying degrees of instability and disrepair.

Subsurface Conditions. Subsurface soil conditions in the Planning Area have been previously explored by drilling hundreds of geotechnical borings to depths ranging from approximately 5 to 150 feet below existing site grade, using a truck-mounted drill rig. Over time, penetration tests were performed throughout the Planning Area to evaluate soil consistency and to obtain information regarding the engineering properties of the subsoils, and soil samples were retained for laboratory testing. The soils encountered were continuously examined and visually classified in accordance with the Unified Soil Classification System.

The subsurface conditions encountered appear typical of those found in the geologic region of the Planning Area. Generally, the upper soils consisted of approximately 6 to 12 inches of very loose silty sand, silty sand with trace clay, sandy silt, clayey sand, or clayey gravel. These soils are disturbed, have low strength characteristics, and are highly compressible when saturated.

Below the loose surface soils, approximately two to four feet of loose/soft to very dense/hard clays, silts, sands, and gravels are typically encountered. Previous field and laboratory tests associated with various projects throughout the Planning Area suggest that these soils are typically moderately strong and slightly to moderately compressible. The clayey soils had a low to high expansion potential. Penetration resistance ranged from less than 5 to greater than 100 blows per foot. Dry densities ranged from 80 to 120 per cubic foot (pcf). Representative soil samples typically consolidate approximately 0.5 to 12 percent under 2 kilos per square foot (ksf) load when saturated. Representative soil samples had angles of internal friction ranging from 11 to 40 degrees. Representative samples of the clayey soils had expansion indices ranging from 0 to 100+.

Below 3 to 5 feet, predominately clays, silts, sands, and gravels are usually encountered. Previous field and laboratory tests associated with various project throughout the Planning Area suggest that these soils are typically moderately strong and slightly compressible. Penetration resistance ranges from 10 to greater than 100+ blows per foot. Dry densities ranged from 90 to 140 pcf. Representative soil samples typically consolidate approximately two to three percent under a 2 ksf load when saturated. These soils usually have slightly stronger strength characteristics than the upper soils and extend to the termination depth of the borings.

Test boring locations for various projects throughout the Planning Area were checked for the presence of groundwater during and immediately following the drilling operations. Groundwater was encountered near the surface in the vicinity of existing ponds, lakes, ditches, and canals, to depths greater than 100 feet below site grade during the field investigations. Review of groundwater elevation data provided by the California Department of Water Resources dating from the 1950's to 2019 indicates that depth to free groundwater in the vicinity of the Planning Area ranged from 0 feet to greater than 100 feet below the existing grade within the Planning Area.[1]

Geological Subgrade. The general soil profile within the City of Fresno Planning Area consists predominately of silty sands, sandy silts, clayey sands, sandy clayey silts, and sands. With the exception of a limited occurrence of near-surface loose soils, penetration resistance and laboratory testing indicate that these materials are typically at least medium dense. Based on the soil properties of specific sites, each site will be classified as a Site Class. The Site Class, per Section 1613.2.2 of the 2019 California Building Code, is assigned to a site based upon the types of soils present and their engineering properties. Site Class D, characterized as stiff soil, is most consistent with the soil conditions in the Planning Area. However, within isolated locations through the Planning Area, and in close proximity to water features, Site Class E conditions (soft soil profile) may be encountered.

Liquefaction. Liquefaction is a seismic phenomenon in which loose, saturated, fine-grained granular soils behave similarly to a fluid when subjected to high-intensity ground shaking. Liquefaction occurs when shallow groundwater; low density, fine, clean sandy soils; and high intensity motion occurs. Effects of liquefaction can include sand boils, settlement, and bearing capacity failures below foundations.

[1] California Department of Water Resources. Water Data Library. Website: https://wdl.water.ca.gov/waterdatalibrary/Map.aspx (accessed January 2025).

The predominant soils anticipated to be encountered within the Planning Area consist of varying combinations of very loose/very soft to very dense/hard silts, clays, sands, and gravels. Moderate cohesion strength is associated with the clayey soils. Groundwater has been encountered near the surface during exploratory drilling, in close proximity to water filled features such as canals, ditches, ponds, and lakes. Historically, groundwater in the Planning Area has been encountered at depths as shallow as 0 feet to greater than 100 feet below the ground surface.

Seismic Settlement and Lateral Spreading. Subsidence of the land surface can be induced by both natural and human phenomena. Natural phenomena that can cause subsidence can result from tectonic deformations and seismically induced settlements; from consolidation, hydrocompaction, or rapid sedimentation; from oxidation or dewatering of organic-rich soils; and from subsurface cavities. Subsidence related to human activity can result from withdrawal of subsurface fluids or sediment, such as pumping of groundwater.

Lateral spreading is the horizontal movement or spreading of soil toward an open face, such as a stream bank, the open side of fill embankments, or the sides of levees. The potential for failure from subsidence and lateral spreading is highest in areas where the groundwater table is high, where relatively soft and recent alluvial deposits exist, and where creek banks are relatively high. One of the most common phenomena during seismic shaking accompanying any earthquake is the induced settlement of loose unconsolidated soils. Due to the subsurface conditions within the Planning Area, and the relatively low to moderate seismicity of the region, the City of Fresno Planning Area is not located in an area within a seismic settlement or lateral spread hazard area.

Land Subsidence. Portions of the San Joaquin Valley have been subject to land subsidence due to fluid withdrawal (groundwater and petroleum). Land subsidence affects 3,500 square miles of productive farm land in the San Joaquin Valley as intense pumping of groundwater continues. Over 20 feet of subsidence has occurred in western Fresno county. Subsidence was first recognized in the valley in 1935, when surveys discovered differential settlements in areas of intensive pumping. With the accelerated use of groundwater for agriculture, subsidence has continued to the present. Today, one-third of the entire San Joaquin Valley is subsiding and damage costs and remedial expenditures represent many millions of dollars. Damage caused by subsidence has been restricted principally to significant changes in gradients of canals, aqueducts, and drainage systems, and breakage of deep water-well casings.

Within the San Joaquin Valley, subsidence is concentrated in the southern part and west side of the valley where rainfall is sparse and groundwater recharge is minimal. The subsidence has been greatest in three areas: an elongated trough close to the mountains west of Fresno, where more than 20 feet of subsidence occurred between 1920 and 1963 and total subsidence is approximately 28 feet; a location 30 miles south of Tulare, where more than 12 feet of subsidence has occurred; and an area located south of Bakersfield, where more than 8 feet of subsidence has occurred. These three areas are not located within the Planning Area. Subsidence rates vary greatly from year to year, and subsidence continues in all areas except south of Tulare where surface water imports have reversed the downward trends of water levels.

Expansive Soils. Expansive soils are composed largely of clays, which greatly increase in volume when saturated with water and shrink when dried. Because of this effect, building foundations may

rise during the rainy season and fall during the dry season. If this expansive movement varies underneath different parts of a single building, foundations may crack, structural portions of the building may be distorted, and doors and windows may become warped so that they no longer function properly. The potential for soil to undergo shrink and swell is greatly enhanced by the presence of a fluctuating, shallow groundwater table. Volume changes of expansive soils can result in the consolidation of soft clays following the lowering of the water table or the placement of fill. The surface and near-surface soils observed throughout the City of Fresno Planning Area consist of varying combinations of clays, silts, sands, gravels, and cobbles. The clayey soils are considered to be slightly to moderately expansive.

Slope Stability, Slope Failure, and Landslides. Landslides are the release of rock, soil, or other debris and its subsequent movement down a slope or hillside. They are generally caused or controlled by a combination of geology, topography, weather, and hydrology, and can be influenced by development practices. Landslides vary greatly in size and composition, ranging from a thin mass of soil a few yards wide to deep-seated bedrock slides miles across. The travel rate of a landslide can range from a few inches per month to many feet per second depending on the slope, type of materials, and moisture content.

Any slope of 15 degrees or greater is susceptible to mud or landslides. Landslides and other ground failures occur during earthquakes, triggered by the strain induced in soil and rock by ground shaking vibrations, and during non-earthquake conditions, most frequently during the rainy season. Both natural and man-made factors contribute to these slope failures.

Ground failure occurs when stresses in the ground exceed the resistance of earth materials to deformation or rupture. This instability can be triggered by earthquake shaking, which instantaneously places high stresses on earth materials by loss of soil strength due to saturation or seismic shaking. Ground failure can also be triggered by manmade changes, such as loading a steep slope or unstable soils.

Landslides are perhaps the most common form of ground failure that is not caused by earthquakes. In areas where a severe slope stability problem exists, landslide damage can best be avoided by not building on the unstable ground. In some landslide-prone areas, landslides can be totally removed or stabilized. Through good planning and careful controlled design, landslide losses can be all but eliminated.

Although slope failures are not expected to produce a regional disaster, there is a persistent risk of damage to public and private property, including individual residences, roads, canals, reservoirs, and other facilities. The two most important factors influencing the performance of slopes are the nature of the bedrock or surficial deposits and the slope angle. However, there are a number of other factors that have a profound effect on the stability of a particular hillside. These include the presence or absence of deep-rooted vegetation; surface and subsurface drainage conditions; thickness and engineering characteristics of soils and underlying weathered, partially decomposed rock; orientation of bedding; or locally high rainfall can exert a controlling effect on the intensity of natural processes occurring on a particular hillside.

City and County General Plans historically have recognized that major slope areas in excess of 26 percent are "not readily available" and "undevelopable," recognizing the cost and engineering difficulties of grading steep slopes as well as their inherent unsuitability. This development limit generally agrees with customary limits throughout the State, and varies only slightly from the 30 percent standard reference developed by the State Division of Mines and Geology as the maximum developable slope. This is a statewide reference that does not reflect special conditions such as clayey soils.

Whether a landslide will or will not occur at any specific, presently stable slope usually cannot be predicted under "natural conditions" because of the range of natural conditions and changes which occur with time. However, land that has experienced land sliding in the past is believed to be generally more slide-prone and is also more sensitive to man-induced changes, such as grading, watering, removing or changing the type of vegetation, and changing drainage patterns, among many possible factors.

Paleontologic/Geologic Context. The general structure of the central San Joaquin Basin had begun to take shape in the Late Cretaceous (65 to 75 million years ago [MYA]) as the effects of subductive North American and Pacific Plates collision lifted once extremely deep ocean sediments above sea level. During the Paleocene (65 to 53 MYA) and Eocene (53 to 35 MYA) Epochs, regional changes in the structure of the Earth's crust caused the Basin to rise and fall below sea level numerous times. During periods when the area was above sea level, large deltas brought sediment out of the Sierras to the east with smaller amounts out of the Diablos to the west. During periods when the Basin was below sea level, sedimentation within a shallow sea environment at maximum several hundred feet deep would occur. The deeper rocks and strata in the Basin, as encountered by petroleum geologists, reflect the fresh and saltwater layer-cake nature of geological time, and many of the deeper petroleum and natural gas deposits trapped by oceanic sedimentation are under extremely high pressure.

By the Miocene Epoch, the relationship between the North American and Pacific Plates had changed from subduction to transpression, and the Pacific Plate began sliding northwest. Tremendous volumes of sediment ran into the Basin, filling it by the end of the Pliocene Epoch (5 to 2 MYA) as the seaways were cut off, and raising the land level above the sea. The surrounding mountains were uplifted by tectonic pressure at the same time erosion filled the valleys below. The San Joaquin quickly became a major trap for freshwater and as the water table rose, and the massive Lake Corcoran formed filling the southern and middle San Joaquin Valley with a deltaic outlet to the sea west of Sacramento. Finally, during the Pleistocene Epoch, the deeper areas became individual freshwater lakes that filled and shrank as each season progressed. The low nature of the Valley produced large swamps and meandering stream and river channels. Pleistocene-era and earlier rock strata will exhibit freshwater and marine fossils within slow-moving lithological environments, only to be hidden by the non-fossiliferous Holocene strata that has formed within the last 10,000 years. Krazan performed a geological analysis of the Planning Area. Based on a review of geological information, the geological subgrade of the Planning Area is entirely alluvial consisting of gravels, sands and clays.

Paleontologic/Geologic Research Results. Based on a review of the University of California Museum paleontology vertebrate paleontology database (Appendix F), geological maps indicate that the

Planning Area consists of Quaternary alluvium with two primary surficial deposits: 1) Pleistocene non-marine and, 2) Quaternary non-marine fan deposits. The Pleistocene non-marine deposits have been more recently referred to as the Riverbank Formation, and are considered to have high potential sensitivity. The Quaternary non-marine terrace deposits consist of undifferentiated Pleistocene-Holocene alluvial sediments and is also considered to have high potential sensitivity.

Based on a database records search at the University of California Museum of Paleontology (UCMP), three Pleistocene Riverbank Formation localities (#V4401, #V65100, and #V81121) were found in surrounding Fresno county, all of which yielded elements of the Rancholabrean (late Pleistocene) vertebrate fauna. Locality #V81121 is referred to the Riverbank Formation, whereas the other two units are unnamed. Locality #V4401 (Tranquility) accounts for 149 of the 151 specimens listed. Numerous specimens have been published, several of which are types for their species. The recovered faunal assemblage includes pond turtle (*Clemmys marmorata*), rattlesnake (*Crotalus*), loon (*Gavia*), broad-footed mole (*Scapanus latimanus*), jackrabbit (*Lepus*), vole (*Microtus*), wood rat (*Neotoma*), pocket gopher (*Thomomys*), badger (*Taxidea*), grey fox (*Urocyon*), true fox (*Vulpes*), coyote (*Canis latrans*), horse (*Equus*), bison (*Bison*), elk (*Cervus*), and mule deer (*Odocoileus*). Among these are type specimens of *Clemmys marmorata*, *Scapanus latimanus*, and *Canis latrans* that have been documented in scientific publication. The UCMP database also records 12 plant localities in Fresno county, in the Pleistocene alluvial deposits of the Modesto, Riverbank, and Turlock Lake formations.

4.7.2 Regulatory Setting

4.7.2.1 Federal Policies and Regulations

Earthquake Hazards Reduction Act. The Earthquake Hazards Reduction Act was enacted in 1997 to "reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards and reduction program." To accomplish this, the act established the National Earthquake Hazards Reduction Program (NEHRP). This program was significantly amended in November 1990 by the National Earthquake Hazards Reduction Program Act (NEHRPA), which refined the description of agency responsibilities, program goals, and objectives.

NEHRP's mission includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improvement of building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improvement of mitigation capacity; and accelerated application of research results. The NEHRPA designates the Federal Emergency Management Agency (FEMA) as the lead agency of the program and assigns it several planning, coordinating, and reporting responsibilities.

4.7.2.2 State Policies and Regulations

Alquist-Priolo Earthquake Fault Zoning Act. In response to the severe fault rupture damage of structures by the 1971 San Fernando earthquake, the State of California enacted the Alquist-Priolo Earthquake Fault Zoning Act in 1972. This act required the State Geologist to delineate Earthquake Fault Zones (EFZs) along known active faults that have a relatively high potential for ground rupture.

Faults that are zoned under the Alquist-Priolo Act must meet the strict definition of being "sufficiently active" and "well-defined" for inclusion as an EFZ. The EFZs are revised periodically, and extend 200 to 500 feet on either side of identified fault traces. No structures for human occupancy may be built across an identified active fault trace. An area of 50 feet on either side of an active fault trace is assumed to be underlain by the fault, unless proven otherwise. Proposed construction in an EFZ is permitted only following the completion of a fault location report prepared by a California Registered Geologist. This Act does not apply to areas within the Planning Area because no active faults cross the Planning Area.

California Building Code. Title 24, Part 2, of the California Code of Regulations, also known as the California Building Code (CBC), sets forth minimum requirements for building design and construction. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. The CBC is reviewed every three years by the California Building Standards Commission. The Commission makes certain State modifications, and adopts the new code edition for use throughout the State. Once the Commission votes to adopt the new code edition, it will become effective on the first of January of the upcoming year, regardless of whether local cities or counties formally adopt it. The current version, the 2019 California Buildings Standard Code, became effective on July 1, 2019.

The California Building Standards Code is a compilation of three types of building standards from three different origins:

- Building standards that have been adopted by state agencies without change from building standards contained in national model codes.

- Building standards that have been adopted and adapted from the national model code standards to meet California conditions.

- Building standards, authorized by the California legislature, that constitute extensive additions not covered by the model codes that have been adopted to address particular California concerns.

In the context of earthquake hazards, the California Building Standards Code's design standards have a primary objective of assuring public safety and a secondary goal of minimizing property damage and maintaining function during and following a seismic event. Recognizing that the risk of severe seismic ground motion varies from place to place, the California Building Standards Code seismic code provisions will vary depending on location (Seismic Zones 0, 1, 2, 3, and 4; with 0 being the least stringent and 4 being the most stringent). The earthquake design requirements take into account the occupancy category of the structure, Site Class, soil classifications, and various seismic coefficients, which are used to determine a Seismic Design Category (SDC) for a project. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at the site and ranges from SDC A (very small seismic vulnerability) to SDC E/F (very high seismic vulnerability and near a major fault). Design specifications are then determined according to the SDC.

Counties and cities may modify their adoption of the California Buildings Standard Code to address local conditions. Most California cities and counties modify the State adopted version of the Building Standards Code to address local circumstances related to the local climate, topography, or geology. Since modifications cannot be less restrictive, California Building Standards Code provides a minimum standard for protecting public health, safety and welfare that is applicable throughout the Planning Area and study area for cumulative impacts.

4.7.2.3 Regional Policies and Regulations

County of Fresno General Plan. The County of Fresno General Plan contains goals and policies that address geology and soils. The following General Plan goal and policies are applicable to the proposed project, and is currently being updated. The policies listed below are from the existing County of Fresno General Plan, adopted in 2000.

Public Facilities Element

Policy PF-D.6. The County shall permit individual on-site sewage disposal systems on parcels that have the area, soils, and other characteristics that permit installation of such disposal facilities without threatening surface or groundwater quality or posing any other health hazards and where community sewer service is not available and cannot be provided.

Health and Safety Element

Goal HS-D. To minimize the loss of life, injury, and property damage due to seismic and geologic hazards.

Policy HS-D.2. The County shall ensure that the General Plan and/or County Ordinance Code is revised, as necessary, to incorporate geologic hazard areas formally designated by the State Geologist (e.g., Earthquake Fault Zones and Seismic Hazard Zones). Development in such areas, including public infrastructure projects, shall not be allowed until compliance with the investigation and mitigation requirements established by the State Geologist can be demonstrated.

Policy HS-D.3. The County shall require that a soils engineering and geologic-seismic analysis be prepared by a California-registered engineer or engineering geologist prior to permitting development, including public infrastructure projects, in areas prone to geologic or seismic hazards (i.e., fault rupture, groundshaking, lateral spreading, lurchcracking, fault creep, liquefaction, subsidence, settlement, landslides, mudslides, unstable slopes, or avalanche).

Policy HS-D.4. The County shall require all proposed structures, additions to structures, utilities, or public facilities situated within areas subject to geologic-seismic hazards as identified in the soils engineering and geologic-seismic analysis to be sited, designed, and constructed in accordance with applicable provisions of the Uniform Building Code (Title 24 of the California Code of Regulations) and other relevant professional standards to minimize or prevent damage or loss and to minimize the risk to public safety.

Policy HS-D.8. The County shall require a soils report by a California-registered engineer or engineering geologist for any proposed development, including public infrastructure projects, that requires a County permit and is located in an area containing soils with high "expansive" or "shrinkswell" properties. Development in such areas shall be prohibited unless suitable design and construction measures are incorporated to reduce the potential risks associated with these conditions.

Policy HS-D.9. The County shall seek to minimize soil erosion by maintaining compatible land uses, suitable building designs, and appropriate construction techniques. Contour grading, where feasible, and revegetation shall be required to mitigate the appearance of engineered slopes and to control erosion.

Policy HS-D.11. The County shall not approve a County permit for new development, including public infrastructure projects where slopes are over thirty (30) percent unless it can be demonstrated by a California-registered civil engineer or engineering geologist that hazards to public safety will be reduced to acceptable levels.

Policy HS-D.12. In known or potential landslide hazard areas, the County shall prohibit avoidable alteration of land in a manner that could increase the hazard, including concentration of water through drainage, irrigation, or septic systems, undercutting the bases of slopes, removal of vegetative cover, and steepening of slopes.

County of Fresno Code of Ordinances

Section 15.28.010. Chapter 18, Chapter 33 and Appendix J of the 2013 California Building Code and Section R300 of the California Residential Code are adopted by reference and except as herein otherwise provided are applicable to and shall cover all grading and excavation within the unincorporated area of the County of Fresno.

4.7.2.4 Local Policies and Regulations

City of Fresno General Plan

Noise and Safety Element

Objective NS-2: Minimize risks of property damage and personal injury posed by geologic and seismic risks.

Policy NS-2-a: Seismic Protection. Ensure seismic protection is incorporated into new and existing construction, consistent with the Fresno Municipal Code.

Policy NS-2-b: Soil Analysis Requirement. Identify areas with potential geologic and/or soils hazards, and require development in these areas to conduct a soil analysis and mitigation plan by a registered civil engineer (or engineering geologist specializing in soil geology) prior to allowing on-site drainage or disposal for wastewater, stormwater runoff, or swimming pool/spa water.

Policy NS-2-c: Landfill Areas. Require proposed land uses on or near landfill areas to be designed and maintained to comply with California Code of Regulations, Title 27, Section 21190, Post Closure Land Use.

Policy NS-2-d: Bluff Preservation Overlay Zone. Per the requirements of the Bluff Preservation Overlay Zone District and Policy POSS-7-f (Chapter 5, Parks and Open Space), the following standards shall be applicable for property located within the Bluff Preservation zone:

- Require proposed development within 300 feet of the toe of the San Joaquin River bluffs to undertake an engineering soils investigation and evaluation report that demonstrates that the site is sufficiently stable to support the proposed development, or provide mitigations to provide sufficient stability; and

- Establish a minimum setback of 30 feet from the San Joaquin River bluff edge for all buildings, structures, decks, pools and spas (which may be above or below grade), fencing, lighting, steps, etc.

    - An applicant may request to reduce the minimum setback to 20 feet from the bluff edge if it can be demonstrated, to the satisfaction of the City's Building Official and the Planning Director, that the proposed building, structure, deck, pool and/or spas (which may be above or below grade), fencing, steps, etc., will meet the objectives of the Bluff Preservation Overlay Ordinance. In no case shall the setback be reduced to less than 20 feet.

City of Fresno Municipal Code

Section 11-101. California Building Code. The California Building Code, 2016 Edition, which may be referred to in this Code as the CBC, as promulgated by the California Building Standards Commission, which incorporates the adoption of the 2015 edition of the of the International Building Code as amended with necessary California amendments and the 2015 International Building Code of the International Code Council, with the exception of Appendix B, are adopted and incorporated by reference into the Code and shall be referred to, along with the City's amendments to the CBC provided in Section 11-102, as the Fresno Building Code. One copy of the CBC is on file and available for use by the public in the Development and Resource Management Department, Building and Safety Services Division.

Section 15-1603. Bluff Protection (BL) Overlay District

Purpose. The Bluff Protection (BL) Overlay District is intended to provide special land development standards that will preserve the integrity of the natural landscape of the southerly San Joaquin River Bluffs, adjacent properties, and adjacent open spaces as areas of special quality by reason of the topography, geologic substratum, and environment of the area. Regulations for the BL Overlay District are deemed necessary for the preservation of the special qualities of the southerly San Joaquin River Bluffs, and for the protection of the

health, safety, and general welfare of owners and users of property within the River Bluff Influence Area.

Applicability. The provisions of this article apply to areas within 300 feet of the toe of the San Joaquin River bluff.

Use Regulations. Those uses permitted in the Base District, subject to the limitations and conditions set forth therein.

Development Standards. Development Standards shall be as required by the Base District, except as follows:

- **Bluff Setback:** Development, including buildings, structures, decks, pools, spas, and steps, shall be setback a minimum of 20 feet from the bluff edge or as identified as necessary for the preservation of the existing state of the bluffs in the soils report prepared pursuant to Section 15-1603-F, Soils Report, whichever is greater. Buildings, structures, decks, pools, spas, and steps include all objects that may be below grade, at grade, or above grade.

- **Lighting and Illumination:** Streetlights and all exterior lighting shall be directed away from the river bottom.

- **Design and Orientation:** The design and orientation of structures, walls and fences shall be in keeping with the natural character of the Bluffs. Fences must be open a minimum of 80 percent (i.e., no more than 20 percent opaque) to allow for the passage of light and air.

- **Colors and Materials:** Construction shall be permitted only on lots subject to recorded deed restrictions or covenants restricting exterior colors and construction materials to those which are compatible with the natural bluff environment and with surrounding development.

Geologic Impact Standards. To minimize potential geologic and soil hazards, the following provisions shall apply to all subdivisions and development within Bluff Zones I, II, and III of the San Joaquin River Bluffs environs:

General Provisions. General provisions for grading, drainage, and erosion:

- Locations of streets, utilities and other facilities shall be approved by the Director and the City Engineer.

- Requirements for the location, design, construction, and maintenance of surface and subsurface drainage facilities shall be as determined by the Fresno Metropolitan Flood Control District.

- All development within Bluff Zones I, II, and III shall comply with the applicable provisions of the Building Code as adopted and amended by the City.

- Drainage of storm and irrigation water shall be directed away from the Bluff Face to public rights-of-way or to drainage facilities approved by the Fresno Metropolitan Flood Control District. A drainage plan shall be provided and approved by the Director for each separate lot within the Bluff Influence Area, establishing methods for conveying surface water from roofs and landscaping, and drain water from all swimming pools or decorative pools to approved locations away from the Bluff Face.

- To minimize erosion, the following shall apply to all graded, altered, or unstable bluff areas:

    - Landscaping with drought-tolerant, low-fuel plants, compatible with the bluff environs, from a list prepared by the City.

    - Landscape irrigation shall utilize drip irrigation or low precipitation systems, and must be approved by the civil engineer prior to installation.

    - Hydroseeding, netting and mulch shall be utilized to re-establish plant life, to control erosion and to discourage rodent burrowing.

Soils Investigation. The following types of soil evaluations shall be performed and reported:

- **Bluff Zone I:** A civil engineer or soils engineer registered in the State of California shall investigate and report on soil and geologic conditions, utilizing methods consistent with accepted practices. The report shall evaluate soils and geologic conditions for development proposals located outside Bluff Zone II and shall be similar in scope to the soils investigation required under Subparagraph ii, below. The investigation and report shall identify potential surface and subsurface drainage problems that may ultimately affect the stability of the bluffs and any measures to mitigate such effects.

- **Bluff Zone II:** A civil engineer or soils engineer registered in the State of California shall provide a detailed Soils Investigation and Evaluation Report using methods consistent with accepted practice and shall include the following:

    - Evaluation of existing stability;

    - Evaluation of post-development slope stability;

    - Documentation of existing conditions for rock falls, block caving, creep failures, shear failures, excessive erosion and sloughing;

    - Evaluation of slope angles, subsurface drainage, proposed grading, structures, utility trenches, potential rodent population, storm drain disposal, surface irrigation and

drainage, erosion, traffic vibration, potential seismic hazards, and on-site sewage disposal approximate to the bluffs;

- Evaluation of the influence of future development and grading along the Bluff Toe for its effect on slope stability;
- Evaluation of the adverse effect of increased surface and subsurface drainage;
- Coordination, review, and approval of site grading and drainage plans prepared by the project civil engineer for conformance to soils and geologic reports;
- Laboratory tests to evaluate the soil parameters to be used in determination of slope stability;
- Determination and establishment of the location of the Bluff Toe, Bluff Edge and of any building setbacks.

- **Bluff Zone III:** A civil engineer or soils engineer registered in the State of California shall complete a Soils Investigation and Evaluation Report, involving detailed study of individual lots within the River Bluff Influence Area, as follows:
  - Zone III soils investigations will address the details of the configuration, location, type, and loading of the proposed structures and drainage plan;
  - The report shall provide detailed recommendations for foundations, drainage, and other items critical to bluff stability.

Filing. Filing of Soils Investigation and Evaluation Reports shall be required as follows:

- A Zone I, Zone II or Zone III Soils Investigation and Evaluation Report and a grading plan shall be filed at the time of filing any tentative tract map or parcel map providing for lots or portions of lots within Zone I, Zone II or Zone III, or at the time of filing any application for rezoning or for special permits for parcels of land within Zone I, Zone II or Zone III;
- For parcels of land within Zone I, Zone II or Zone III, that are not the subject of the filing of a tentative map or tentative parcel map, or that are not the subject of any application for rezoning or a special permit, a Zone I, Zone II or Zone III Soils Investigation and Evaluation Report and a grading plan shall be filed with any request for a building permit.

Certification. The Soils Investigation and Evaluation Reports shall be certified as follows:

- The engineer responsible for the soils investigation and evaluation report and for the grading plan shall certify that the proposed project will not cause any significant increase in the risk of damage to the bluff from erosion, slippage, subsidence, or other

movement when grading, drainage, and other slope protection measures have been done in accordance with the Soils Investigation and Evaluation Report and the grading plan. The certificate may be executed on the face of the subdivision map or parcel map or may be contained in a separate instrument delivered to the Director.

- The engineer responsible for the soils investigation and evaluation report and for the grading plan for parcels of land for which certification is not provided above shall file written certification with any request for a building permit that the proposed project will not cause any significant increase in the risk of damage to the bluff from erosion, slippage, subsidence or other movement, when grading, drainage and other slope protection have been done in accordance with the soils investigation and evaluation report and the grading plan.

Completion of Erosion Controls. All erosion control measures shall be completed before the issuance of occupancy permits for residences constructed on lots within or partially within Zone II, and shall be completed before the issuance of building permits for structures constructed on lots within or partially within Zone III.

4.7.3 Impacts and Mitigation Measures

The following section presents a discussion of the impacts related to geology and soils that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds to determine if an impact is significant. The latter part of this section presents the impacts associated with implementation of the proposed project and the recommended mitigation measures, if required. Mitigation measures are recommended, as appropriate, for significant impacts to eliminate or reduce them to a less than significant level. Cumulative impacts are also addressed.

4.7.3.1 Significance Criteria

Based on *State CEQA Guidelines* Appendix G, the proposed project would have a significant impact on geology and soils if it would:

a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

   i. 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);

   ii. Strong seismic ground shaking;

   iii. Seismic-related ground failure, including liquefaction; or

   iv. Landslides.

b. Result in substantial soil erosion or the loss of topsoil.

c. 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.

d. Be located on expansive soil, as defined in Table 18-1-B of the UBC (1994), creating substantial risks to life or property.

e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

4.7.3.2 Project Impacts

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

GEO-1 The proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known fault, strong seismic ground shaking, seismic-related ground failure, or landslides.

The proposed project consists of the adoption of a VMT Reduction Program which aims to establish mitigation for future projects that exceed the City's VMT thresholds in the form of a mitigation bank. The program would identify, quantify, and prioritize applicable mitigation measures and relevant VMT-reducing projects within Fresno to be funded by the proposed mitigation bank. The following analysis addresses potential seismic hazards in the project area.

i. 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;

According to the Fault Rupture Zones Map prepared by the California Department of Conservation in 2018, the Planning Area is not located within a Fault-Rupture Hazard Area. Moreover, no active faults have been identified within the Planning Area. The nearest zoned fault to the Planning Area is a portion of the Nunez Fault, located approximately 48 miles southwest of the Planning Area. Therefore, because no active faults occur within the Planning Area, impacts associated with fault rupture would be less than significant. No mitigation is required.

ii. Strong seismic ground shaking;

As with most areas within the State of California, the Planning Area would be exposed to ground shaking from seismic events on local and regional faults. However, the Fresno area has historically experienced a low to moderate degree of seismicity.

Although the Planning Area occurs in an area with historically low to moderate level of seismicity, strong ground shaking could occur within the Planning Area during seismic events and occurrences have the possibility to result in significant impacts. Major seismic activity along the nearby Great Valley Fault Zone or the Nunez Fault, or other associated faults, could affect the Planning Area through strong seismic ground shaking. Strong seismic ground shaking could potentially cause structural damage to existing or proposed projects in the Planning Area, possibly resulting in damage to facilities and interruption of service.

The proposed project would not result in any physical improvements, or in changes to the distribution or intensity of the land uses within the Planning Area. However, adoption of the proposed VMT Reduction Program would support future multi-modal or transportation improvements in accordance with the program. These future VMT-reducing projects identified by the VMT Reduction Program would be required to comply with construction and design standards of the California Building Code (CBC), the City's General Plan and the Municipal Code to reduce risks associated with ground shaking hazards. With the implementation of applicable General Plan policies as well as adherence to Municipal Code and other applicable regulations, potential seismic ground shaking impacts would be less than significant.

iii. Seismic-related ground failure, including liquefaction; or

The predominant soils within the Planning Area consist of varying combinations of loose/very soft to very dense/hard silts, clays, sands, and gravels. Groundwater has been encountered near the ground surface in close proximity to water-filled features such as canals, ditches, ponds, and lakes. Based on these characteristics, the potential for soil liquefaction within the Planning Area ranges from very low to moderate due to the variable density of the subsurface soils and the presence of shallow groundwater.

The proposed project would not result in any physical improvements, or in changes to the distribution or intensity of the land uses within the Planning Area. However, adoption of the proposed VMT Reduction Program would support future multi-modal or transportation improvements in accordance with the program. These future VMT-reducing projects identified by the VMT Reduction Program would be required to comply with requirements of applicable General Plan policies, including Objective NS-2 and Policies NS-2-a through NS-2-d which require implementing seismic protection in new and existing developments, conducting soil analyses for development projects, and enforcing development setbacks in the City's Bluff Preservation Overlay Zone as applicable. With the implementation of applicable policies and standards, potential soil liquefaction impacts would be less than significant. No mitigation is required.

In addition to liquefaction, the Planning Area could be susceptible to induced settlement of loose unconsolidated soils or lateral spread during seismic shaking events. Based on the nature of the subsurface materials and the relatively low to moderate seismicity of the region, seismic settlement and/or lateral spread are not anticipated to represent a substantial hazard within the Planning Area during seismic events. However, if induced settlement or lateral spread does occur, development projects could experience significant

impacts. Future VMT-reducing projects identified by the VMT Reduction Program would need to comply with requirements of the CBC, as required by Section 11-101 of the Fresno Municipal Code, which would reduce potential settlement and lateral spread impacts to less-than-significant levels. No mitigation is required.

iv. Landslides.

The Planning Area is located within an area that consists of mostly flat topography within the Central Valley. Accordingly, there is no risk of large landslides in the majority of the Planning Area. However, there is the potential for landslides and slumping along the steep banks of rivers, creeks, or drainage basins such as the San Joaquin River bluff and the many unlined basins and canals that trend throughout the Planning Area.

The City of Fresno Municipal Code Section 15-1603 requires a soils investigations and assessments of geologic impact standards to be prepared for every subdivision to be performed in the vicinity of the San Joaquin River bluff prior to any new developments or modifications to the bluff area.

As discussed above, the proposed project would not result in any physical improvements, or in changes to the distribution or intensity of the land uses within the Planning Area. However, adoption of the proposed VMT Reduction Program would support future multi-modal or transportation improvements in accordance with the program. As required by the City's Municipal Code, future projects listed under the Fresno VMT Reduction Program would be required to implement CBC requirements into project design, which would reduce potential impacts related to landslides to less-than-significant levels. No mitigation is required.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

GEO-2 The proposed project would not result in substantial soil erosion or the loss of topsoil.

Natural forces, both chemical and physical, are continually at work breaking down soils. Erosion poses two hazards: 1) it removes soils, thereby undermining roads and buildings and producing unstable slopes, and 2) it deposits eroded soil in reservoirs, lakes, and drainage structures, and on roads as mudslides. Natural erosion is frequently accelerated by human activities such as site preparation for construction and alteration of topographic features.

The proposed project consists of the adoption of a VMT Reduction Program which aims to establish mitigation for future projects that exceed the City's VMT thresholds in the form of a mitigation bank. The program would identify, quantify, and prioritize applicable mitigation measures and relevant VMT-reducing projects within Fresno to be funded by the proposed mitigation bank. The proposed project would not result in any physical improvements, or in changes to the distribution or intensity of the land uses within the Planning Area. However, adoption of the proposed VMT Reduction Program would support future multi-modal or transportation improvements in accordance with the

program. These future VMT-reducing projects identified by the VMT Reduction Program would potentially result in site preparation activities, such as grading and trenching, at future project sites located throughout the Planning Area. Future projects would also result in the addition of impervious surfaces within the Planning Area, and depending on the location of the project, could possibly result in the alteration of topographic features at the project site. The alteration of topographic features could lead to increased erosion by creating unstable rock or soil surfaces, by changing the permeability or runoff characteristics of the soil, or by modifying or creating new pathways for drainage.

The Fresno Municipal Code Section 15-1603 requires the preparation of a preliminary soils report that would identify any potential site-specific soil issues, foundation support and grading parameters would be incorporated into the design as required by the Code. Further, Fresno Municipal Code Section 15-3302 requires every approved map to be conditioned on compliance with the requirements for grading and erosion control, including the prevention of sedimentation or damage to off-site property. Compliance with these policies and with other pertinent regulations will ensure that potential soil erosion impacts, or the potential loss of topsoil, would be less than significant. No mitigation is required.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

GEO-3 The proposed project would not 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.

As previously discussed, impacts associated with liquefaction, lateral spreading, and landslides would be less than significant. Portions of the San Joaquin Valley have been subject to land subsidence or collapse due to groundwater and petroleum extraction. Damage caused by subsidence or collapse has been restricted principally to significant changes in gradients of canals and aqueducts, and breakage of deep-water well casings. Within the San Joaquin Valley, subsidence or collapse is concentrated in the southern part and the west side of the valley where rainfall is sparse and groundwater recharge is minimal. Although subsidence or collapse is a significant concern in western Fresno county, as well as other portions of the San Joaquin Valley, the Planning Area is not known to be subject to such subsidence or collapse hazards.

As previously discussed, the proposed project would not result in any physical improvements, or in changes to the distribution or intensity of the land uses within the Planning Area. However, adoption of the proposed VMT Reduction Program would support future multi-modal or transportation improvements in accordance with the program. These future VMT-reducing projects identified by the VMT Reduction Program, at the time they are proposed for development, would be required to comply with construction and design requirements of the General Plan and the Fresno Municipal Code, which would reduce potential settlement and lateral spread impacts to less than significant levels. No mitigation is required.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

GEO-4 The proposed project would not be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property.

The surface and near-surface soils observed throughout the Planning Area consist of varying combinations of clays, silts, sands, gravels, and cobbles. The clayey soils are considered to be slightly to moderately expansive. Previously developed areas within the Planning Area contained expansive clayey soils, and it is anticipated that there are localized areas within the Planning Area that contain expansive soils.

As previously discussed, the proposed project would not result in any physical improvements, or in changes to the distribution or intensity of the land uses within the Planning Area. However, adoption of the proposed VMT Reduction Program would support future multi-modal or transportation improvements in accordance with the program. These future VMT-reducing projects identified by the VMT Reduction Program, at the time they are proposed for development, would be developed according to General Plan requirements and would be required to prepare site-specific geotechnical reports to assess sites for potentially hazardous soil conditions and provide measures to mitigate potential impacts associated with them. Further, grading and erosion control measures are required under Section 15-1603 of the City of Fresno Municipal Code. The implementation of the requirements in the City of Fresno Municipal Code would reduce potential expansive soil impacts to less than significant levels. No mitigation is required.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

GEO-5 The proposed project does not contain 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.

The proposed project consists of the adoption of a VMT Reduction Program which aims to establish mitigation for future projects that exceed the City's VMT thresholds in the form of a mitigation bank. The program would identify, quantify, and prioritize applicable mitigation measures and relevant VMT-reducing projects within Fresno to be funded by the proposed mitigation bank. The proposed project would not result in any physical improvements, or in changes to the distribution or intensity of the land uses within the Planning Area. However, adoption of the proposed VMT Reduction Program would support future multi-modal or transportation improvements in accordance with the program. Future VMT-reducing projects identified by the VMT Reduction Program are not anticipated to generate sewage such that construction of a septic system or connection to the City's wastewater sewage system would be required to manage it. As such, the proposed project would result in no impacts associated with soils that are incapable of supporting septic tanks. No mitigation is required.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

GEO-6 The proposed project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Based on a review of geologic maps of the Planning Area, there are two primary surficial deposits: (1) Pleistocene non-marine; and (2) Quaternary non-marine fan deposits. The Pleistocene non-marine deposits are considered to have a high potential sensitivity. The Quaternary non-marine deposits consist of Pleistocene-Holocene alluvial sediments. Since these deposits include Pleistocene sediments, they are also considered to have a high potential for sensitivity. Therefore, excavation and/or construction activities within the Planning Area have the potential to impact paleontological/geological resources during excavation and construction activities within previously undisturbed soils.

The proposed project would not result in any physical improvements, or in changes to the distribution or intensity of the land uses within the Planning Area. However, adoption of the proposed VMT Reduction Program would support future multi-modal or transportation improvements in accordance with the program. Future VMT-reducing projects identified by the VMT Reduction Program could potentially involve development of previously undeveloped parcels that could result in disturbance of previously undisturbed soils. Therefore, a potentially significant impact to paleontological and geologic resources could occur. Future projects would be required to implement Mitigation Measure GEO-6 to reduce potential impacts to paleontological resources to a less-than-significant level.

Mitigation Measure GEO-6

Subsequent to a preliminary City review of the project grading plans, if there is evidence that a project will include excavation or construction activities within previously undisturbed soils, a field survey and literature search for unique paleontological/geological resources shall be conducted. The following procedures shall be followed:

- If unique paleontological/geological resources are not found during either the field survey or literature search, excavation and/or construction activities can commence. In the event that unique paleontological/geological resources are discovered during excavation and/or construction activities, construction shall stop in the immediate vicinity of the find and a qualified paleontologist shall be consulted to determine whether the resource requires further study. The qualified paleontologist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including but not limited to, excavation of the finds and evaluation of the finds. If the resources are determined to be significant, mitigation measures shall be identified by the

monitor and recommended to the Lead Agency. Appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any paleontological/geological resources recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study.

- If unique paleontological/geological resources are found during the field survey or literature review, the resources shall be inventoried and evaluated for significance. If the resources are found to be significant, mitigation measures shall be identified by the qualified paleontologist. Similar to above, appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. In addition, appropriate mitigation for excavation and construction activities in the vicinity of the resources found during the field survey or literature review shall include a paleontological monitor. The monitoring period shall be determined by the qualified paleontologist. If additional paleontological/geological resources are found during excavation and/or construction activities, the procedure identified above for the discovery of unknown resources shall be followed.

Level of Significance With Mitigation: Less Than Significant Impact with Mitigation Incorporated.

4.7.3.3 Cumulative Impacts

The proposed project would have a significant effect on the environment if it—in combination with other projects—would contribute to a significant cumulative impact related to geology and soils. For geology and soils, the cumulative study area consists of the City of Fresno Planning Area.

Fresno is relatively immune to some seismic hazards: to surface rupture of a known active fault due to the lack of nearby faults in the region, and liquification and lateral spreading due to the nature of the soils underlying Fresno and the history of low to moderate ground shaking in the region.

Compliance with construction standards and geotechnical requirements from the California Building Code, as required by the City's Municipal Code, and the City's General Plan policies would reduce potential impacts related to ground-shaking, expansive soils and soil erosion in Fresno.

Compliance with the City's General Plan and implementation of Mitigation Measure GEO-6 would reduce potential impacts to paleontological resources to less than significant.

Implementation of the proposed project would result in a less-than-significant cumulative impact with mitigation related to geology and soils.

Mitigation Measure: Refer to Mitigation Measure GEO-6.

Level of Significance With Mitigation: Less Than Significant Impact with Mitigation Incorporated.

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4.8 GREENHOUSE GAS EMISSIONS

This section summarizes existing greenhouse gas (GHG) emissions and discusses global climate change, its causes, and the contribution of human activities. This section also estimates the likely GHG emissions that would result from construction and operational activities associated with implementation of the proposed project.

4.8.1 Existing Environment Setting

The following discussion describes existing GHG emissions in the city of Fresno and the San Joaquin Valley Air Basin (SJVAB), beginning with a discussion of typical GHG types and sources, impacts of global climate changes, the regulatory framework surrounding these issues, and current emission levels.

The study area for project impacts regarding GHG is the City of Fresno Planning Area because potential development under implementation of the proposed Fresno VMT Reduction Program is limited to areas within the Planning Area where the emissions are generated. It should be noted that GHG impacts are inherently cumulative impacts.

The study area for the analysis of cumulative GHG impacts is the State of California. This analysis will be based on a summary of projections approach as provided in Section 15130(b)(1)(B) of the CEQA Guidelines. The applicable projections include those provided by the State pursuant to AB 32 and the California Air Resources Board (CARB) Scoping Plan prepared to address AB 32 requirements.

4.8.1.1 Background

The following section provides background information on GHGs and global climate change.

Greenhouse Gases. Global climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans in recent decades. The Earth's average near-surface atmospheric temperature rose 0.6 ± 0.2° Celsius or 1.1 ± 0.4° Fahrenheit in the 20th century. 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 form 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:

[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, greenhouse gases like carbon dioxide, methane, and nitrous oxide 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 greenhouse gas results in global warming, the naturally occurring greenhouse effect is necessary to keep our planet at a comfortable temperature.

- Carbon dioxide (CO_2)
- Methane (CH_4)
- Nitrous oxide (N_2O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur Hexafluoride (SF_6)

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. While manmade GHGs include naturally-occurring GHGs such as CO_2, methane, and N_2O, some gases, like HFCs, PFCs, and SF_6 are completely new to the atmosphere.

Certain gases, 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. For the purposes of this air quality analysis, the term "GHGs" will refer collectively to the six gases listed above.

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 global warming potential is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that 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, SF_6 is 23,900 times more potent at contributing to global warming than CO_2.

Table 4.8.A: Global Warming Potential of Greenhouse Gases

Gas	Atmospheric Lifetime (Years)	Global Warming Potential (100-year Time Horizon)
Carbon Dioxide	50-200	1
Methane	12	25
Nitrous Oxide	114	310
HFC-23	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: *Second Update to the Climate Change Scoping Plan: Building on the Framework* (CARB 2017b).

The following discussion summarizes the characteristics of the six GHGs and black carbon. Black carbon also contributes to climate change and is therefore discussed below.

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. Natural sources release approximately 150 billion tons of CO_2 each year, far outweighing the 7 billion tons of man-made emissions of CO_2 each year. Nevertheless, natural removal processes, such as photosynthesis by land- and ocean-dwelling plant species, cannot keep pace with this extra input of man-made CO_2, and consequently, the gas is building up in the atmosphere.

In 2021, total annual CO_2 accounted for approximately 81.2 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, industrial and residential sources also make important contributions to CO_2 emissions in California.

Methane. Methane (CH_4) is produced when organic matter decomposes in environments lacking sufficient oxygen. Natural sources include wetlands and oceans. Decomposition occurring in landfills accounts for the majority of human generated CH_4 emissions in California and in the United States as a whole. Agricultural processes such as intestinal fermentation in dairy cows, manure management, and rice cultivation are also significant sources of CH_4 in California. Total annual emissions of CH_4 accounted for approximately 9.8 percent of GHG emissions in California in 2021.[3]

Nitrous Oxide. 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 most natural source emissions. Nitrous oxide 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. Nitrous oxide emissions accounted for approximately 3.4 percent of GHG emissions in California in 2021.[4]

Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride.HFCs are primarily used as substitutes for ozone-depleting substances regulated under the Montreal Protocol.[5] PFCs and

2 CARB. 2022. GHGs Descriptions & Sources in California. Website: ww2.arb.ca.gov/ghg-descriptions-sources (accessed May 2025).

3 Ibid.

4 Ibid.

5 The Montreal Protocol 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.

SF_6 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 resulted in greater use of PFCs. HFCs, PFCs, and SF_6 accounted for about 5.6 percent of GHG emissions in California in 2021.[6]

Black Carbon. Black carbon is the most strongly light-absorbing component of particulate matter (PM) 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 size ($PM_{2.5}$) and is the most effective form of PM, by mass, at absorbing solar energy. Per unit of mass in the atmosphere, black carbon can absorb 1 million times more energy than CO_2.[7] Black carbon contributes to climate change both directly, such as absorbing sunlight, and indirectly, such as affecting cloud formation. However, because black carbon is short-lived in the atmosphere, it can be difficult to quantify its effect on global warming.

Most United States emissions of black carbon come from mobile sources (52 percent), particularly from diesel-fueled vehicles.[8] 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.[9]

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, and California GHG emission inventories.

Global Emissions. Worldwide emissions of GHGs in 2020 totaled 22.9 billion metric tons of CO_2e (MT CO_2e). Global estimates are based on country inventories developed as part of the programs of the United Nations Framework Convention on Climate Change.[10]

United States Emissions. In 2021, the year for which the most recent data are available, the United States emitted about 5,586.0 million metric tons of CO_2e (MMT CO_2e) after accounting for sequestration from the land sector. Overall, emissions in 2021 increased by 6 percent since and were 17 percent lower than 2005 levels. The increase in total GHG emissions was driven by an increase in CO_2 emissions from fossil fuel combustion. In 2021, CO_2 emissions from fossil fuel combustion increased by 7 percent relative to the previous year. This increase in fossil fuel

6 CARB. 2022. op. cit.

7 United States Environmental Protection Agency (USEPA). 2017. Black Carbon, Basic Information. February 14, 2017. Website: 19january2017snapshot.epa.gov/www3/airquality/blackcarbon/basic.html (accessed May 2025).

8 Ibid.

9 CARB. 2017a. *Short-Lived Climate Pollutant Reduction Strategy.* March. Website: https://ww2.arb.ca.gov/sites/default/files/2020-07/final_SLCP_strategy.pdf (accessed May 2025).

10 United Nations Framework Convention on Climate Change (UNFCCC). 2022. GHG Data from UNFCCC. Website: https://di.unfccc.int/time_series (accessed May 2025).

consumption emissions was due primarily to economic activity rebounding after the height of the COVID-19 pandemic. Of the five major sectors—residential and commercial, agricultural, industry, transportation, and electricity generation—transportation accounted for the highest amount of GHG emissions in 2021 (approximately 28 percent), with electricity generation second at 25 percent and emissions from industry third at 23 percent.[11]

State of California Emissions. The State emitted approximately 381.3 MMT CO_2e emissions in 2021, 12.1 MMT CO_2e higher than 2020 levels and 49.7 MMT CO_2e below the 2020 GHG limit of 431 MMT CO_2e.[12] CARB estimates that transportation was the source of approximately 38 percent of the State's GHG emissions in 2021. The next largest sources included industrial sources at approximately 19 percent and electricity generation at 16 percent. The remaining sources of GHG emissions were commercial and residential activities at 10 percent, agriculture at 8 percent, high GWP at 6 percent, and waste at 2 percent.[13]

4.8.2 Regulatory Setting

4.8.2.1 Federal Policies and 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 that the United States Environmental Protection Agency (EPA) has the authority to regulate CO_2 emissions under the federal Clean Air Act. While 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. Additionally, the EPA Administrator signed an endangerment finding action in 2009 under the federal Clean Air Act, 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 October 2012, the EPA and the National Highway Traffic Safety Administration (NHTSA), on behalf of the United States Department of Transportation, issued final rules to further reduce GHG emissions and improve corporate average fuel economy (CAFE) standards for light-duty vehicles for model years 2017 and beyond (77 *Federal Register* 62624). The NHTSA's CAFE standards have been enacted under the Energy Policy and Conservation Act since 1978. This national program requires automobile manufacturers to build a single light-duty national fleet that meets all requirements under both federal programs and the standards of California and other states. This program would increase fuel economy to the equivalent of 54.5 miles per gallon, limiting vehicle emissions to 163

11 USEPA. 2023. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2021. Website: https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2019 (accessed May 2025).

12 CARB. 2023. *California Greenhouse Gas Emissions for 2000 to 2021, Trends of Emissions and Other Indicators Report*. Website: https://ww2.arb.ca.gov/sites/default/files/2023-12/2000_2021_ghg_inventory_trends.pdf (accessed May 2025).

13 Ibid.

grams of CO_2 per mile for the fleet of cars and light-duty trucks by model year 2025 (77 *Federal Register* 62630).

On March 31, 2022, the NHTSA finalized the 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 49 miles per gallon 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 about 234 billion gallons of gas between model years 2030 to 2050.

4.8.2.2 State Policies and Regulations

The CARB is the lead agency for implementing climate change regulations in the State. Since its formation, the 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 are described below.

Assembly Bill 1493 (2002). In a 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 the 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. CARB approved these standards (starting in model years 2009 to 2016) in 2004, but the EPA did not grant the needed waiver of Clean Air Act Preemption until June 30, 2009. CARB responded by amending its original regulation, now referred to as LEV 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.

Executive Order S-3-05 (2005). Governor Arnold Schwarzenegger signed Executive Order (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 executive order 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

The Secretary of the California Environmental Protection Agency (CalEPA) is required to coordinate efforts of various State agencies to collectively and efficiently reduce GHGs. A biannual progress report must be submitted to the Governor and State Legislature disclosing the progress made toward GHG emission reduction targets. In addition, another biannual report must be submitted illustrating the impacts of global warming on California's water supply, public health, agriculture, the coastline, and forestry, and report possible mitigation and adaptation plans to address these impacts.

The Secretary of CalEPA leads a Climate Action Team (CAT) made up of representatives from State agencies as well as numerous other boards and departments. The CAT members work to coordinate statewide efforts to implement global warming emission reduction programs and the State's

Climate Adaptation Strategy. The CAT is also responsible for reporting on the progress made toward meeting the statewide GHG targets that were established in the executive order and further defined under AB 32, the "Global Warming Solutions Act of 2006." The first CAT Report to the Governor and the Legislature was released in March 2006. It laid out 46 specific emission reduction strategies for reducing GHG emissions and reaching the targets established in the EO. The most recent report was released in 2022.

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 effort aims at reducing GHG emissions to 1990 levels by 2020. The CARB has established the level of GHG emissions in 1990 at 427 MMT CO_2e. The emissions target of 427 MMT CO_2e requires the reduction of 169 MMT CO_2e from the State's projected business-as-usual 2020 emissions of 596 MMT CO_2e. AB 32 requires the CARB to prepare a Scoping Plan that outlines the main State strategies for meeting the 2020 deadline and to reduce GHGs that contribute to global climate change. The CARB approved the Scoping Plan on December 11, 2008; it contains the main strategies California will implement to achieve the reduction of approximately 169 MMT CO_2e, or approximately 30 percent, from the State's projected 2020 emissions level of 596 MMT CO_2e under a business-as-usual scenario (this is a reduction of 42 MMT CO_2e, or almost 10 percent from 2002–2004 average emissions). The Scoping Plan also includes CARB recommended GHG reductions for each emissions sector of the State's GHG inventory. The Scoping Plan calls for the largest reductions in GHG emissions to be achieved by implementing the following measures and standards: Improved emissions standards for light-duty vehicles (estimated reductions of 31.7 MMT CO_2e):

- The Low-Carbon Fuel Standard (15.0 MMT CO_2e)
- Energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems (26.3 MMT CO_2e)
- A renewable portfolio standard for electricity production (21.3 MMT CO_2e)

The CARB approved the First Update to the Climate Change Scoping Plan on May 22, 2014. The First Update identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. The First Update defines CARB climate change priorities until 2020, and sets the groundwork to reach long-term goals set forth in EOs S-3-05 and B-16-2012. The Update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals as defined in the initial Scoping Plan. It also evaluates how to align the State's "longer-term" GHG reduction strategies with other State policy priorities for water, waste, natural resources, clean energy, transportation, and land use. CARB released a second update to the Scoping Plan, the 2017 Scoping Plan,[14] to reflect the 2030 target set by EO B-30-15 and codified by SB 32.

[14] CARB. 2017. *California's 2017 Climate Change Scoping Plan*. November.

The 2022 Scoping Plan[15] was approved in December 2022, assesses progress towards achieving the SB 32 2030 target, and lays 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 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 97 (2007). SB 97, signed by the Governor in August 2007 (Chapter 185, Statutes of 2007; Public Resources Code, Sections 21083.05 and 21097), acknowledges climate change is a prominent environmental issue that requires analysis under CEQA. This bill directed the Governor's Office of Planning and Research to prepare, develop, and transmit to the California Resources Agency guidelines for mitigating GHG emissions or the effects of GHG emissions, as required by CEQA.

The California Natural Resources Agency adopted the amendments to the *State CEQA Guidelines* in November 2018, which went into effect in December 2018. The amendments do not identify a threshold of significance for GHG emissions, nor do they prescribe assessment methodologies or specific mitigation measures. The amendments encourage lead agencies to consider many factors in performing a CEQA analysis, but preserve the discretion granted by CEQA to lead agencies in making their own determinations based on substantial evidence. The amendments also encourage public agencies to make use of programmatic mitigation plans and programs when they perform individual project analyses.

Senate Bill 375 (2008). SB 375, the Sustainable Communities and Climate Protection Act, which establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions, the State adopted on September 30, 2008. On September 23, 2010, the CARB adopted the vehicular GHG emissions reduction targets that had been developed in consultation with the Metropolitan Planning Organization (MPOs); the targets require a 6 to 15 percent reduction by 2020 and between 13 to 19 percent reduction by 2035 for each MPO. SB 375 recognizes the importance of achieving significant GHG reductions by working with cities and counties to change land use patterns and improve transportation alternatives. Through the SB 375 process, MPOs such as the Fresno Council of Governments will work with local jurisdictions in the development of Sustainable Communities Strategy designed to integrate development patterns and the transportation network in a way that reduces GHG emissions while meeting housing needs and other regional planning objectives. As shown in Table 4.8.B, pursuant to SB 375, the Central Valley/San Joaquin reduction targets for per capita vehicular emissions are 13 to 16 percent by 2035.

[15] CARB. 2022. *2022 Scoping Plan Update*. December. Website: https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf (accessed May 2025).

Table 4.8.B: Senate Bill 375 Regional Greenhouse Gas Emissions Reduction Targets

Metropolitan Planning Organization	By 2020 (%)	By 2035 (%)
San Francisco Bay Area	10	19
San Diego	15	19
Sacramento	7	19
Central Valley/San Joaquin	6–13	13–16
Los Angeles/Southern California	8	19

Source: California Air Resources Board (2018).

Executive Order B-30-15 (2015). Governor Jerry Brown signed EO B-30-15 on April 29, 2015, which added the immediate target of:

- 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 mid-term 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 renewable portfolio standard from 33 percent to 50 percent
- Increasing 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 the 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 non-renewable resources. The 50 percent increase in energy efficiency in buildings must be achieved using 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 summer 2016, the Legislature passed and the Governor signed SB 32 and AB 197. 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 Governor Brown's April 2015 EO B-30-15. SB 32 builds on AB 32 and keeps us on the path toward achieving the State's 2050 objective of reducing emissions to 80 percent below 1990 levels, consistent with an

Intergovernmental Panel on 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. Additional direction in AB 197 meant to provide easier public access to air emissions data that are collected by CARB was posted in December 2016.

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 100 percent by 2045. The bill 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 the bill, 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 the CARB to work with relevant State agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The goal of carbon neutrality by 2045 is in addition to other statewide goals, meaning 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.

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. This bill 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, Building Standards Code and CALGreen Code. The California Building Standards Code, or Title 24 of the California Code of Regulations contains the regulations that govern the construction of buildings in California. Within the Building Standards Code, two parts pertain to the incorporation of both energy efficient and green building elements into land use development. 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.

In November 2008, the California Building Standards Commission established the California Green Building Standards Code (CALGreen Code), which sets performance standards for residential and non-residential development to reduce environmental impacts and encourage sustainable construction practices. The CALGreen Code addresses energy efficiency, water conservation, material conservation, planning and design, and overall environmental quality. The CALGreen Code is updated every 3 years and was most recently updated in 2022 to include new mandatory

measures for residential as well as non-residential uses; the new measures took effect on January 1, 2023.

Cap and Trade. The development of a cap-and-trade program was included as a key reduction measure of the CARB AB 32 Climate Change Scoping Plan. The cap-and-trade program will help put California on the path to meet its goal of reducing GHG emissions to 1990 levels by 2020 and ultimately achieving an 80 percent reduction from 1990 levels by 2050. The cap-and-trade emissions trading program developed by the CARB took effect on January 1, 2012, with enforceable compliance obligations beginning January 1, 2013. The cap-and-trade program aims to regulate GHG emissions from the largest producers in the State by setting a statewide firm limit, or cap, on allowable annual GHG emissions. The cap was set in 2013 at approximately 2 percent below the emissions forecast for 2020. In 2014, the cap declined approximately 2 percent. Beginning in 2015 and continuing through 2020, the cap has been declining approximately 3 percent annually. The CARB administered the first auction on November 14, 2012, with many of the qualified bidders representing corporations or organizations that produce large amounts of GHG emissions, including energy companies, agriculture and food industries, steel mills, cement companies, and universities. On January 1, 2015, compliance obligation began for distributors of transportation fuels, natural gas, and other fuels. The cap-and-trade program was initially slated to sunset in 2020 but the passage of SB 398 in 2017 extended the program through 2030.[16]

Executive Order N-79-20. EO N-79-20, which Governor Gavin Newsom 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.

California Integrated Waste Management Act. To minimize the amount of solid waste that must be disposed of in landfills, the State Legislature passed the California Integrated Waste Management Act of 1989 (AB 939), effective January 1990. According to AB 939, all cities and counties were required to divert 25 percent of all solid waste from landfill facilities by January 1, 1995, and 50 percent by January 1, 2000. Through other statutes and regulations, this 50 percent diversion rate also applies to State agencies. In order of priority, waste reduction efforts must promote source reduction, recycling and composting, and environmentally safe transformation and land disposal. In 2011, AB 341 modified the California Integrated Waste Management Act and directed the California Department of Resources Recycling and Recovery (CalRecycle) to develop and adopt regulations for mandatory commercial recycling. The resulting 2012 Mandatory Commercial Recycling Regulation requires that on and after July 1, 2012, certain businesses that generate 4 cubic yards or more of commercial solid waste per week shall arrange recycling services. To comply with this requirement, businesses may either separate recyclables and self-haul them or subscribe to a recycling service that includes mixed waste processing. AB 341 also established a statewide recycling goal of 75 percent; the 50 percent disposal reduction mandate still applies for cities and counties under AB 939, the Integrated Waste Management Act. In April 2016, AB 1826 further modified the

[16] California Air Resources Board (CARB). 2014. Cap-and-Trade Program. Website: www.arb.ca.gov/cc/capandtrade/capandtrade.htm (accessed May 2025).

California Integrated Waste Management Act, requiring businesses that generate a specified amount of organic waste per week to arrange for recycling services for that organic waste in a specified manner. In September 2020, CalRecycle determined that statewide disposal of organic waste had not been reduced by 50 percent below 2014 levels by 2020. As a result, CalRecycle reduced the threshold so that a business that generates two cubic yards or more per week of commercial solid waste can arrange for the organic waste recycling services. Furthermore, jurisdictions are no longer able to grant an exemption for a business whose generation is less than one cubic yard of organic waste per week.

Low Carbon Fuel Standard. In January 2007, EO S-01-07 established a low carbon fuel standard (LCFS). This EO calls for a statewide goal to be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020, and that an LCFS for transportation fuels be established for California. The LCFS applies to all refiners, blenders, producers, or importers ("Providers") of transportation fuels in California, including fuels used by off-road construction equipment. In June 2007, CARB adopted the LCFS under AB 32 pursuant to Health and Safety Code Section 38560.5, and, in April 2009, CARB approved the new rules and carbon intensity reference values with new regulatory requirements taking effect in January 2011. The standards require providers of transportation fuels to report on the mix of fuels they provide and demonstrate they meet the LCFS intensity standards annually. This is accomplished by ensuring that the number of "credits" earned by providing fuels with a lower carbon intensity than the established baseline (or obtained from another party) is equal to or greater than the "deficits" earned from selling higher intensity fuels. In response to certain court rulings, CARB re-adopted the LCFS regulation in September 2015, and the LCFS went into effect on January 1, 2016. In 2018, CARB approved amendments to the regulation 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.

Advanced Clean Cars Program. In January 2012, CARB approved the Advanced Clean Cars program, which combines the control of GHG emissions and criteria air pollutants, as well as requirements for greater numbers of ZEVs, into a single package of regulatory standards for vehicle model years 2017 through 2025. The new regulations strengthen the GHG standard for 2017 models and beyond. This will be achieved through existing technologies, the use of stronger and lighter materials, and more efficient drivetrains and engines. The program's ZEVs regulation requires battery, fuel cell, and/or plug-in hybrid electric vehicles (EV) to account for up to 15 percent of California's new vehicle sales by 2025. The program also includes a clean fuels outlet regulation designed to support the commercialization of zero-emission hydrogen fuel cell vehicles planned by vehicle manufacturers by 2015 by requiring increased numbers of hydrogen fueling stations throughout the State. The number of stations will grow as vehicle manufacturers sell more fuel cell vehicles. By 2025, when the rules will be fully implemented, the statewide fleet of new cars and light trucks will emit 40 percent fewer GHGs and 75 percent fewer smog-forming emissions than 2012 model year vehicles.

The Advanced Clean Cars II regulations will rapidly scale down light-duty passenger car, pickup truck and SUV emissions starting with the 2026 model year through 2035. The regulations are two-pronged. First, it amends the ZEV regulation to require an increasing number of ZEVs, and relies on

currently available advanced vehicle technologies, including battery-electric, hydrogen fuel cell electric and plug-in hybrid electric-vehicles, to meet air quality and climate change emissions standards. These amendments support Executive Order N-79-20 that requires all new passenger vehicles sold in California to be zero emissions by 2035. Second, the Low-emission Vehicle Regulations were amended to include increasingly stringent standards for gasoline cars and heavier passenger trucks to continue to reduce smog-forming emissions.

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 install 200 hydrogen fueling stations and 250,000 EV charging stations by 2025. It specifies that 10,000 of the EV charging stations should be direct current (DC) fast chargers. This order 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 Zero-Emissions Vehicle 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.

4.8.2.3 Regional Policies and Regulations

San Joaquin Valley Air Pollution Control District. Fresno is within the SJVAB, which is under the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD). 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, which are now superseded by State policies (i.e., the 2019 CALGreen Code) and the 2030 GHG targets, established in SB 32.

San Joaquin Valley Carbon Exchange and Rule 2301. The SJVAPCD initiated work on the San Joaquin Valley Carbon Exchange in November 2008. The 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 is participating in a new 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. The District is one of the first to have offsets available for trading on the GHGRx.

Fresno Council of Governments. Fresno Council of Governments (FCOG) is responsible for regional transportation planning in Fresno County and participates in developing mobile source emission inventories used in air quality attainment plans.

Regional Transportation Plan/Sustainable Communities Strategy. Regional Transportation Plans (RTPs) are State-mandated plans that identify long-term transportation needs for a region's transportation network. FCOG's 2022 RTP charts the long-range vision of regional transportation in Fresno county through the year 2046. The RTP identifies existing and future transportation related needs, while considering all modes of travel, analyzing alternative solutions, and identifying priorities for the anticipated available funding for the 1,100 projects and multiple programs included within it. 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 a Sustainable Communities Strategy (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 planning can lead to lower greenhouse gas emissions from automobiles and light trucks. Fresno COG has included the SCS in its 2022 RTP.

City of Fresno General Plan. The City of Fresno General Plan provides goals, policies, and action items that work to meet or exceed all current and future state-mandated targets for reducing emissions of GHGs. The policies and action items from the General Plan, listed below, would apply to the proposed project.

Policy RC-5-a: Support State Goal to Reduce Statewide GHG Emissions. As is consistent with State law, strive to meet AB 32 goal to reduce greenhouse gas emissions to 1990 levels by 2020 and strive to meet a reduction of 80 percent below 1990 levels by 2050 as stated in Executive Order S-03-05. As new statewide GHG reduction targets and dates are set by the State update the City's Greenhouse Gas Reduction Plan to include a comprehensive strategy to achieve consistency with those targets by the dates established.

Policy RC-5-c: GHG Reduction through Design and Operations. Increase efforts to incorporate requirements for GHG emission reductions in land use entitlement decisions, facility design, and operational measures subject to City regulation through the following measures and strategies:

- Promote the expansion of incentive-based programs that involve certification of projects for energy and water efficiency and resiliency. These certification programs and scoring systems may include public agency "Green" and conservation criteria, Energy Star™ certification, CALGreen Tier 1 or Tier 2, Leadership in Energy Efficient Design (LEED™) certification, etc.

- Promote appropriate energy and water conservation standards and facilitate mixed-use projects, new incentives for infill development, and the incorporation of mass transit, bicycle and pedestrian amenities into public and private projects.

- Require energy and water audits and upgrades for water conservation, energy efficiency, and mass transit, pedestrian, and bicycle amenities at the time of renovation, change in use, change in occupancy, and change in ownership for major projects meeting review thresholds specified in an implementing ordinance.

- Incorporate the City's "Guidelines for Ponding Basin/Pond Construction and Management to Control Mosquito Breeding" as conditions of approval for any project using an on-site stormwater basin to prevent possible increases in vector-borne illnesses associated with global climate change.

- Periodically evaluate the City's facility maintenance practices to determine whether there are additional opportunities to reduce GHGs through facility cleaning and painting, parks maintenance, road maintenance, and utility system maintenance.

- Periodically evaluate standards and mitigation strategies for highly vehicle-dependent land uses and facilities, such as drive-through facilities and auto-oriented development

Policy RC-5-d: SCS and CAP Conformity Analysis. Ensure that the City includes analysis of a project's conformity to an adopted regional Sustainable Community Strategy or Alternative Planning Strategy (APS), an adopted Climate Action Plan (CAP), and any other applicable City and regional greenhouse gas reduction strategies in effect at the time of project review.

Policy RC-5-e: Ensure Compliance. Ensure ongoing compliance with GHG emissions reduction plans and programs by requiring that air quality measures are incorporated into project design, conditions of approval, and mitigation measures.

Policy RC-5-g: Evaluate Impacts with Models. Continue to use computer models such as those used by SJVAPCD to evaluate greenhouse gas impacts of plans and projects that require such review.

Policy RC-7-c: Best Practices for Conservation. Require all City facilities and all new private development to follow United States Bureau of Reclamation Best Management Practices for water conservation, as warranted and appropriate.

Policy RC-8-a: Existing Standards and Programs. Existing Standards and Programs. Continue existing beneficial energy conservation programs, including adhering to the California Energy Code in new construction and major renovations.

Policy RC-11-a: Waste Reduction Strategies. Maintain current targets for recycling and re-use of all types of waste material in the city and enhance waste and wastewater management practices to reduce natural resource consumption, including the following measures:

- Continue to require recyclable material collection and storage areas in all residential development.
- Establish recycling collection and storage area standards for commercial and industrial facilities to size the recycling areas according to the anticipated types and amounts of recyclable material generated.
- Provide educational materials to residents on how and what to recycle and how to dispose of hazardous waste.
- Provide recycling canisters and collection in public areas where trash cans are also provided.
- Institute a program to evaluate major waste generators and identify recycling opportunities for their facilities and operations.
- Continue to partner with the California Integrated Waste Management Board on waste diversion and recycling programs and the CalMax (California Materials Exchange) program.
- Evaluate the feasibility of a residential, restaurant, and institutional food waste segregation and recycling program, to reduce the amount of organic material sent to landfill and minimize the emissions generated by decomposing organic material.
- Evaluate the feasibility of "carbon footprinting" for the City's wastewater treatment facilities, biomass and composting operations, solid waste collection and recycling programs.
- Expand yard waste collection to divert compostable waste from landfills.
- Study the feasibility and cost-benefit analysis of a municipal composting program to collect and compost food and yard waste, including institutional food and yard waste, using the resulting compost matter for City park and median maintenance.

4.8.3 Impacts and Mitigation Measures

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

4.8.3.1 Significance Criteria

Based on State CEQA Guidelines Appendix G, the proposed project would have a significant impact related to greenhouse gas emissions if it would:

a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

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.

The City's 2021 GHG Reduction Plan was rescinded, and the SJVAPCD also does not have adopted thresholds of significance for GHG emissions. Therefore, this analysis evaluates the proposed project's potential GHG emissions based on its design elements, consistent with the Bay Area Air Quality Management District (BAAQMD) GHG thresholds. The BAAQMD adopted the *Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans* (Justification Report),[17] which identifies GHG significance thresholds that would be applicable to the proposed project. These thresholds evaluate a project based on its effect on achieving California's long-term climate goal of carbon neutrality by 2045. Based on this research, the BAAQMD has determined that new land use development projects must incorporate specified design elements to contribute the "fair share" toward implementation of the goal of carbon neutrality by 2045. If a project is designed and built to incorporate the identified design elements related to natural gas, energy, vehicle miles traveled (VMT), and electric vehicles (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. The document concludes that if a project does not incorporate these design elements, then it should be found to result in a significant climate impact because it would hinder California's efforts to address climate change.

The Justification Report provides substantial evidence supporting the use of these thresholds for projects throughout California because the thresholds are applicable to meeting the State's

[17] Bay Area Air Quality Management District (BAAQMD). 2022. *Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts From Land Use Projects and Plans*. April.

established GHG reduction goals. In the absence of any City 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*:

        1. Residential projects: 15 percent below the existing VMT per capita

        2. Office projects: 15 percent below the existing VMT per employee

        3. 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.

c. Or be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b).

These project design elements are utilized in the following analysis as the thresholds of significance to evaluate the project's potential GHG emissions impact.

Per the significance thresholds described above, a less than significant GHG impact would occur if the project were consistent with the identified design standards, as evaluated below.

4.8.3.2 Project Impacts

The following discussion describes the potential impacts and impact significance related to greenhouse gas emissions that could result from implementation of the proposed project.

GHG-1 The project would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

The intent of the proposed project is to streamline the SB 743 compliance process for development projects while funding future VMT-reducing transportation improvements to reduce Citywide VMT. The program itself does not propose any demolition or development activities within Fresno. Future transportation improvements would be City-initiated or occur as part of development projects and would occur in incremental phases over time, based largely on funding availability, economic considerations, market demand, and other planning considerations. The phasing and exact details of each future VMT-reducing improvement would be evaluated by the City on a case-by-case basis. Therefore, construction and operational GHG emissions are not quantified as part of this programmatic analysis.

Direct project-related GHG emissions include emissions from construction activities, area sources, and mobile sources, while indirect sources include emissions from electricity and natural gas consumption, water demand, and solid waste generation. However, the proposed project-related GHG emissions would not include emissions from indirect sources as the funded transportation improvements would not involve any building construction that may use natural gas, water, or generate solid waste during operation. Similarly, future transportation improvements would not generate area source emissions as no building construction would occur. Additionally, future funded transportation improvements would reduce mobile source emissions as the intent of the proposed program is to reduce Citywide VMT.

Further, all future transportation improvements, including those implemented as part of development projects, would be required to undergo separate environmental review under CEQA (e.g., preparation of a Categorical Exemption, Mitigated Negative Declaration, or Environmental Impact Report) to evaluate project-level GHG impacts and to identify any required mitigation. As such, impacts would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

GHG-2 The project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

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. As discussed above, 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 (i.e.,

the 2022 California Green Building Code) and the 2030 GHG targets, established in SB 32, as well as State goals for carbon neutrality, as included in Executive Orders and codified in AB 1279. As discussed in the preceding section, the proposed project is consistent with Justification Report. Therefore, in this section, the proposed project is analyzed for consistency with the goals of EO B-30-15, SB 32, AB 197, and the 2022 Scoping Plan and the FCOG RTP.

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,[18] 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 us on the path toward achieving the State's 2050 objective of reducing emissions to 80 percent below 1990 levels. The companion bill to SB 32, AB 197, provides additional direction to the CARB related to the adoption of strategies to reduce GHG emissions. 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 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 will be zero-emission by 2035, and all other fleets will have transitioned to zero-emission as fully possible by 2045, which will reduce the percentage of fossil fuel combustion vehicles.

Water conservation and efficiency measures are intended to continue efficiency programs and use cleaner energy sources to move and treat water. Increasing the efficiency of water transport and reducing water use would reduce GHG emissions. As noted above, future projects implemented as part of the VMT Reduction Program would comply with the CALGreen Code, which includes a variety of different measures, including the reduction of wastewater and water use.

[18] CARB. 2017c. *California's 2017 Climate Change Scoping Plan*. November.

Therefore, the proposed project would not conflict with the plans and policies adopted for the purpose of reducing the emissions of greenhouse gases, including the CARB 2022 Scoping Plan, Executive Order B-30-15, SB 32, and AB 1279.

Fresno Council of Governments' 2022 Regional Transportation Plan. The Fresno Council of Governments (FCOG) Regional Transportation Plan (RTP) reflects transportation planning for Fresno County through 2046. The vision, goals, and policies in the 2022 RTP are intended to serve as the foundation for both short and long-term planning and guide implementation activities. The core vision in the 2022 RTP is to create a region of diverse, safe, resilient, and accessible transportation options that improve the quality of life for all residents by fostering sustainability, equity, a vibrant economy, clean air, and healthy communities. The 2022 RTP contains transportation projects to help more efficiently distribute population, housing, and employment growth, and forecast development that is generally consistent with regional-level general plan data. The actions in the 2022 RTP address all transportation modes (highways, local streets and roads, mass transportation, rail, bicycle, aviation facilities and services) and consist of short- and long-term activities that address regional transportation needs. While the actions are organized by the five key policy areas, many of them are cross-cutting and support multiple goals and policies. Some actions are intended to support the Sustainable Communities Strategy and reduce greenhouse gas emissions directly, while others are focused on the RTP's broader goals. The 2022 RTP does not require that local General Plans, Specific Plans, or zoning be consistent with the 2022 RTP, but provides incentives for consistency for governments and developers.

The proposed project would not interfere with the FCOG's ability to achieve the region's GHG reductions. Furthermore, the proposed project is not regionally significant per *State CEQA Guidelines* Section 15206 and as such, it would not conflict with the 2022 RTP targets, since those targets were established and are applicable on a regional level.

The proposed project would comply with existing State regulations adopted to achieve the overall GHG emissions reduction goals identified in the 2022 RTP and would be consistent with applicable State plans and programs designed to reduce GHG emissions. Therefore, the proposed project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs and impacts would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

4.8.3.3 Cumulative Impacts

CEQA Guidelines Section 15355 requires an analysis of cumulative impacts, which are defined as, "two or more individual effects which, when considered together, are considerable, or which compound or increase other environmental impacts." The cumulative analysis below considers the proposed project's impacts in conjunction with future buildout of the General Plan.

GHG-3 The project, in combination with other projects, would not contribute to a significant cumulative impact related to greenhouse gas emissions.

GHG impacts are by their 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 greenhouse gas 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 discussed above, the Justification Report has determined that projects need to incorporate design elements to do their "fair share" of implementing the goal of carbon neutrality by 2045. If a project is designed and built to incorporate the design elements, then it would contribute its portion of what is necessary to achieve its "fair share," and it can be concluded that the project would result in a less than significant impact related to GHG emissions. If a project does not incorporate these design elements, then a project would result in a significant GHG impact. Therefore, since the proposed project would meet all of the project design features recommended in the Justification Report to support the project achieving its "fair share" of emission reductions, the proposed project would not result in the generation of GHG emissions that would have a significant impact on the environment, and the cumulative GHG impacts would be considered less than significant with mitigation incorporated.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

4.9 HAZARDS AND HAZARDOUS MATERIALS

This section describes the environmental setting, including regulatory framework and existing conditions, and potentially significant environmental impacts of the proposed project on hazards and hazardous materials.

4.9.1 Existing Environment Setting

4.9.1.1 Hazardous Materials Definitions

Hazardous materials refer to substances or waste products that exhibit potential harm to human health, safety, and/or the environment. Hazardous materials can be potentially corrosive, poisonous, flammable, and/or undergo a chemical reaction that may cause harm. These materials can be used in everyday products (e.g., household cleaners, industrial solvents, pesticides, electronics, plastic products, etc.) and can include toxic chemicals. These products are commonly used in agriculture, commercial, industry, hospitals, and households.

"Hazardous materials" described in this section includes all materials defined in the California Health and Safety Code (HSC) Section 25260 as a:

> "Substance or waste that, because of its physical, chemical, or other characteristics, may pose a risk of endangering human health or safety or of degrading the environment. 'Hazardous material' includes but is not limited to…A hazardous substance as defined in Section 25281 or 25316; a hazardous waste as defined in Section 25117; A waste as defined in Section 470 or Section 13050 of the Water Code."[1]

"Hazardous substances" are substances that can adversely affect a person's health, or quality of the environment (e.g., carcinogenic, airborne contaminant, contaminates water, etc.). "Hazardous waste" is any discarded hazardous material and includes hazardous materials purposefully disposed of, or inadvertently released, unless the material has been specifically excluded by regulation. Hazardous wastes are broadly characterized by their ignitability, toxicity, corrosivity, reactivity, radioactivity, or bioactivity. Waste as referenced in HSC Section 470 and Section 13050 of the Water Code is used oil or sewage (radioactive, of human or animal origin, etc.).

Hazardous materials, including certain chemicals are regulated under various State and federal agencies such as the: United States Department of Transportation (USDOT), the United States Environmental Protection Agency (USEPA), the Department of Toxic Substances Control (DTSC), the California Governor's Office of Emergency Services, and other agencies.

The federal and State levels have defined hazardous waste similarly; however, certain distinctions have separated federal and State agencies. Hazardous waste is addressed at the federal level with the Resource Conservation and Recovery Act of 1976 (RCRA), non-RCRA hazardous wastes is addressed at the State level. Federal, State, and local programs have set various regulations in

[1] Find Law. 2020. California Code, Health and Safety Code Section 25260. Website: codes.findlaw.com/ca/health-and-safety-code/hsc-sect-25260.html (accessed May 2024).

handling (treating, storing, and transportation) and disposing hazardous waste to prevent mishandling and potential impact to public health and environment. Some materials are designated "acutely" or "extremely" hazardous under relevant statues and regulations.

4.9.1.2 Hazardous Materials Sites

Hazardous materials are routinely used, stored, and transported in the Planning Area as established by the City's General Plan, and are associated with industrial and commercial/retail businesses, as well as in educational facilities, hospitals, and households. Hazardous waste generators in the Planning Area include industries, businesses, public and private institutions, and households. Federal, state, and local agencies maintain comprehensive databases that identify the location of facilities using large quantities of hazardous materials, as well as facilities generating hazardous waste. Some of these facilities use certain classes of hazardous materials that require risk management plans to protect surrounding land uses.

The Fresno County Health Department's Certified Unified Program Agency (CUPA) is responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that:

- Require Hazardous Materials Business Plans;
- Require California Accidental Release Prevention plans or Federal Risk Management Plans;
- Operate Underground Storage Tanks;
- Operate Aboveground Storage Tanks;
- Generate Hazardous Waste(s);
- Have Onsite Treatment of Hazardous Waste(s)/Tiered Permits.

Compliance is achieved through routine inspections of all regulated facilities, and investigation of citizen-based complaints and inquiries regarding improper handling and/or disposal of hazardous materials and/or hazardous wastes. Hazardous waste source reduction is a primary goal of the CUPA. Additionally, the agency provides oversight for the remediation of contaminated sites.

Hazardous Waste Storage and Leaking Sites. State laws relating to the storage of hazardous materials in underground storage tanks include permitting, monitoring, closure, and cleanup requirements. Regulations set forth construction and monitoring standards, monitoring standards for existing tanks, release reporting requirements, and closure requirements. A Permit to Operate from Fresno County Environmental Health Department is required in order to operate an underground storage tank system within the Planning Area. Environmental Health staff inspects UST facilities on an annual basis to assure compliance with applicable laws and regulations. The purpose of this program is to assure that hazardous materials stored in underground tanks are not released into the groundwater and/or the environment. The Permit to Operate incorporates a set of conditions for operation and continuous monitoring of the underground storage tank system.

> Sites within the Planning Area that have been previously contaminated by hazardous materials are required to be identified and cleaned up. These contaminated sites are mainly associated with leaking underground storage tanks and are located in several areas including south of Downtown, within the boundaries of Fresno Yosemite

International Airport, adjacent to the Palm Bluffs Corporate Center (located in northwest Fresno), as well as along the Union Pacific Railroad Tracks. Releases, leaks, or disposal of chemical compounds, such as petroleum, on or below ground surface can cause contamination in underlying soil and groundwater.

Disturbance of previously contaminated areas may expose the public to hazards from physical or airborne contact. Due to these threats from hazardous materials, the City of Fresno coordinates with local, state and federal agencies to ensure potential threats are minimized. Below is a brief description of six of the databases that provide information about hazardous materials sites within the Planning Area.

1. **Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS):** CERCLIS contains data on potentially hazardous waste sites that have been reported to the United States Environmental Protection Agency (US EPA) by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites, which are either proposed to or on the National Priorities List (NPL) and sites, which are in the screening and assessment phased for possible inclusion on the NPL. The CERCLIS database lists three Federal Superfund sites within the Planning Area, outlined in Table 4.9.A below.

Table 4.9.A: Facilities Listed on the US EPA CERCLIS Database

Site Facility Name	Site/Facility Type	National Priorities List (NPL) Status	Address Description
T.H. Agriculture & Nutrition Co.	Federal Superfund	Deleted NPL	7183 East Mckinley Avenue
Fresno Municipal Sanitary Landfill	Federal Superfund	Final NPL	Southwest Corner of Jensen & West Avenues
Industrial Waste Processing	Federal Superfund	Final NPL	7140 North Harrison Avenue

Source: United States Environmental Protection Agency (2024).

2. **Department of Toxic Substances Control EnviroStor Database**: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. This is one of a number of lists that comprise the "Cortese List" (a list of all hazardous materials sites compiled pursuant to Government Code Section 65962.5). The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, a formerly used database of known and potential hazardous substance release sites. DTSC replaced CalSites with EnviroStor, which also provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the EnviroStor database in May 2024 identified a total of 196 sites in the Planning Area. Table 4.9.B lists current Active sites from that list within the Planning Area.

Table 4.9.B: Facilities Listed on the DTSC EnviroStor Database

Site Facility Name	Site/Facility Type	Cleanup Status	Address Description
1457 H Street	Voluntary Cleanup	Active	1457 H Street
6346 North Blackstone Avenue	Voluntary Cleanup	Active	6346 North Blackstone Avenue
70SBCFresno	Voluntary Cleanup	Active	908 East Garrett Avenue
Agricultural Education Facilities for Sunnyside High School (Proposed)	School Evaluation	Active	718/748/810 and 1010 South Minnewawa Avenue
Bruno's Metal Recycling	Corrective Action	Active	3211 South Golden State Boulevard
California and Elm Groundwater Plume	Evaluation	Active	1802 East California Avenue
Commercial Electroplaters	State Response	Active	2940 South Elm Avenue
Dakota/Hayes - Proposed	School Evaluation	Active	5710 & 5796 West Dakota Avenue
Diamond Cleaners	Evaluation	Active	3782 West Shields Avenue
Downgradient Portion of South Fresno Regional Groundwater Plume	State Response	Active	North of East Woodward Avenue at South East Avenue
FMC Corporation - Fresno	Corrective Action/Voluntary Cleanup/State Response	Active	2501 South Sunland Avenue
Former Fresno 2 Manufactured Gas Plant Site	Voluntary Cleanup	Active	Mariposa Street Between F and G Streets
Former Lamoure's Cleaners and Laundry, 7355 North Blackstone	State Response	Active	7355 North Blackstone Avenue
Former Nees One Hour Martinizing	State Response	Active	7763 North First Street
Fourth Educational Center Site	School Cleanup	Active	2660 Leonard Avenue
Fresno Air Terminal/Old Hammer Field (J09ca0823)	State Response	Active	Mckinley and Clovis Avenues
Fresno Sanitary Landfill	Federal Superfund - Listed	Active - Land Use Restrictions	Southwest Corner of Jensen and West Avenues
International Recycling and Towing	Corrective Action	Active	3270 South Golden State Boulevard
North Fresno PCE Plume	Evaluation	Active	Blackstone and Bullard Avenues
Potential Release Southeast of Golden State Boulevard and East Avenue	State Response	Active	Southeast of Golden State Boulevard & South East Avenue
Radius Recycling (Formerly Schnitzer - Fresno)	Corrective Action	Active	2727 South Chestnut Avenue
Safety-Kleen of California Inc - Fresno	Haz Waste - Standardized	Operating Permit	4139 North Valentine Avenue
Scotts Cleaners	Evaluation	Active	920 East Belgravia Avenue
Skees Recycling	Corrective Action	Active	4628 East Thomas Avenue
South Fresno PCE Groundwater Plume	State Response	Active	2376 South Railroad Avenue
South Fresno Regional Groundwater Plume	State Response	Active	North of Church Avenue at South East Avenue
TSG Recycling Disposal, Incorporated, DBA Western Metal Company	Corrective Action	Active	2910 South Cherry Avenue
Valley Foundry and Machine Works	State Response	Active	2510 South East Avenue

Source: Department of Toxic Substances Control- Envirostor Database (2024).

3. **GeoTracker Database**: The Geotracker database is the California Water Resources Control Boards' (Water Board) data management system for managing sites that impact groundwater, especially those that require groundwater cleanup (such as Underground Storage Tanks, Department of Defense, Site Cleanup Program) as well as permitted facilities such as operating underground storage tanks (USTs) and land disposal sites. Per the Geotracker database, the Planning Area contains 73 sites, in which the cleanup status is open.[2]

4. **Water Board Sites**: The Water Board has identified a list of solid waste disposal sites with waste constituents above hazardous waste levels outside the waste management unit. The following two sites, shown in Table 4.9.C, are located in the Planning Area.[3]

Table 4.9.C: Waste Management Units

Discharger System Number	Waste Management Unit Number	Facility Name	Agency Name
5D100300001-01	McKinley Avenue Yard	T.H. Agriculture and Nutrition	North American Phillips
5D100319001-01 (Solid Waste Id Number: 10-AA-0013)	Orange Avenue Disposal Company	Orange Avenue Landfill	Orange Avenue Disposal Company, Inc.

Source: California Environmental Protection Agency (n.d.).

5. **List of "active" Cease and Desist Orders (CDOs) and Cleanup and Abatement Orders (CAOs) from the Water Board**: This list contains many Cease and Desist Orders and Cleanup and Abatement Orders that do not concern the discharge of wastes that are hazardous materials. Many of the listed orders concern, as examples, discharges of domestic sewage, food processing wastes, or sediment that do not contain hazardous materials, but the Water Boards' database does not distinguish between these types of orders. As shown in Table 4.9.D below, there are three listed facilities in the Planning Area, with only one being active.

Table 4.9.D: Facilities Listed on the Water Board List of "Active" CDO and CAOs

Facility ID	Facility Name	Agency Name	Description	Address	Facility Waste Type	Status
269508	USA SS #96	USA Petroleum Corporation Santa Monica	Gasoline Service Stations	5698 Kings Canyon		Never Active
273180	Malaga CWD WWTF	Malaga CWD	Sewerage Systems	3749 South Maple Avenue	Domestic wastewater	Historical
797417	G Street Lamoure's Fresno	Lamoure's Incorporated		1304 G Street	Contaminated soil	Active

Source: Cortese List Data Resources (2024).

[2] California Water Resources Control Board. 2024. GeoTracker Database. Website: https://geotracker.waterboards.ca.gov/map/?myaddress=California&from=header&cqid=6920362174 (accessed May 2024).

[3] California Environmental Protection Agency. n.d. Sites Identified with Waste Constituents above Hazardous Waste Levels Outside the Waste Management Unit. Website: https://calepa.ca.gov/wp-content/uploads/sites/6/2016/10/SiteCleanup-CorteseList-CurrentList.pdf (accessed May 2024).

6. **Department of Toxic Substances Control (DTSC)**: Section 65962.5(a)(1) requires that DTSC "shall compile and update as appropriate, but at least annually, and shall submit to the Secretary for Environmental Protection, a list of all the following: (1) [a]ll hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code.

   The hazardous waste facilities identified in HSC § 25187.5 are those where DTSC has taken or contracted for corrective action because a facility owner/operator has failed to comply with a date for taking corrective action in an order issued under HSC § 25187, or because DTSC determined that immediate corrective action was necessary to abate an imminent or substantial endangerment. This is a very small and specific subgroup of facilities, and they are not separately posted on the DTSC or Cal/EPA's website. There are no facilities currently listed in the Planning Area.[4]

4.9.1.3 Hazardous Materials Emergency Response

Hazardous Materials Incidents Emergency Response. The unauthorized releases of hazardous materials into the environment could create many environmental impacts including impacts to properties, natural environment and human health. The significance of these impacts could vary according to the location and quantity of the substance released. Hazardous releases can occur in areas that treat, store, transport and use hazardous materials; however, certain areas within the State and Planning Area are at higher risk for releases. In the event of an unauthorized release of hazardous materials/substances, emergency response measures must be implemented to ensure the protection of human and natural environmental health from risk.

The Planning Area includes a developed urban area with industrial uses concentrated in the southern portion of the Planning Area. Agriculture is one of the city's major industries. The potential for hazardous materials incidents are heightened. Accidental releases of pesticides, fertilizers, and other agricultural chemicals may be harmful to the public's health, safety, and the environment. In addition, the Planning Area contains major transportation routes, such as State Highways 99, 180, 41, and 168. Varieties of chemicals are also transported utilizing one of the two railroad lines that intersect the city. As discussed below, the Fresno Yosemite International Airport (FYI), Fresno Chandler Executive Airport, and the Sierra Sky Park are located within the Planning Area. These facilities, along with the transportation routes and industrial uses listed above, transport hundreds of thousands of tons of hazardous materials through and into the Planning Area each year. Due to the urban nature of the Planning Area and its location among several routes that regularly transport hazardous materials through and around the Planning Area, the area faces risks associated with the potential for hazardous materials emergencies (accidental releases). The City of Fresno Fire Department recognizes the potential for a large chemical release to occur which could expose thousands of people to hazardous or toxic vapors.

[4] California Environmental Protection Agency. n.d. Cortese List Section 65962.5(a). Website: https://calepa.ca.gov/sitecleanup/corteselist/section-65962-5a/ (accessed May 2024).

The City of Fresno Fire Department Hazardous Materials Response Team (HMRT) has embraced an all-hazards approach to emergency response to ensure that the Planning Area receives effective protection from the risk of hazardous materials releases.

The Fresno Fire Department HMRT is comprised of approximately sixty (60) personnel trained to the Hazardous Materials Technician and/or Specialist requirements set by the State of California. There are fourteen personnel on duty each day with a minimum staffing of nine Technician/Specialist level trained members. The HMRT responds from two strategically located fire stations within the city of Fresno. The station is staffed with two Type One HAZMAT vehicles and one Mass Decontamination Trailer which are equipped to handle any type of hazardous materials release. In addition, the closest First Responder Operation (FRO) response company will respond to a hazardous materials incident for support. All Fresno Firefighters are trained to the Hazardous Materials First Responder Operations and Decontamination level.

Emergency Response. In addition to emergency response to hazardous materials incidents, both the City of Fresno and the County of Fresno implement programs to facilitate emergency preparedness for other types of incidents within the Planning Area. Specifically, the City of Fresno has an Emergency Operations Plan that describes what the City's actions will be during a response to an emergency. This plan also describes the role of the Emergency Operations Center (EOC) and the coordination that occurs between the EOC, City Departments, and other response agencies. The plan establishes a requirement for the emergency management organization to mitigate any significant emergency disaster affecting the city of Fresno. The plan also identifies the policies, responsibilities, and procedures required to protect the health and safety of city communities, public and private property, and the environmental effects of natural or technological disasters. In addition, the plan establishes the operation concepts and procedures associated within initial response operations (field response) to emergencies, the extended response operations (City of Fresno Emergency Operations Center Activities), and the recovery process. Furthermore, the plan complies with the State of California Emergency Operations Plan "Cross Walk" checklist for determining whether an emergency plan has addressed critical elements of California's Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS).

The County of Fresno has a Multi-Jurisdictional Hazard Mitigation Plan, which is a plan that aims to reduce or eliminate long-term risk to people or property from hazards. The plan, which covers all territory within Fresno County's jurisdictional boundaries, was adopted by the County of Fresno in 2009, and an update was completed and adopted by the County of Fresno in 2018. The plan was prepared pursuant to the requirements of the Disaster Mitigation Act of 2000 so that Fresno County and the jurisdictions within it would be eligible for the Federal Emergency Management Agency's (FEMA) Hazard Mitigation Assistance Grants.

Standardized Emergency Management System (SEMS). In addition to the City Emergency Operations Plan and the County Multi-Jurisdictional Hazard Mitigation Plan, the SEMS is the system required by Government Code Section 8607 (a) for managing response to multi-agency and multi-jurisdiction emergencies in California. SEMS consists of five organizational levels, which are activated as necessary: field response, local government, operational area, OES Mutual Aid Regions, and State OES.

Emergency Operations Center (EOC). The primary City of Fresno EOC is located at the City owned waste water treatment facility located at 5607 W Jensen. During a disaster/emergency, the City of Fresno EOC will support field response operations in mitigating incidents within the incorporated areas of the city of Fresno.

The primary emphasis will be placed on saving lives, protecting property, and preserving the environment. The City of Fresno EOC will operate using the SEMS/National Incident functions, principles, and components. It will implement the action planning process, identifying and implementing specific objectives for each operational period.

The City of Fresno EOC will serve as the coordination and communications between the City of Fresno and Fresno County Operational Area EOC. The Operational Area EOC will be activated whenever an emergency or disaster impacts the city, cities, or special district(s). The Fresno Operational Area EOC will utilize the discipline-specific mutual aid coordinators to coordinate fire, law enforcement, public works, and medical specific resources. Other resource requests that do not fall into these four disciplines will be coordinated by the requesting branch/section/unit within the Appropriate SEMS EOC Section.

Emergency Response Routes. The City does not maintain formal evacuation routes, as the most appropriate routes away from an area that may have been affected by a major disaster would be determined by the location and type of incident. Plans for such incidents would also be heavily subject to change.

Airport Hazards. Three airports are located within the city of Fresno: Fresno Yosemite International Airport (FYI), Fresno Chandler Executive Airport, and Sierra Sky Park. Each of the three airports is described below.

Fresno Yosemite International Airport. Fresno Yosemite International Airport (FYI) is located in the eastern portion of the city along East Clinton Way. FYI is a joint use civilian/military airport. It is used by commercial air carriers, air cargo operators, charter operators, the State of California, general aviation, and the United States military. The California Air National Guard (CANG) occupies a 58-acre area adjacent to East McKinley Avenue in the southeast portion of FYI. A helicopter repair and maintenance unit of the Army National Guard, the California Division of Forestry, and a number of corporate aviation businesses occupy facilities north of the runways. About 250 general aviation aircraft are based at FYI and two Fixed Base Operators (FBOs) offer a wide range of aeronautical services. According to the FYI Safety Compatibility Zones Map, approximately six existing residential structures are located within Safety Zone 1-Runway Protection Zone (RPZ) at the north end of the runway. These residential structures were constructed before implementation of the RPZ, but due to their location relative to noise contours, the homeowners are eligible for no-cost noise mitigation measures such as the installation of noise-reducing windows, exterior doors, attic insulation and other acoustic treatments.

Fresno Chandler Executive Airport. Fresno Chandler Executive Airport is located in the southwestern portion of the city, northwest of the intersection of West Kearny Boulevard and South Thorne Avenue. The airport is designated as a general aviation reliever airport for FYI. One

small cargo carrier operates out of the facility, and nine general aviation businesses operate out of the airport. Approximately 180 general aviation aircraft are based at Fresno Chandler Executive Airport.

Sierra Sky Park. Sierra Sky Park airport is located in the northern portion of the city adjacent to the San Joaquin River north of Herndon Avenue. The facility is a privately owned public use general aviation airport. Sierra Sky Park functions as a reliever airport for small general aviation aircraft, and includes a hangar and office complex.

Fire Hazards. The Planning Area is located within the Central Valley, and is relatively flat. The majority of the Planning Area is located within developed properties or agricultural lands. Similar uses surround the Planning Area with the City of Clovis to the east, and mostly agricultural properties to the north, west, and south. The Sierra Nevada foothills to the north and east of the Planning Area and the City of Clovis provide the nearest areas where large expanses of undeveloped properties occur. Because of the topography and the distance between the developed portions of the Planning Area and undeveloped areas, the primary fire hazard concern within the Planning Area consists of the potential for structure fires in developed areas.

4.9.2 Regulatory Setting

4.9.2.1 Federal Policies and Regulations

Toxic Substances Control Act. Established in 1976 and amended on December 31, 2002, the Toxic Substances Control Act (TSCA) (15 United States Code [USC] Section 2601-2692) grants the EPA power to require proper reporting, record-keeping, and testing requirements related to chemical substances and/or mixtures. Specifically, the TSCA addresses the production, importation, use, and disposal of specific chemicals, including polychlorinated biphenyls (PCBs), asbestos, radon, and lead-based paints (LBP). The TSCA establishes the EPA's authority to require the notification of the use of chemicals, require testing, maintain a TSCA inventory, and require those importing chemicals under Sections 12(b) and 13 to comply with certification and/or other reporting requirements. This federal legislation also phased out the use of asbestos-containing materials in new building materials and sets requirements for the use, handling, and disposal of asbestos-containing materials. Disposal standards for lead-based paint wastes are also detailed in the TSCA.

The Emergency Planning and Community Right-To-Know Act. The Emergency Planning and Community Right-To-Know Act (also known as Title III of the Federal Superfund Amendments and Reauthorization Act, or "SARA III") (42 United States Code 11001 et seq.), was established by the EPA to allow for emergency planning at the State and local level regarding chemical emergencies, to provide notification of emergency release of chemicals, and to address community right-to-know regarding hazardous and toxic chemicals. SARA III was designed to increase community access and knowledge about chemical hazards as well as facilitate the creation and implementation of State/Native American tribe emergency response commissions, responsible for coordinating certain emergency response activities and for appointing local emergency planning committees (LEPCs). Section 1910.1200(c) Title 29 of the CFR defines "chemicals or hazardous materials" for the purposes of SARA III.

Federal Air Regulations, Part 77. The Federal Aviation Administration (FAA) is charged with 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 navigation. 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. Proposed structures are also evaluated against Terminal En Route Procedures, which ensure that a structure does not adversely impact flight procedures. Tall structures, including buildings, construction cranes, and cell towers in the vicinity of an airport can be hazardous to the navigation of airplanes. Federal Air Regulations Part 77 identifies the maximum 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.

Federal Insecticide, Fungicide, and Rodenticide Act. The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) (seven United States Code 136 et seq.) was originally passed in 1947. It has been amended several times, most extensively in 1972 and in 1996 by the Food Quality Protection Act of 1996, and in 2012 by the Pesticide Registration Improvement Extension Act. The purpose of FIFRA is to establish federal jurisdiction over the distribution, sale, and use of pesticides. It also gives EPA the authority to study the effects of pesticide use. Other key provisions of FIFRA require pesticide applicators to pass a licensing examination for status as "qualified applicators," create a review and registration process for new pesticide products, and ensure thorough and understandable labeling that includes instructions for use.

Hazardous Materials Transportation Act (HMTA) – Safe Transport of Hazardous Materials. The U.S. Department of Transportation regulates hazardous materials transportation between states under Title 49, Chapter 1, Part 100-185 of the Code of Federal Regulations. Within California, Caltrans and the California Highway Patrol enforce federal law. Together, these agencies determine driver training requirements, load labeling procedures, and specifications for container types to be used.

Federal Emergency Management Agency (FEMA). With respect to emergency planning, FEMA is responsible for ensuring the establishment and development of policies and programs for emergency management at the federal, State, and local levels. Enforcement of these laws and regulations is delegated to State and local environmental regulatory agencies.

Resource Conservation and Recovery Act. The 1976 Federal Resource Conservation and Recovery Act (RCRA) and the 1984 RCRA Amendments regulate the treatment, storage, and disposal of hazardous and non-hazardous wastes. The legislation mandated that hazardous wastes be tracked from the point of generation to their ultimate fate in the environment. This includes detailed tracking of hazardous materials during transport and permitting of hazardous material handling facilities.

The 1984 RCRA amendments provide the framework for a regulatory program designed to prevent releases from Underground Storage Tanks (USTs). The program establishes tank and leak detection

standards, including spill and overflow protection devices for new tanks. The tanks must also meet performance standards to ensure that the stored material will not corrode the tanks. Owners and operators of USTs had until December 1998 to meet the new tank standards.

Comprehensive Environmental Response, Compensation and Liability Act. The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 introduced active federal involvement to emergency response, site remediation, and spill prevention, most notably the Superfund program. The act was intended to be comprehensive in encompassing both the prevention of, and response to uncontrolled hazardous substances releases. The act deals with environmental response, providing mechanisms for reacting to emergencies and chronic hazardous material releases. In addition to establishing procedures to prevent and remedy problems, it establishes a system for compensating appropriate individuals and assigning appropriate liability. It is designed to plan for, and respond to, failure in other regulatory programs and to remedy problems resulting from action taken before the era of comprehensive regulatory protection.

4.9.2.2 State Policies and Regulations

California Environmental Protection Agency. The California Environmental Protection Agency (CalEPA) is authorized by the USEPA to enforce and implement certain laws and regulations regarding hazardous materials. Under CalEPA, the California DTSC protects the State and people from hazardous waste exposure under RCRA and the California Health and Safety Code. The DTSC requirements include written programs and response plans such as preparation of a Hazardous Materials Business Plan (HMBP). Programs under the DTSC includes aftermath clean-up of improper hazardous waste management, evaluation of samples taken from sites, regulation enforcement regarding use, storage, and disposal of hazardous materials, and encouragement of pollution prevention.

California Division of Occupational Safety and Health. Cal-OSHA is the state-level agency responsible for ensuring workplace safety and is responsible for adoption and enforcement of workplace safety standards and safety practices. If a site is contaminated, a Site Safety Plan must be created and implemented for the safety of workers. A Site Safety Plan establishes policies, practices, and procedures for workers and the public to follow to prevent exposure from hazardous materials originating from a contaminated site or building.

California Building Code. The California Building Code (CBC), contained in Part 2 of Title 24 of the California Code of Regulations (CCR) identifies building design standards, and includes standards for fire safety. The CBC is updated every three years, with the most recent version of the code effective January 1, 2023. The CBC is effective statewide; however, local jurisdictions may adopt more restrictive standards based on locality's conditions. A local city and country building official must check plans for commercial and residential buildings to ensure compliance with the CBC. Fire safety compliance with the CBC include fire sprinkler installation in all new residential, high rise, and hazardous materials buildings; establishment of fire-resistant standards for fire doors, building materials, and certain types of construction; debris and vegetation clearance within a prescribed distance from occupied structures in wildfire hazard areas.

California Emergency Management Agency. The California Emergency Management Agency, established as part of the Governor's Office on January 1, 2009 [Assembly Bill (AB) 38 (Nava)], is responsible for overseeing and coordinating emergency preparedness, response, recovery, and homeland security activities within the State and is supported by local government.

California Department of Forestry and Fire Protection. Public Resources Code 4201-4204 and Government Code 51175-89 requires the California Department of Forestry and Fire Protection (CAL Fire) to evaluate fire threat potential and hazard severity according to areas of responsibility (i.e., state, and local). Evaluations are based on topography, fire history, and climate and include fire threat rankings. In 2012, CAL Fire produced the Strategic Plan for California that contains goals, objectives, and policies to prepare and mitigate for the effects of fire on California's natural and built environments. The Strategic Plan was updated in 2019 to reaffirm, with minor adjustments, the Mission, Vision, and Values of the 2012 Strategic Plan. CAL Fire is in the process of developing a new 2024 Strategic Plan, building on the goals and objectives of the 2019 Strategic Plan.

California Fire Code. The California Fire Code (CFC) is updated every three years with the most current update effective January 1, 2023. The CFC contained in Part 9 of CCR Title 24 incorporates by adoption the International Fire Code of the International Code Council with California amendments. Local jurisdictions can also adopt more restrictive standards based on local conditions, as previously mentioned with the CBC. The CFC regulates building standards, fire department access, fire protection systems and devices, fire and explosion hazard safety, hazardous material storage and use, and building inspection standards.

California Department of Transportation and California Highway Patrol. Caltrans and the CHP are responsible for enforcing federal and State regulations, as well as responding to hazardous material transportation emergencies. Caltrans is the first responder for hazardous material spills and releases on highway and freeway lanes, as well as intercity rail services. The CHP enforces proper labeling and packing regulations of hazardous materials in transit by performing regular vehicle and equipment inspections.

The following are descriptions of provisions included in the California Vehicle Code (CVC) and pertain to the transportation of hazardous-related materials.

- The CHP designates routes in California which are to be used for the transportation of explosives. (CVC Section 31616)

- The CVC applies when explosives are transported as a delivery service for hire or in quantities in excess of 1,000 pounds. The transportation of explosives in quantities of 1,000 pounds or less, or other than on a public highway, is subject to the California Health and Safety Code. (CVC Section 31601(a))

- It is illegal to transport explosives or inhalation hazards on any public highway not designated for that purpose, unless the use of the highway is required to permit delivery of, or the loading of, such materials. (CVC Section 31602(b) and Section 32104(a))

- When transporting explosives through or into a city for which a route has not been designated by the Highway Patrol, drivers must follow routes as may be prescribed or established by local authorities. (CVC Section 31614(a))

- Inhalation hazards and poison gases are subject to additional safeguards. These materials are highly toxic, spread rapidly, and require rapid and widespread evacuation if there is loss of containment or a fire. The CHP designates through routes to be used for the transportation of inhalation hazards. It may also designate separate through routes for the transportation of inhalation hazards composed of any chemical rocket propellant. (CVC Section 32100 and Section 32102(b))

4.9.2.3 Regional Policies and Regulations

County of Fresno Hazard Mitigation Plan. In 2024, Fresno County, with participation from 17 jurisdictions prepared a local multi-jurisdictional hazard mitigation plan to better protect the people and property throughout Fresno County from the effects of hazard events. A local hazard mitigation plan recognizes risks before they occur, as well as identifies resources, information, and strategies for emergency response.

Fresno County Environmental Health Department - Hazardous Materials Business Plans. Facilities that store, use or handle hazardous materials above reportable amounts are required to prepare and file a Hazardous Materials Business Plan for the safe storage and use of chemicals. In the event of an emergency, firefighters, health officials, planners, public safety officers, health care providers and others rely on the Business Plan. Implementation of the Business Plan should prevent or reduce damage to the health and safety of people and the environment when a hazardous material is released.[5]

A Business Plan must be submitted by businesses that handle a hazardous material, or a mixture containing a hazardous material, in quantities equal to or greater than:

1. 55 gallons of a liquid.

2. 500 pounds of a solid.

3. 200 cubic feet (at standard temperature and pressure) of a compressed gas.

4. The federal Threshold Planning Quantity (TPQ) for Extremely Hazardous Substances.

5. Radioactive materials in quantities for which an Emergency Plan is required as per Parts 30, 40, or 70, Chapter 1 of Title 10 of Code of Federal Regulations.

[5] Fresno County Department of Environmental Health. Hazardous Materials Business Plans. Website: https://www.fresnocountyca.gov/Departments/Public-Health/Environmental-Health/Hazardous-Materials-Business-Plans (accessed January 2025).

The Business Plan must include: 1) the type and quantity of hazardous materials; 2) site map; 3) risks of using these materials; 4) spill prevention; 5) emergency response; 6) employee training; and 7) emergency contacts.

Fresno County Airport Land Use Compatibility Plan. The Fresno County Airport Land Use Compatibility Plan (ALUCP) was prepared by the Fresno County Airport Land Use Commission (ALUC) and adopted in December 2018. The ALUCP provides an update of the State-mandated airport land use compatibility plan for the environs of the nine public use airports in Fresno County, including three public use airports within the City of Fresno: Fresno Chandler Executive Airport; Fresno Yosemite International Airport; and Sierra Sky Park Airport. The Fresno County ALUCP implements land use compatibility policies and criteria related to proposed development in the vicinity of public use airports in the City (and throughout Fresno County). The Fresno County ALUCP 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.This Airport Land Use Compatibility Plan replaced the following compatibility plans for the Fresno County ALUC:

- Coalinga Airport Land Use Policy Plan, November 1994
- Fresno County Airports Land Use Policy Plan (Firebaugh, William Robert Johnston Municipal, Reedley Municipal, and Selma), January 1983
- Fresno Chandler Downtown Airport Land Use Policy Plan, Revised October 2014
- Fresno Yosemite International Airport Compatibility Land Use Plan, Revised June 2012
- Harris Ranch Airport Land Use Policy Plan, October 1995
- Reedley Municipal Airport Land Use Compatibility Plan, November 2007
- Sierra Sky Park Land Use Policy Plan, Revised October 1995

Similar to the previously listed airport compatibility plans, this ALUCP is intended to protect and promote the safety and welfare of residents, businesses, and airport users near the public use airports and Naval Air Station Lemoore in Fresno County, while supporting the continued operation of these facilities. Specifically, the plan seeks to: ensure that people and facilities are not concentrated in areas susceptible to aircraft accidents; protect the public from the adverse effects of airport noise; and ensure that no structures or activities encroach upon, or adversely affect, the use of navigable airspace. The City of Fresno Development Code Priority of Plans section mentioned above (Section 15-104-B.4) clearly establishes the adopted Fresno County Airport Land Use Compatibility Plan as the plan that takes precedence over all of the City's other land use plans within the Airport Influence Areas defined in the Plan. The Fresno ALUCP was updated in October 2023 to reflect current conditions shown on the 2023 Airport Layout Plan for the Fresno Chandler Airport, which no longer includes a runway extension.

4.9.2.4 Local Policies and Regulations

City of Fresno Emergency Operation Plan. The California Emergency Services Act requires cities to prepare and maintain an emergency plan for emergencies that are natural or caused by man. The City's adopted Emergency Operations Plan (EOP) plans for emergencies including natural hazards. The EOP does not designate any evacuation routes within the City of Fresno.

City of Fresno General Plan. The City of Fresno's General Plan Noise and Safety Element includes objectives and policies that work to minimize the risk of loss of life, injury, serious illness, and damage to property resulting from the use, transport, treatment, and disposal of hazardous materials and hazardous wastes. The following policies related to hazards and hazardous materials are applicable to the proposed project:

Policy NS-4-a: Processing and Storage. Require safe processing and storage of hazardous materials, consistent with the California Building Code and the Uniform Fire Code, as adopted by the City.

Policy NS-4-c: Soil and Groundwater Contamination Reports. Require an investigation of potential soil or groundwater contamination whenever justified by past site uses. Require appropriate mitigation as a condition of project approval in the event soil or groundwater contamination is identified or could be encountered during site development.

Policy NS-4-e: Compliance with County Program. Require that the production, use, storage, disposal, and transport of hazardous materials conform to the standards and procedures established by the County Division of Environmental Health. Require compliance with the County's Hazardous Waste Generator Program, including the submittal and implementation of a Hazardous Materials Business Plan, when applicable.

Policy NS-4-f: Hazardous Materials Facilities. Require facilities that handle hazardous materials or hazardous wastes to be designed, constructed, and operated in accordance with applicable hazardous materials and waste management laws and regulations.

Policy NS-4-g: Hazmat Response. Include policies and procedures appropriate to hazardous materials in the City's disaster and emergency response preparedness and planning, coordinating with implementation of Fresno County's Hazardous Materials Incident Response Plan.

Policy NS-4-h: Household Collection. Continue to support and assist with Fresno County's special household hazardous waste collection activities, to reduce the amount of this material being improperly discarded.

Policy NS-5-a: Land Use and Height. Incorporate and enforce all applicable Airport Land Use Compatibility Plans (ALUCPs) through land use designations, zoning, and development standards to support the continued viability and flight operations of Fresno's airports and to protect public safety, health, and general welfare.

- Limit land uses in airport safety zones to those uses listed in the applicable ALUCPs as compatible uses, and regulate compatibility in terms of location, height, and noise.

- Ensure that development, including public infrastructure projects, within the airport approach and departure zones complies with Part 77 of the Federal Aviation Administration Regulations (Objects Affecting Navigable Airspace), particularly in terms of height.

Policy NS-5-b: Airport Safety Hazards. Ensure that new development, including public infrastructure projects, does not create safety hazards such as glare from direct or reflective sources, smoke, electrical interference, hazardous chemicals, fuel storage, or from wildlife, in violation of adopted safety standards.

Policy NS-6-a: County Multi-Jurisdiction Hazard Mitigation Plan. Adopt and implement the Fresno County Multi-Jurisdiction Hazard Mitigation Plan and City of Fresno Local Hazard Mitigation Plan Annex.

Policy NS-6-f: Emergency Vehicle Access. Require adequate access for emergency vehicles in all new development, including adequate widths, turning radii, hard standing areas, and vertical clearance.

City of Fresno Municipal Code. Chapter 10, Article 14 of the City of Fresno Municipal Code pertains to the recovery of expenses associated with hazardous spills. Specifically, this section states that "Any person causing a release or threatened release which results in an emergency action shall be liable to the City of Fresno for the recoverable costs resulting from the emergency action."

4.9.3 Impacts and Mitigation Measures

The following section presents a discussion of the impacts related to hazards and hazardous materials that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds to determine if an impact is significant. The latter part of this section presents the impacts associated with implementation of the proposed project and the recommended mitigation measures, if required. Mitigation measures are recommended, as appropriate, for significant impacts to eliminate or reduce them to a less than significant level. Cumulative impacts are also addressed.

4.9.3.1 Significance Criteria

Based on *State CEQA Guidelines* Appendix G, the proposed project would have a significant impact on hazards and hazardous materials if it would:

a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;

b. 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;

c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school;

d. Be located on a site that is included on a list of hazardous materials sites compiled by Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment;

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area;

f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or

g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

4.9.3.2 Project Impacts

The following discussion describes the potential impacts and impact significance related to hazard and hazardous materials that could result from implementation of the proposed project. Mitigation measures are provided as necessary to reduce potential impacts.

HAZ-1 The proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

The proposed project consists of the adoption of the Fresno VMT Reduction Program which aims to establish mitigation for future projects that exceed the City's VMT thresholds in the form of a mitigation bank. The program would identify, quantify, and prioritize applicable mitigation measures and relevant VMT-reducing projects within the City to be funded by the proposed mitigation bank. The proposed project would not result in any physical improvements or change the distribution or intensity of the land uses within the Planning Area. As such, the proposed project would not create significant hazards to the public through he routine transport of use, or disposal of hazardous materials.

However, the adoption of the proposed Fresno VMT Reduction Program would support future multi-modal or transportation improvements in accordance with the program. These future VMT-reducing projects identified by the Fresno VMT Reduction Program could result in the transport, use, storage and disposal of hazardous materials in the project area, including common cleaning products, building maintenance products, paints and solvents, and other similar items. Such hazardous materials would not be used in sufficient quantities to pose a significant hazard to public health and safety or to the environment. It is not anticipated that future VMT-reducing projects would involve the use of acutely hazardous materials.

As applicable, future VMT-reducing projects identified by the Fresno VMT Reduction Program would need to comply with various regulations and guidelines to ensure proper management of hazardous substances during project construction, including San Joaquin Valley Air Pollution Control District

requirements for demolitions and renovations; Construction Safety Orders 1529 (pertaining to asbestos) and 1532.1 (pertaining to lead) from Title 8 of the CCR, Part 61, Subpart M of the Code of Federal Regulations (CFR) (pertaining to asbestos); California Occupational Safety and Health Administration (Cal/OSHA) requirements for safety training, availability of safety equipment, hazardous materials exposure warnings, and emergency action and fire prevention plan preparation; and requirements from the Department of Toxic Substances Control (DTSC), Fresno County Division of Environmental Health, and/or Regional Water Quality Control Board (RWQCB) for new development that may expose construction workers and the public to known or potentially unknown hazardous substances present in the soil or groundwater.

Additionally, future projects would be required to comply with General Plan policies regarding routine transport, use, or disposal of hazardous materials, which include Policies NS-4-a through NS-4-i within the Noise and Safety Element as identified in Section 4.9.2.3, Local Policies and Regulations, above.

Compliance with federal, State, and local regulations and programs described above pertaining to the transportation, use, and disposal of hazardous materials, potential impacts related to the transportation, handling, and disposal of hazardous materials would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

HAZ-2 The proposed project would not 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.

Refer to impact discussion HAZ-1 above. The proposed project would not result in any physical improvements or change the distribution or intensity of the land uses within the Planning Area. However, the adoption of the proposed Fresno VMT Reduction Program would support future multi-modal or transportation improvements in accordance with the program. These future VMT-reducing projects identified by the Fresno VMT Reduction Program would be subject to existing federal, State, and local regulations for the transport, use, storage, and disposal of hazardous materials and would require project-specific analysis to assess potential impacts related to hazardous materials. Implementation of requirements from the policies listed above would reduce potential impacts related to the release of hazardous materials to the environment to less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

HAZ-3 The proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

As described above, the proposed project would not result in development within the Planning Area. Future VMT-reducing projects identified by the Fresno VMT Reduction Program would be subject to existing federal, State, and local regulations for the transport, use, storage and disposal of hazardous materials and would be required to perform project-specific analysis to determine potential impacts related to hazardous emissions or handling of hazardous materials within 0.25 mile of a school. Therefore, the proposed project would have a less-than-significant impact.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

HAZ-4 The proposed project would not be located on a site that is included on a list of hazardous materials sites compiled by Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.

Under Government Code Section 65962.6, the Department of Toxic Substances Control (DTSC) is required to compile and update the Cortese List, which provides information about the location of hazardous materials release sites. As shown in Table 4.9.B above, review of the DTSC EnviroStor database in May 2024 identified a total of 196 active hazardous sites in the Planning Area. Additionally, per the Geotracker database, the Planning Area contains 73 hazardous sites in which the cleanup status is open.

As discussed above, the proposed project would not result in development within the Planning Area. Future VMT-reducing projects identified by the Fresno VMT Reduction Program would be required to assess whether potential project sites are located within an active hazardous site listed in the Cortese List, and if applicable, would be required to remediate any potential effects related to on-site hazardous materials consistent with the requirements of the DTSC, Fresno County Division of Environmental Health, and/or RWQCB. Further, future projects would be subject to existing federal, State, and local regulations for the transport, use, storage and disposal of hazardous materials. As a result, a less-than-significant impact would occur, and no mitigation is required.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

HAZ-5 The proposed project would not result in a safety hazard or excessive noise for people residing or working in the project area.

Airport-related hazards are generally associated with aircraft accidents, particularly during takeoffs and landings. Operation hazards include incompatible land uses, power transmission lines, wildlife hazards (e.g., bird strikes), and tall structures that penetrate the imaginary surfaces surrounding an airport. There are three public or public use airports located within in the Planning Area: Fresno-Yosemite International Airport; Fresno Chandler Executive Airport, and Sierra Sky Park.

The City of Fresno implements land use compatibility policies and criteria related to proposed development in the vicinity of public use airports in the Planning Area. The Fresno County ALUCP

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.

The ALUCP is intended to protect and promote the safety and welfare of residents, businesses, and airport users near the public use airports and Naval Air Station Lemoore in Fresno county, while supporting the continued operation of these facilities. Specifically, the plan seeks to: ensure that people and facilities are not concentrated in areas susceptible to aircraft accidents; protect the public from the adverse effects of airport noise; and ensure that no structures or activities encroach upon, or adversely affect, the use of navigable airspace.

The ALUCP identifies seven safety zones that reflect specific operating characteristics of the airports (i.e. type of aircraft activity, runway length, traffic pattern, etc.). Table 3A of the ALUCP includes safety zone land use compatibility standards that restrict the development of land uses that could pose particular hazards to the public or to vulnerable populations in case of an aircraft accident. Further, Table 3A also provides a breakdown of the intensity criteria for the compatibility zones.[6]

As described above, the proposed project would not include the construction of any physical improvements and as such, would not expose people to airport-related hazards. However, the adoption of the proposed Fresno VMT Reduction Program would support future multi-modal or transportation improvements in accordance with the program. These future VMT-reducing projects identified by the Fresno VMT Reduction Program would be required to conduct project-specific environmental analyses to assess potential impacts related to airport hazards. Future projects would be required to be consistent with the airport safety zone land use and intensity criteria applicable to individual project sites.

Therefore, implementation of the Fresno VMT Reduction Program would not expose people to excessive airport-related hazards or noise, and the impact would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

HAZ-6 The proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

The California Emergency Services Act requires cities to prepare and maintain an Emergency Plan for natural, manmade, or war-caused emergencies that result in conditions of disaster or in extreme peril to life. The City's full-time Emergency Preparedness Officer (EPO) is responsible for ensuring that Fresno's emergency response plans are up-to-date and implemented properly. The EPO also facilitates cooperation between City departments and other local, State and federal agencies that would be involved in emergency response operations. The City of Fresno Emergency Operations

[6] Fresno Council of Governments (Fresno COG). 2023. Fresno County Airport Land Use Compatibility Plan. October. Website: https://www.fresnocog.org/project/airport-land-use-commission-of-fresno-county/ (accessed June 2024).

Center (EOC) serves as the coordination and communication between the City of Fresno and Fresno County Operational Area EOC.

The proposed project consists of the adoption of the Fresno VMT Reduction Program which aims to establish mitigation for future projects that exceed the City's VMT thresholds in the form of a mitigation bank. The program would identify, quantify, and prioritize applicable mitigation measures and relevant VMT-reducing projects within the City to be funded by the proposed mitigation bank. The proposed project would not result in any physical improvements or change the distribution or intensity of the land uses within the Planning Area. Therefore, the proposed project would not result in any alterations of existing roadways that could be used as emergency evacuation routes, and would not interfere with the implementation of or physically interfere with any adopted emergency response plans or emergency evacuation plan. This impact would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

HAZ-7 The proposed project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

Although the city of Fresno is located near high and very high fire hazard designated areas, the city is largely categorized as little or no threat or moderate fire hazard, which is largely attributed to paved areas. Some small areas along the San Joaquin River Bluff area in northern Fresno are classified as Moderate Fire Hazard Severity Zones within the City's Local Responsibility Area (LRA).

As previously discussed, the proposed project would not include the construction of any physical improvements and as such, would not expose people to airport-related hazards. However, the adoption of the proposed Fresno VMT Reduction Program would support future multi-modal or transportation improvements in accordance with the program. These future VMT-reducing projects identified by the Fresno VMT Reduction Program would be required to prepare project-specific analysis to assess potential impacts related to wildland fires, as well as comply with all of the City's requirements for fire safety, including compliance with the Fresno Fire Department's project application review process and the City's General Plan Policies PU-3-a, Policy PU-3-b, Policy PU-3-d, Policy PU-3-e, Policy PU-3-f and Policy PU-3-g, as applicable.

Therefore, the proposed project would not result in a significant risk of loss, injury or death involving wildland fires, and the impact would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

4.9.3.3 Cumulative Impacts

Implementation of the proposed project would not result in impacts in impacts related to hazardous materials. However, future projects identified within the Fresno VMT Reduction Plan would potentially increase hazard-related impacts (i.e., potential release of hazardous waste/material,

interference with emergency plan, wildland fires, etc.) in the City. However, compliance with federal, State, and local policies and actions identified in this section would reduce potential impacts to a less-than-significant level.

Although future projects would have potential impacts associated with hazardous materials, the environmental concerns associated with hazardous materials are site specific. Each project would be required to address any issues related to hazardous material or wastes. Federal, state, and local regulations also require mitigation to protect against site contamination by hazardous materials. Therefore, there would be no cumulative hazardous materials impacts.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

4.10 HYDROLOGY AND WATER QUALITY

This section evaluates the potential environmental effects related to hydrology and water quality associated with the proposed project. This section also addresses local, State, and federal regulations as they pertain to project impacts on hydrology and water quality.

4.10.1 Existing Environment Setting

The following discussion outlines the hydrological conditions of the City of Fresno.

4.10.1.1 Precipitation

Precipitation in Fresno occurs mostly as rain during the months of November through April. Climate data collected from 1948 to 2016 shows that annual rainfall averaged 10.89 inches, but is variable. Recorded annual rainfall has ranged from a low of 3.01 inches in 2013 to a high of 21.61 inches in 1983.[1]

4.10.1.2 Hydrologic Setting

The City of Fresno is located in the Kings Subbasin and lies within the larger San Joaquin Valley Groundwater Basin in the Central Valley of California. The Kings Subbasin covers approximately 1,530 square miles. The San Joaquin Valley Groundwater Basin is bounded to the north by the Sacramento-San Joaquin Delta and Sacramento Valley, to the east by the Sierra Nevada, to the south by the San Emigdio and Tehachapi mountains, and to the west by the Coast Ranges. The Kings Subbasin, located within the southern half of the San Joaquin Valley Groundwater Basin, is bounded to the north by the San Joaquin River, to the east by the alluvium-granite rock interface of the Sierra Nevada foothills, to the south by the southern fork of the Kings River, and to the west by the Delta-Mendota and Westside subbasins. The Kings Subbasin is split into seven Groundwater Sustainability Agency (GSA) management areas, with Fresno located in the North Kings GSA.

4.10.1.3 Groundwater

The City of Fresno is underlain by the Kings River Subbasin, which, along with six other subbasins, comprises the San Joaquin Valley Groundwater Basin. In turn, the San Joaquin Basin is located within the Tulare Lake Hydrologic Region. The Tulare Lake Hydrologic Region spans approximately 10.9 million acres (17,000 square miles) and includes most of Fresno County. The Region encompasses the southern one-third of the Central Valley Regional Water Quality Control Board (RWQCB) jurisdiction.

Groundwater Management. The seven GSAs of the Kings Subbasin operate cooperatively across the basin via a coordination agreement that ensures common approaches to sustainability items such as similarity of data usage and methodologies, consistent interpretations of the basin setting, and common assumptions and development of water budgets, monitoring networks, sustainable management criteria, and data management systems.

[1] Western Regional Climate Center. Period of Record Monthly Climate Summary, Fresno Yosemite Intl AP, California (043257). Average Total Precipitation (inches). Website: wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca3257 (accessed March 27, 2025).

As required by the Sustainable Groundwater Management Act (SGMA), the North Kings GSA considers six sustainability indicators:

- Chronic lowering of groundwater levels, indicating significant and unreasonable depletion of supply;
- Significant and unreasonable reduction of groundwater storage;
- Significant and unreasonable seawater intrusion;
- Significant and unreasonable degraded water quality;
- Significant and unreasonable land subsidence; and
- Depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water.

Each indicator has an identified undesirable result, measurable objective, and minimum threshold. The measurable objective and minimum threshold allow the North Kings GSA to evaluate their progress for the subject indicator and determine if conditions are improving, remaining stable or degrading. The sustainability indicators of primary concern within the City are groundwater levels, groundwater storage, and groundwater quality. The methodology for the water quality indicators has been developed and the methodology is still being developed for the groundwater levels and groundwater storage indicators.

Groundwater Quality. Groundwater within the North Kings Subbasin generally meets primary and secondary drinking water standards for municipal water use and is described as being bicarbonate-type water, including calcium, magnesium, and sodium as the dominant ions. Total dissolved solids (TDS) concentrations rarely exceed 600 milligrams per liter (mg/L) and range from 200 to 700 mg/L. However, the groundwater basin has been impacted by multiple chemical contaminants that affect the City's ability to fully utilize the groundwater basin resources without some type of wellhead treatment in certain areas.[2]

The primary contaminants are nitrate, 1,2-dibromo-3-chloropropane (DBCP), 1,2,3-trichloropropane (1,2,3-TCP), and other volatile organic compounds like trichloroethylene (TCE) and perchloroethylene (PCE). The City has received settlements in a number of lawsuits related to these contaminants and has constructed wellhead treatment systems and implemented blending plans for a number of wells. Approximately 40 City wells are being treated for contaminants such as PCE, DBCP, TCE, 1,2,3-TCP, perfluorooctanoic acid, perfluorooctanesulfonic acid, ethylene dibromide, and nitrate, and an additional 20 wells include treatment for iron, manganese, and hydrogen sulfide removal or corrosion control.[3]

[2] City of Fresno. 2020 Urban Water Management Plan. Website: https://www.fresno.gov/wp-content/uploads/2023/03/Fresno-2020-UWMP_Final_2021-07-21.pdf (accessed June 2025).

[3] Ibid

Extensive groundwater contamination nearly covers the City's entire water service area; only areas located in the northwest appear to be relatively unaffected by regional groundwater contamination. Also, many of the City's wells are impacted by one or more of the contaminant plumes.

4.10.1.4 Surface Water

With the completion and operation of the Southeast Surface Water Treatment Facility (SESWTF), surface water has become the primary source used to meet potable water demands within the City. The City contracts with the Fresno Irrigation District (FID) for Kings River water and with the United States Bureau of Reclamation (USBR) for Central Valley Project (CVP) water from the Friant-Kern Canal. Surface water is either treated and distributed for potable use or delivered to recharge basins for groundwater recharge.

Potential hazards to surface water quality include the following nonpoint pollution problems: high turbidity from sediment resulting from erosion of improperly graded construction projects, concentration of nitrates and dissolved solids from agriculture or surfacing septic tank failures, contaminated street and lawn run-off from urban areas, and warm water drainage discharges into cold water streams.

The most critical period for surface water quality is typically after a rainstorm which can produce significant amounts of drainage runoff into streams at low flow, resulting in poor dilution of contaminates in the low flowing stream. Such conditions are most frequent during the fall at the beginning of the rainy season when stream flows are near their lowest annual levels. Besides the greases, oils, pesticides, litter, and organic matter associated with such runoff, heavy metals such as copper, zinc, and cadmium can cause considerable harm to aquatic organisms when introduced to streams in low flow conditions.

Historically, urban stormwater runoff was considered as a non-point discharge under the Federal Water Pollution Control Amendments of 1972 until the mid-1980s. However, since then, the United States Environmental Protection Agency (EPA) has developed regulations that classify certain urban runoff as a point source (an identifiable source) subject to National Pollution Discharge Elimination System (NPDES) permits. These rules currently apply to medium and large urban areas, with further rulemaking anticipated as additional programs are developed to meet requirements of federal water pollution control laws.

Erosion also contributes significantly to surface water pollution. Excessive and improperly managed grading, vegetation removal, quarrying, logging, and agricultural practices all lead to increased erosion of exposed earth and sedimentation of watercourses during rainy periods. In slower moving water bodies these same factors often cause a buildup of siltation, which ultimately reduces the capacity of the water system to percolate and recharge groundwater basins, as well as adversely affecting both aquatic resources and flood control efforts.

4.10.1.5 Stormwater Drainage

The Fresno-Clovis Metropolitan Area and surrounding rural vicinities are within the service area boundaries of the FMFCD, which has primary responsibility for managing the local stormwater flows. Most stormwater in Fresno drains to urban stormwater basins, where the water is retained to

attenuate peak-flow runoff and recharge stormwater, or is pumped to local irrigation canals for conveyance away from the municipal areas.

The storm drainage facilities are documented in the Storm Drainage and Flood Control Master Plan (SDFCMP), which is developed and updated by FMFCD. The master plan drainage system for the City consists of over 170 individual drainage areas or urban watersheds. Drainage area boundaries are determined by geographic and topographic features and the economics of providing storm drainage service to the watershed. The storm drainage facilities within a drainage area consist of storm drain inlets, pipeline, retention basins, urban detention (water quality) basins, and stormwater pump stations. Surface grading improvements such as streets, curbs, gutters, and valley gutters are part of the City of Fresno infrastructure, but the general grading of these features is governed by the SDFCMP to provide a coherent implementation of drainage within the City.

Storm drain inlets are located at low points in the topography as determined by the SDFCMP. Pipeline alignments and sizes are also shown on the SDFCMP. Pipeline alignments are subject to change as development proposals are put forward by development projects. Retention basins and urban detention basins' locations and geometry are part of the SDFCMP as well. Basins are sited in the topographic low point of the drainage area. All of the storm drainage pipelines are directed to the retention and urban detention basins. Retention basins store and percolate stormwater from the drainage area if time between storms permits, or is otherwise pumped to designated irrigation canals. Urban detention basins provide quiescent (still) conditions for the removal or settling out of suspended solids prior to discharge of the stormwater to the San Joaquin River.

The Fresno-Clovis Metropolitan area consists of drainage areas that are completed, e.g., all of the master planned facilities are constructed and functional; or in the process of being completed, e.g. portions of the retention basins, pipelines, and inlets are constructed and portions are not. For the drainage areas that are in the planning stage, e.g., the drainage area is planned and documented, the retention basin land may have been purchased, but no construction has occurred. Implementation of the SDFCMP occurs in response to development activity in newly developing areas and through Capital Improvement Project (CIP) planning in previously developed areas. Funding for storm drainage facilities occurs through the collection of drainage fees assessed on parcels as they develop through grant funding from the State of California and the Federal Government, through low interest infrastructure improvement bonds, and in the past, through assessment districts. Drainage fees fund most of the construction of master plan facilities in newly developing areas. Grants, infrastructure loans, and assessment districts fund most of the construction in previously developed drainage areas.

4.10.1.6 Inundation Hazards

Floodplain. The City of Fresno is in the alluvial fans of numerous foothill streams and creeks that drain the western slope of the Sierra Nevada foothills. These streams include Big Dry Creek, Alluvial Drain, Pup Creek, Dog Creek, Redbank Creek, Mud Creek, and Fancher Creek. Numerous smaller, unnamed drainage courses also drain into the Fresno from the rural areas east of the Fresno.

Based on a review of the Federal Emergency Management Agency's Flood Insurance Rate Maps (FIRM) for Fresno,[4] there are areas that are subject to the 100-year frequency flood zone. The primary area that is subject to the 100-year flood zone is along the San Joaquin River below the bluffs. There are additional areas in the vicinity of the Fresno International Airport, the Southeast Development Area in the vicinity of the Redbank Creek Dam, adjacent to Highway 180 east of Clovis Avenue, and within an industrial area east of SR-99, south of California Avenue and north of Jensen Avenue. In addition, various detention basins are subject to the 100-year flood zone.

4.10.2 Regulatory Setting

4.10.2.1 Federal Policies and Regulations

Clean Water Act. The Clean Water Act (CWA) established a basic structure for regulating discharges of pollutants into Waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized and expanded in 1972. The "Clean Water Act" became the Act's common name with amendments in 1977.

Under the CWA, the USEPA has implemented pollution control programs and established water quality standards for all contaminants in surface waters. The CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a NPDES permit was obtained. Point sources are discrete conveyances such as pipes or manmade ditches. While residential structures that are either connected to a municipal system or otherwise do not discharge into surface waters are not required to obtain a NPDES permit, industrial, municipal, and similar facilities must obtain permits to discharge directly into surface waters. In California, the NPDES program is administered through the nine RWQCBs.

Non-point sources are similarly regulated through a General Construction Activity Stormwater NPDES permit. Construction activities subject to this permit include clearing, grading, excavating, and general disturbances to the ground. Stormwater Pollution Prevention Plans (SWPPPs) are required for the issuance of a General Construction Activity Stormwater NPDES permit and typically include the implementation of structural and non-structural Best Management Practices (BMPs) to reduce impacts related to surface water quality.

National Pollutant Discharge Elimination System (NPDES) Permit. Section 402 of the CWA established the NPDES to control water pollution by regulating point sources that discharge pollutants into Waters of the United States. In the State of California, the USEPA has authorized the State Water Resources Control Board (SWRCB) as the permitting authority to implement the NPDES program. The SWRCB issues two-baseline general permits; one for industrial operations, the other for construction activities (General Construction Permit). Additionally, the NPDES program includes the regulation of stormwater discharges from cities, counties, and other municipalities under Order No. R8-2009-0030 (waste discharge requirements for stormwater) and updated under Order No. 5-01-048 for the Central Valley Region.

[4] Federal Emergency Management Agency. FEMA Flood Map Service Center. Website: msc.fema.gov/portal/home (accessed February 19, 2025).

Under the General Construction Permit, stormwater discharges from construction sites with a disturbed area of one or more acres are required to obtain either individual NPDES permits for stormwater discharges or be covered by the Construction General Permit. Coverage under the Construction General Permit is accomplished by completing and filing a Notice of Intent with the SWRCB. Each applicant under the Construction General Permit is required to both prepare a SWPPP prior to the commencement of grading activities and to ensure implementation of the SWPPP during construction activities. The primary objective of the SWPPP is to identify, construct, implement, and maintain BMPs to reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges from the construction site during construction activities. BMPs may include programs, technologies, processes, practices, and devices that control, prevent, remove, or reduce pollution. The SWPPP would also address BMPs developed specifically to reduce pollutants in stormwater discharges following the completion of construction activities.

The NPDES program also includes regulations for discharging limited threat wastewater to waters of the United States under Order No. R5-2022-0006. "Limited threat" wastewater refers to clean or relatively pollutant-free wastewaters that pose little or no threat to water quality. Limited threat wastewater includes water from the following sources:

- Well Development Water
- Construction Dewatering
- Pump/Well Testing
- Pipeline/Tank Pressure Testing
- Pipeline/Tank Flushing or Dewatering
- Condensate
- Water Supply System
- Aggregate Mine
- Filter Backwash Water

Safe Drinking Water Act (Federal). The Safe Drinking Water Act (SDWA) was established to protect the quality of drinking water in the United States. This SDWA focuses on all waters either designed or potentially designed for drinking water use, whether from surface water or groundwater sources. The SDWA and subsequent amendments authorized the USEPA to establish health-based standards, or maximum contaminant levels (MCLs), for drinking water to protect public health against both natural and anthropogenic contaminants. All owners or operators of public water systems are required to comply with these primary (health-related) standards. State governments, which can be approved to implement these primary standards for the USEPA, also encourage attainment of secondary (nuisance-related) standards. At the federal level, the USEPA administers the SDWA and establishes MCLs for bacteriological, organic, inorganic, and radiological constituents (United States Code Title 42, and Code of Federal Regulations Title 40). At the state level, California has adopted its own SDWA, which incorporates the federal SDWA standards with some other requirements specific only to California (California Health and Safety Code, Section 116350 et seq.).

The 1996 SDWA amendments established source water assessment programs pertaining to untreated water from rivers, lakes, streams, and groundwater aquifers used for drinking water supply. According to these amendments, the USEPA must consider a detailed risk and cost assessment, as well as best available peer-reviewed science, when developing standards for drinking water. These programs are the foundation of protecting drinking water resources from contamination and avoiding costly treatment to remove pollutants. In California, the Drinking Water Source Assessment and Protection (DWSAP) program fulfills these federal mandates. The Division of

Drinking Water of the State Water Resources Control Board is the primary agency for developing and implementing the DWSAP program, and is responsible for performing the assessments of existing groundwater sources.

4.10.2.2 State Policies and Regulations

Porter-Cologne Water Quality Control Act. The Porter-Cologne Water Quality Control Act of 1969, which became Division 7 of the California Water Code, authorized the SWRCB to provide comprehensive protection for California's waters through water allocation and water quality protection. The SWRCB implements the requirement of the CWA Section 303, which states that water quality standards must be established for certain waters through the adoption of water quality control plans under the Porter-Cologne Act. The Porter-Cologne Act established the responsibilities and authorities of the nine RWQCBs, which include preparing water quality plans within the regions, identifying water quality objectives, and instituting waste discharge requirements. Water quality objectives are defined as limits or levels of water quality constituents and characteristics established for reasonable protection of beneficial uses or prevention of nuisance. Beneficial uses consist of all the various ways that water can be used for the benefit of people and wildlife. The Porter-Cologne Act was later amended to provide the authority delegated from the USEPA to issue NPDES permits regulating discharges to Waters of the United States.

Sustainable Groundwater Management Act of 2014. On September 16, 2014, a three-bill legislative package was signed into law, composed of AB 1739, SB 1168, and SB 1319, collectively known as the SGMA. The Governor's signing message states "a central feature of these bills is the recognition that groundwater management in California is best accomplished locally".

The SGMA provides a framework for sustainable management of groundwater supplies by local authorities, with the potential for state intervention if necessary to protect the resource.

The act requires the formation of local GSAs that must assess conditions in their local water basins and adopt locally-based management plans. The groundwater basin that serves Fresno has been designated by the Department of Water Resources as high-priority and subject to a condition of critical overdraft.

Urban Water Management Planning Act. The Urban Water Management Planning Act of 1983, California Water Code Sections 10610 et seq., requires publicly or privately owned water suppliers that provide more than 3,000 acre-feet (AF) of water annually or supply more than 3,000 customers to prepare a plan that:

- Plans for water supply and assesses reliability of each source of water over a 20-year period in 5-year increments.
- Identifies and quantifies adequate water supplies, including recycled water, for existing and future demands, in normal, single-dry, and multiple-dry years.
- Implements conservation and the efficient use of urban water supplies. Significant new requirements for quantified demand reductions have been added by the Water Conservation Act

of 2009 (Senate Bill 7 of Special Extended Session 7 [SBX7-7]), which amends the act and adds new water conservation provisions to the Water Code.

Senate Bills 610 and 221, Water Supply Planning. To assist water suppliers, cities, and counties in integrated water and land use planning, the state passed Senate Bill (SB) 610 (Chapter 643, Statutes of 2001) and SB 221 (Chapter 642, Statutes of 2001), effective January 1, 2002. SB 610 and SB 221 improve the link between information of water supply availability and certain land use decisions made by cities and counties. SB 610 and SB 221 are companion measures that promote more collaborative planning between local water suppliers and cities and counties. Both statutes require detailed information regarding water availability to be provided to city and county decision makers prior to approval of specified large development projects. This detailed information must be included in the administrative record as the evidentiary basis for an approval action by the city or county on such projects. The statutes recognize local control and decision making regarding the availability of water for projects and the approval of projects. Under SB 610, water supply assessments (WSA) must be furnished to local governments for inclusion in any environmental documentation for certain projects subject to CEQA, as defined in Water Code Section 10912[a].Under SB 221, approval by a city or county of certain residential subdivisions requires an affirmative verification of sufficient water supply. SB 221 is intended as a fail-safe mechanism to ensure that collaboration on finding the needed water supplies to serve a new large subdivision occurs before construction begins.

The Urban Water Management Planning Act states that every urban water supplier that provides water to 3,000 or more customers or provides over 3,000 af of water annually should make every effort to ensure the appropriate level of reliability in its water service to meet the needs of its various categories of customers during normal, dry, and multiple dry years. Both SB 610 and SB 221 identify the Urban Water Management Plan (UWMP) as a planning document that can be used by a water supplier to meet the standards in both statutes. Thorough and complete UWMPs are foundations for water suppliers to fulfill the specific requirements of these two statutes, and they are important source documents for cities and counties as they update their general plans. Conversely, general plans are source documents as water suppliers update the UWMPs. These planning documents are linked, and their accuracy and usefulness are interdependent.

Additionally, pursuant to the California Water Code Section 10632, urban water suppliers that serve more than 3,000 acre-feet per year or have more than 3,000 connections are required to prepare and adopt a standalone Water Shortage Contingency Plan (WSCP) as part of its Urban Water Management Plan. A WSCP is a detailed plan on how an urban water supplier intends to respond to foreseeable and unforeseeable water shortages. A water shortage occurs when the water supply is reduced to a level that cannot support typical demand at any given time. The WSCP is used to provide guidance by identifying response actions to allow for responsible management of any water shortage with predictability and accountability. Preparation provides the tools to maintain reliable supplies and reduce the impacts of supply interruptions due to extended drought and catastrophic supply interruptions.

AB 3030, California Groundwater Management Act. The Groundwater Management Act of the California Water Code (AB 3030) provides guidance for applicable local agencies to develop a

voluntary Groundwater Management Plan in state-designated groundwater basins.Local Policies and Regulations

City of Fresno General Plan. The City of Fresno's General Plan Public Utilities and Services Element and Resource Conservation and Resilience Element include objectives and policies that work to manage and develop the City's water facilities and ensure that Fresno has a reliable, long-range source of drinkable water. The following policies related to hydrology and water quality are applicable to the proposed project:

Policy PU-5-c: Satellite Facilities. Work with the Regional Water Quality Control Board to ensure that approval of any satellite treatment and reclamation facility proposal is consistent with governing statutes and regulations.

Policy PU-7-b: Reduce Stormwater Leakage. Reduce storm water infiltration into the sewer collection system, where feasible, through a program of replacing old and deteriorated sewer collection pipeline; eliminating existing stormwater sewer cut-ins to the sanitary sewer system; and avoiding any new sewer cut-ins except when required to protect health and safety.

Policy PU-7-e: Infiltration Basins. Continue to rehabilitate existing infiltration basins, and if determined appropriate, pursue acquiring additional sites for infiltration basins, as needed.

Policy PU-8-b: Potable Water Supply and Cost Recovery. Prepare for provision of increased potable water capacity (including surface water treatment capacity) in a timely manner to facilitate planned urban development consistent with the General Plan. Accommodate increase in water demand from the existing community with the capital costs and benefits allocated equitably and fairly between existing users and new users, as authorized by law, and recognizing the differences in terms of quantity, quality and reliability of the various types of water in the City's portfolio.

Policy PU-8-c: Conditions of Approval. Set appropriate conditions of approval for each new development proposal to ensure that the necessary potable water production and supply facilities and water resources are in place prior to occupancy.

Policy PU-8-f: Water Quality. Continue to evaluate and implement measures determined to be appropriate and consistent with water system policies, including prioritizing the use of groundwater, installing wellhead treatment facilities, constructing above-ground storage and surface water treatment facilities, and enhancing transmission grid mains to promote adequate water quality and quantity.

Policy PU-8-g: Review Project Impact on Supply. Mitigate the effects of development and capital improvement projects on the long-range water budget to ensure an adequate water supply for current and future uses.

Policy RC-6-b: Water Plans. Adopt and implement ordinances, standards, and policies to achieve the intent of the City of Fresno Urban Water Management Plan, Fresno-Area Regional

Groundwater Management Plan, and City of Fresno Metropolitan Water Resources Management Plan to ensure a dependable supply of water.

Policy RC-6-c: Land Use and Development Compliance. Ensure that land use and development projects adhere to the objective of the Fresno Metropolitan Water Resources Management Plan to provide sustainable and reliable water supplies to meet the demand of existing and future customers through 2025.

Policy RC-6-g: Protect Recharge Areas. Continue to protect areas of beneficial natural groundwater recharge by preventing uses that can contaminate soil or groundwater.

Policy RC-7-a: Water Conservation Program Target. Maintain a comprehensive conservation program to help reduce per capita water usage in the city's water service area to 243 gallons per capita per day (gpcd) by 2020 and 190 gpcd by 2035, by adopting conservation standards and implementing a program of incentives, design and operation standards, and user fees.

- Support programs that result in decreased water demand, such as landscaping standards that require drought-tolerant plants, rebates for water conserving devices and systems, turf replacement, xeriscape landscape for new homes, irrigation controllers, commercial/industrial/institutional water conserving programs, prioritized leak detection program, complete water system audit, landscape water audit and budget program, and retrofit upon resale ordinance.

- Implement the U.S. Bureau of Reclamation Best Management Practices for water conservation as necessary to maintain the City's surface water entitlements.

- Adopt and implement policies in the event that an artificial lake is proposed for development.

- Work cooperatively toward effective uniform water conservation measures that would apply throughout the Planning Area.

- Expand efforts to educate the public about water supply issues and water conservation techniques.

Policy RC-7-c: Best Practices for Conservation. Require all City facilities and all new private development to follow U.S. Bureau of Reclamation Best Management Practices for water conservation, as warranted and appropriate.

Policy RC-7-d: Update Standards for New Development. Continue to refine water saving and conservation standards for new development.

City of Fresno Municipal Code. Chapter 6, Municipal Services and Utilities, Article 7, Urban Storm Water Quality Management and Discharge Control, of the Fresno Municipal Code (FMC) establishes provisions regarding stormwater discharges. The purpose of the City's Urban Storm Water Quality Management and Discharge Control Ordinance is to ensure the health, safety, and general welfare of

citizens and protect the water quality of watercourses and water bodies in a manner pursuant to and consistent with the CWA (33 U.S.C. Section 1251, et seq.) by reducing pollutants in urban stormwater discharges to the maximum extent practicable and by effectively prohibiting non-stormwater discharges to the storm drain system.

Chapter 11, Building Permits and Regulations, Article 6 Fresno Flood Plain Ordinance establish methods of reducing flood losses by: restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards or flood heights or velocities; requiring that uses vulnerable to floods be protected against flood damage at the time of initial construction; controlling filling, grading, dredging, and other development which may increase flood damage; preventing or regulating the construction of flood barriers which will unnaturally divert flood water or which may increase flood hazards in other areas; and controlling the alteration of natural flood plains, stream channels, and natural protective barriers, which help accommodate or channel flood waters.

4.10.3 Impacts and Mitigation Measures

The following section presents a discussion of the impacts related to hydrology and water quality that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds to determine if an impact is significant. The latter part of this section presents the impacts associated with implementation of the proposed project and the recommended mitigation measures, if required. Mitigation measures are recommended, as appropriate, for significant impacts to eliminate or reduce them to a less-than-significant level. Cumulative impacts are also addressed.

4.10.3.1 Significance Criteria

Based on *State CEQA Guidelines* Appendix G, the proposed project would have a significant impact on hydrology and water quality if it would:

a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality;

b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;

c. 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 a substantial erosion or siltation on- or off-site;

- Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;

- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

- Impede or redirect flood flows.

d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; or

e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

4.10.3.2 Project Impacts

The following discussion describes the potential impacts related to hydrology and water quality that could result from implementation of the proposed project.

HYD-1 The project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.

The proposed VMT Reduction Program would fund future transportation improvement projects that contribute towards reducing VMT throughout Fresno. Future transportation improvements could contribute to water quality degradation in Fresno. Although minimal, transportation improvement projects, such as pedestrian improvements and bikeways could increase impervious areas in the City, thus increasing urban runoff. There is also the possibility for water quality degradation during construction. Substances such as oils, fuels, paints, and solvents may be transported to nearby drainages, watersheds, and groundwater in stormwater runoff, wash water, and dust control water. The significance of these water quality impacts would vary depending upon the level of construction activity, weather conditions, soil conditions, increased sedimentation of drainage systems within the area, compliance with NPDES permit requirements, and proper installation of BMPs.

Short-Term Construction Impacts. Future VMT-reducing transportation infrastructure improvements are unlikely to disturb more than one acre of land. In this case, the improvements would be required to comply with the City's Municipal Code, which includes measures that minimize stormwater runoff during construction and operation.

Any development project disturbing one or more acres of soil must obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ). Construction activities subject to the Construction General Permit includes clearing, grading, and other ground-disturbing activities such as stockpiling or excavation. The Construction General Permit requires development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). Among other mandated items that are included in a SWPPP are features designed to eliminate contact of rainfall and stormwater runoff with sources of pollution that occur on construction sites, of which a primary source is soil erosion as a result of unstabilized soils coming in contact with water and wind. These features are known as Best Management Practices (BMPs). Future development would be required to prepare, implement, and

be consistent with the Construction General Permit, including the SWPPP and BMPs, which would reduce project construction impacts on water quality to less than significant levels. Therefore, short-term construction impacts associated with water quality standards and waste discharge requirements would be less than significant.

Long-Term Project Impacts. As discussed above, future transportation improvements associated with the proposed project would likely increase impervious areas and could result in increased runoff. However, it is noted that many of the potential VMT-reducing improvements, such as pedestrian improvements and bikeways would add minimal new impervious surfaces and would not substantially increase runoff in a manner that would adversely impact water quality.

The Municipal Storm Water Permitting Program regulates storm water discharges from municipal separate storm sewer systems (MS4s). In 2016 the RWQCB adopted a region-wide MS4 Permit. The Fresno MS4 Permit regulates discharge requirements for Fresno Metropolitan Flood Control District (FMFCD), City of Fresno, City of Clovis, County of Fresno, and California State University of Fresno.

Regardless, to reduce long-term operational impacts in accordance with the requirements of the City and the regional MS4 permit, future transportation improvement projects would be required to comply with the NPDES permit and any BMP conditions and requirements established by the City.

As stated, future transportation improvements would be City-initiated projects or implemented as part of future development projects and would require environmental review under CEQA (e.g., preparation of a Categorical Exemption, Mitigated Negative Declaration, or Environmental Impact Report). Thus, project- and site-specific operational impacts would be analyzed.

Additionally, applicable future transportation improvement projects would be required to prepare a Water Quality Management Plan (WQMP) in compliance with the NPDES permit requirements. Project-specific WQMPs are intended to reduce pollutants and post-development runoff and can include low impact development (LID) features, site design BMPs, and structural/nonstructural treatment BMPs to address post-construction stormwater runoff management. LID features may include techniques to infiltrate, filter, store, evaporate, or retain runoff close to the source of runoff, and are consistent with the prescribed hierarchy of treatment provided in the regional MS4 permit. Selection of LID and additional treatment control BMPs would be based on the pollutants of concern for the specific project site and the BMP's ability to effectively treat those pollutants, in consideration of site conditions and constraints. Additionally, future applicable transportation improvement projects would be required to comply with the City's municipal code and Urban Storm Water Quality Management and Discharge Control Ordinance, which includes additional minimum control measures that reduce stormwater runoff during construction and operation.

Overall, future transportation improvement projects associated with the proposed program would be required to comply with a number of local, State, and Federal regulations that ensure pollutant runoff generated by future projects does not exceed water quality standards and the City continues to comply with MS4 permit requirements related to water quality. Future improvements would be required to undergo separate environmental review to evaluate project- and site-specific impacts with regards to water quality. Applicable projects would also be required to prepare and implement SWPPPs and WQMPs to minimize off-site discharge of potential pollutant runoff during the

construction and postconstruction phases of the project. As a result, the project would not result in violation of water quality standards or waste discharge requirements or otherwise substantially degrade water quality, and less-than-significant impact would occur.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

HYD-2 The project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

The proposed VMT Reduction Program would fund future transportation improvement projects, primarily within existing rights-of-way in urban areas of Fresno that contribute towards reducing VMT throughout Fresno. Potential VMT-Reducing Improvements, as listed in Table 3.A, include, but are not limited to, new bus routes, pedestrian safe enhancement corridors, bikeway network and other pedestrian safety improvements. As such, because the VMT Reduction Program would not directly increase the population and demand for groundwater, the VMT-reducing projects would not have the potential to substantially decrease groundwater supplies or interfere substantially with groundwater recharge. Further, all future transportation improvement projects associated with the proposed program would be required to undergo separate environmental review under CEQA to evaluate project- and site-specific hydrologic impacts. Future improvements would also be required to comply with all applicable Federal, State, and local regulations and requirements related to groundwater. As such, implementation of the project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge in a manner that would impede sustainable groundwater management of the Kings Subbasin, and a less-than-significant impact would occur.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

HYD-3 The project would not 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 a substantial erosion or siltation on- or off-site;**
- **Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;**
- **Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; nor**
- **Impede or redirect flood flows.**

Future transportation improvement projects associated with the proposed VMT Reduction Program could alter existing drainage patterns and increase runoff volumes in Fresno. For example, implementing pedestrian improvements and bikeways could increase impervious surfaces if constructed on undeveloped or pervious areas, and thus, increase runoff volumes. However, other transportation improvements, new bus routes, and adaptive signal controls would not substantively increase impervious area and would have minimal impacts with regards to altering existing drainage patterns or runoff volumes.

Regardless of the type of improvements to be implemented as part of the proposed VMT Reduction Program, all future transportation improvement projects would be required to undergo separate environmental review to evaluate project- and site-specific impacts in this regard. In addition, all improvements would be required to comply with applicable Federal, State, and local stormwater regulations and requirements as detailed above. Depending on the level of development, hydrology and drainage studies may also be required, which would require analyses of pre- and post-development hydrology conditions. Any changes in drainage flow paths, impervious areas, and runoff volumes associated with the transportation improvement projects would be identified in these studies and mitigation would be recommended to ensure the improvement (or larger development project) do not substantially alter a site's existing drainage pattern in a manner that could result in substantial erosion, siltation, or flooding. These studies may identify site-specific LID features, BMPs, and other on-site retention features to be implemented to reduce peak flow rates and/or runoff volumes.

Erosion/Siltation. In addition to complying with existing City regulations, applicable future transportation improvements would be required to prepare a SWPPP under the NPDES program. Implementation of a project-specific SWPPP and associated BMPs would minimize construction-related water quality impacts (including erosion and siltation) to less-than-significant levels. Additionally, future improvements may also be required to implement a project-specific WQMP and associated BMPs to reduce operational impacts in this regard.

Flooding. Regulatory mechanisms in place that would reduce the effects of construction activities on drainage patterns that would result in flooding on or off of a construction site include compliance with the City's grading plan check process, the SDFCMP, and the NPDES Construction General Permit. Compliance with these required regulations would reduce project construction impacts on grading patterns and flooding on and off of the construction site to less-than-significant levels.

Stormwater Drainage System. As stated above, existing Federal, State, and local regulations would ensure future transportation improvements prepare and implement the appropriate studies and BMPs to reduce project-related runoff and pollutants during construction and operations. Given the nature of the transportation improvements, the improvements are not anticipated to increase runoff volumes in a manner that would exceed existing and planned stormwater drainage system capacities. In addition to requiring separate environmental review under CEQA, continued implementation of the approved General Plan polices, along with preparation, implementation, and participation of the NPDES Permit would reduce project-specific impacts on water quality associated with the significant increase in stormwater runoff.

Implementation of the proposed VMT Reduction Program would require compliance with existing regulations. In addition, future transportation improvement projects would not significantly alter existing drainage patterns or substantially increase runoff volumes or rates in a manner that would result in substantial erosion or siltation, cause flooding on- or off-site, or exceed stormwater drainage system capacities. As a result, less-than-significant impacts would occur.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

HYD-4 The project would not risk release of pollutants due to project inundation in a flood hazard, tsunami, or seiche zones.

Official Statewide Tsunami Inundation Maps, coordinated by the California Geological Survey (CGS) and the Governor's Office of Emergency Services (Cal OES, are developed for all populated areas at risk to tsunamis in California. According to the Cal OES MyHazards website,[5] the city of Fresno is located outside of a Tsunami Emergency Response Planning Zone.

A seiche is a "standing" wave oscillating in a body of water. This phenomenon occurs in large bodies of water such as bays and lakes. A seiche may occur in any semi- or fully-enclosed body of water. They can be caused by strong winds and earthquakes. The nearest body of water capable of producing a seiche is Big Creek Dry Dam and Reservoir located northeast of Fresno. Further, all future transportation improvement projects associated with the proposed program would be required to undergo separate environmental review under CEQA to evaluate project- and site-specific hydrologic impacts related to tsunamis, seiches, or flooding hazards. As a result, a less-than-significant impact related to tsunamis, seiches, or flooding hazards would occur.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

HYD-5 The project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

The 2014 Sustainable Groundwater Management Act requires local public agencies and groundwater sustainability agencies in high- and medium-priority basins to develop and implement groundwater sustainability plans (GSPs) or prepare an alternative to a GSP. The proposed VMT Reduction Program would fund projects located within the Kings Subbasin, which is split into seven Groundwater Sustainability Agency (GSA) management areas, with Fresno located in the North Kings GSA. The seven GSAs of the Kings Subbasin operate cooperatively across the basin via a coordination agreement that ensures common approaches to sustainability items such as similarity of data usage and methodologies, consistent interpretations of the basin setting, and common assumptions and development of water budgets, monitoring networks, sustainable management criteria, and data

[5] State of California Governor's Office of Emergency Services. 2015. MyHazards. Website: myhazards.caloes.ca.gov (accessed February 20, 2025).

management systems. As discussed above, implementation of the proposed program and associated future transportation improvements would not conflict with water quality standards, and the North Kings GSA continues to monitor groundwater supplies. All future transportation improvement projects associated with the proposed program would be required to undergo separate environmental review and mitigate project- and site-specific hydrologic impacts, as needed. Further, the proposed VMT Reduction Program would not substantially deplete groundwater supplies or interfere with groundwater recharge. As such, upon compliance with all applicable regulations, the proposed project is not anticipated to conflict with or obstruct implementation of the Basin Plan. Impacts would be less than significant in this regard.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

4.10.3.3 Cumulative Impacts

HYD-6 The project, in combination with other projects, would not contribute to a significant cumulative impact related to hydrology and water quality.

Cumulative projects developed in accordance with the General Plan buildout could affect water quality degradation, groundwater recharge, existing drainage patterns, flood hazards, and water quality in Fresno. However, all cumulative projects would be required to mitigate site-specific hydrologic impacts on a project-by-project basis pursuant to all applicable Federal, State, and local stormwater regulations and requirements, including NPDES permit requirements (i.e., preparation of project-specific SWPPPs and associated BMP/LID features). Similarly, cumulative projects would also be required to undergo project-level environmental review under CEQA on a case-by-case basis.

The proposed VMT Reduction Program does not propose site-specific development and would not significantly impact drainage courses and hydrologic flows throughout the City. As discussed above, compliance with NPDES permit requirements, applicable transportation improvement projects would be required to implement project-specific SWPPPs to minimize off-site discharge of anticipated and potential pollutant runoff during the construction and post-construction phase. As a result, future transportation improvement projects would not result in the violation of water quality standards or waste discharge requirements or otherwise substantially degrade water quality. Implementation of the proposed program would not result in a substantial cumulative contribution to water quality impacts and impacts in this regard would be less than significant.

Additionally, cumulative projects developed in accordance with the General Plan could alter local drainage patterns and result in substantial erosion and siltation or flooding. However, as stated above, cumulative projects would be required to evaluate site-specific hydrologic impacts on a project-by-project basis pursuant to all applicable Federal, State, and local stormwater regulations and requirements (e.g., NPDES and FEMA requirements). These regulations would require project-specific BMPs, LID features, and/or on-site retention techniques, which would reduce peak flow rate or runoff volumes. Future cumulative projects would also be required to undergo project-level environmental review under CEQA on a case-by-case basis. As such, implementation of the proposed

program would not result in a substantial cumulative contribution to erosion, siltation, or flooding on- or off-site and impacts, and less-than-significant impacts would occur.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

4.11 LAND USE AND PLANNING

This section provides a discussion of the existing environmental setting of the use of land for various activities such as residential, commercial, office, public facilities, mixed use, industrial, open space, agriculture, and other uses. In addition, this section discusses the applicable plans and policies related to land use within the Planning Area of the City of Fresno. The potential impacts from the implementation of the proposed Fresno VMT Reduction Program (project) are described, and mitigation measures are provided, if required.

4.11.1 Environmental Setting

The study area for project impacts regarding land use and planning is the Planning Area because potential development under the proposed project would be limited to within the Planning Area. The Planning Area is the geographic area for which the approved General Plan establishes policies about future growth. The Planning Area established by the City includes all areas within the City's current city limits, including the Fresno-Clovis Regional Wastewater Reclamation Facility (RWRF), the areas within the current Sphere of Influence (SOI), and an area north of the city's most northeasterly portion of the city (referred to as the North Area).

In its existing setting, residential land uses are the predominant land use in the city. The remaining land uses characterizing the city are commercial and office, mixed use, public, industrial, and open space. Existing development patterns associated with these uses are summarized and further discussed below.

4.11.1.1 Residential

Single-family and multi-family residential land uses are the predominant land uses currently characterizing the city. Single-family residential uses are distributed fairly evenly throughout the incorporated area of the city. Multi-family units are located throughout the city and are prevalent in certain areas throughout the city, including around California State University Fresno, Fresno Pacific University, and north of Shaw Avenue, River Park Shopping Center, the Freeway 41 Corridor, and the Fig Garden Loop Area.

4.11.1.2 Commercial

Commercial land uses within the Planning Area include a wide range of retail and service establishments intended to serve local and regional needs. Office land uses include administrative, financial, business, professional, medical, and public offices. Commercial and office retail uses include business services, food services and convenience goods for those who work in the area. Commercial and Office land uses are concentrated in various areas of the city but primarily located along transportation corridors such as Blackstone Avenue, Herndon Avenue, Shaw Avenue, and in the Downtown area.

4.11.1.3 Industrial

Industrial land uses include light and heavy industrial and manufacturing uses. The majority of industrial land is located south of Downtown, between State Route 99 (SR-99) and State Route 41

(SR-41). Other areas of industrial land are located along State Route 99 and near the Fresno Yosemite International Airport.

4.11.1.4 Mixed Use

Mixed use land uses are commercial uses that require a residential component, and are typically designated as higher-density or located along corridors. Mixed-Use land use and zoning was established in 2014 along most commercial corridors, including Blackstone, Shaw and Cesar Chavez Blvd. to take advantage of planned Bus Rapid Transit service (now High Frequency Transit Corridors). Several mixed-use developments have now been constructed, most notably along Blackstone Avenue.

4.11.1.5 Public Facilities

Public facilities are lands owned by public entities, including City Hall and other City buildings, county buildings, schools, colleges, the municipal airport and hospitals. They also include public facilities such as fire and police stations, City-operated recycling centers and sewage treatment facilities. Public facilities are distributed fairly evenly across the planning area, with large expanses at the Chandler Executive and Fresno Yosemite International Airports, as well as Fresno State University, Fresno City College and the Fairgrounds.

4.11.1.6 Open Space

Open space and agricultural land uses dominate much of the regional landscape. Open space land use within the City's Planning Area is distributed citywide in over 80 neighborhood, community and regional parks. The City does not have a land use designation dedicated only to agricultural land uses. Larger expanses of open space are located along the San Joaquin River in the north, and southeast of the Fresno Yosemite International Airport, in the Clear Zone in the southeast.

4.11.2 Regulatory Setting

4.11.2.1 Regional Policies and Regulations

Fresno Council of Governments 2022 Regional Transportation Plan and Sustainable Communities Strategy. Fresno Council of Governments (Fresno COG) adopted the Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS) in 2022. The 2022 RTP/SCS comprehensively assesses all forms of transportation available in Fresno County as well as travel and goods movement needs through 2046. The RTP establishes Fresno COG's transportation goals, objectives, and policies for each transportation mode. Each existing multimodal system is described in the RTP, and is followed by a needs assessment as well as proposed short-term and long-term actions for both planning and actual project improvements. Fresno COG is currently in the process of preparing the 2026 RTP/SCS, with adoption anticipated for in the summer of 2026.

Fresno County Regional Trails Plan. The Fresno Regional Trails Master Plan was developed to increase access, convenience, and safety of recreational trails across Fresno County. The Fresno Regional Trails Master Plan focuses on unpaved recreational trails and paved shared-use paths in the unincorporated portions of Fresno County (outside of city boundaries), including county islands within incorporated cities. The Fresno Regional Trails Master Plan allows Fresno County to leverage

its existing trail system to expand recreational trail opportunities for hiking, mountain biking, and horse-back riding in all areas of the county.

4.11.2.2 Local Policies and Regulations

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

City of Fresno General Plan. The City's General Plan is a long-range plan which establishes goals, objectives, policies, and strategies that combine to serve as a "blueprint" directing future growth in the city. The approved General Plan was adopted on December 18, 2014 and consists of the Economic Development and Fiscal Sustainability, Urban Form, Land Use, and Design, Mobility and Transportation, Parks, Open Space, and Schools, Public Utilities and Services, Resource Conservation and Resilience, Historic and Cultural Resources, Noise and Safety, Healthy Communities, and Housing Elements. Relevant objectives and policies in the City of Fresno's General Plan are included below in Table 4.11.A.

Table 4.11.A: General Plan Consistency Analysis

Applicable General Plan Policies	Project Consistency Analysis
Objective UF-12: Locate roughly one-half of future residential development in infill areas—defined as being within the City on December 31, 2012—including the Downtown core area and surrounding neighborhoods, mixed-use centers and transit-oriented development along major BRT corridors, and other non-corridor infill areas, and vacant land.	
UF-12-e Access to Activity Centers. Promote adoption and implementation of standards supporting pedestrian activities and bicycle linkages from surrounding land uses and neighborhoods into Activity Centers and to transit stops. Provide for priority transit routes and facilities to serve the Activity Centers.	Consistent. The proposed VMT Reduction Program would fund various transportation infrastructure improvements that facilitate the public transit and use of bicycles. These improvements would include new transit routes, pedestrian enhancements, and new bikeways. As such, the proposed VMT Reduction Program would be consistent with this policy.
Objective UF-14 Create an urban form that facilitates multi-modal connectivity.	
UF-14-a Design Guidelines for Walkability. Develop and use design guidelines and standards for a walkable and pedestrian-scaled environment with a network of streets and connections for pedestrians and bicyclists, as well as transit and autos.	Consistent. No land use development would occur as part of the project. However, the proposed VMT Reduction Program would fund various transportation infrastructure improvements that facilitate the public transit and use of bicycles.
Objective LU-2: Plan for infill development that includes a range of housing types, building forms, and land uses to meet the needs of both current and future residents.	
LU-2-a Infill Development and Redevelopment. Promote development of vacant, underdeveloped, and re-developable land within the City Limits where urban services are available by considering the establishment and implementation of supportive regulations and programs.	Consistent. The proposed VMT Reduction Program would fund VMT-reducing projects throughout Fresno. Through implementation of the proposed project, it is intended that infill development would be supported with improved active transportation options.
Objective MT-1: Create and maintain a transportation system that is safe, efficient, provides access in an equitable manner, and optimizes travel by all modes.	

Table 4.11.A: General Plan Consistency Analysis

Applicable General Plan Policies	Project Consistency Analysis
MT-1-a Transportation Planning Consistent with the General Plan. Continue to review local, regional and inter-regional transportation plans and capital improvement plans, and advocate for the approval and funding of State highway and rail projects, consistent with the General Plan and discourage projects inconsistent with the General Plan.	Consistent. The proposed VMT Reduction Program would fund various transportation infrastructure improvements that facilitate public transit and use of bicycles. These improvements may include new transit routes, pedestrian enhancements, and new bikeways. As such, the proposed VMT Reduction Program would be consistent with this policy.
MT-1-d Integrate Land Use and Transportation Planning. Plan for and maintain a coordinated and well integrated land use pattern, local circulation network and transportation system that accommodates planned growth, reduces impacts on adjacent land uses, and preserves the integrity of established neighborhoods.	Consistent. Future VMT-reducing projects funded by the proposed VMT Reduction Program would be implemented to reduce VMT and provide alternative modes of transportation. VMT-reducing projects would include new bus routes, pedestrian enhancements, and bikeways, to support the local circulation network and transportation network.
MT-1-k Multi-Modal Level of Service Standards. Develop and use a tiered system of flexible, multi-modal Level of Service standards for streets designated by the Circulation Diagram (Figure MT-1). Strive to accommodate a peak hour vehicle LOS of D or better on street segments and at intersections, except where Policies MT-1-m through MT-1-p provide greater specificity. Establish minimum acceptable service levels for other modes and use them in the development review process.	Consistent. The proposed VMT Reduction Program includes funding of VMT-reducing projects and TDM strategies to reduce vehicle use and provide connectivity.
MT-1-n Peak Hour Vehicle LOS. For planning purposes and implementation of Capital Improvement Projects, maintain a peak-hour vehicle LOS standard of D or better for all roadway areas outside of identified Activity Center and Bus Rapid Transit Corridor districts, unless the City Traffic Engineer determines that maintaining this LOS would be infeasible and/or conflict with the achievement of other General Plan policies.	Consistent. As part of the proposed VMT Reduction Program, TDM strategies would be implemented to reduce vehicle trips and therefore reduce potential LOS impacts.
Objective MT-2: Make efficient use of the City's existing and proposed transportation system and strive to ensure the planning and provision of adequate resources to operate and maintain it.	
MT-2-b Reduce Vehicle Miles Traveled and Trips. Partner with major employers and other responsible agencies, such the San Joaquin Valley Air Pollution Control District and the Fresno Council of Governments, to implement trip reduction strategies, such as eTRIP, to reduce total vehicle miles traveled and the total number of daily and peak hour vehicle trips, thereby making better use of the existing transportation system.	Consistent. The proposed VMT Reduction Program would fund VMT-reducing projects throughout Fresno. Through implementation of the proposed project, it is intended that through reduced VMT, the existing transportation system would be better utilized.
MT-2-c Reduce VMT through Infill Development. Provide incentives for infill development that would provide jobs and services closer to housing and multi-modal transportations corridors in order to reduce citywide vehicle miles travelled (VMT).	Consistent. The proposed project would not conflict with future development of infill sites. Instead, the proposed VMT Reduction Program would encourage the use of additional transportation options throughout Fresno that would support infill sites.

Table 4.11.A: General Plan Consistency Analysis

Applicable General Plan Policies	Project Consistency Analysis
MT-2-g Transportation Demand Management and Transportation System Management. Pursue implementation of Transportation Demand Management and Transportation System Management strategies to reduce peak hour vehicle traffic and supplement the capacity of the transportation system.	Consistent. The proposed VMT Reduction Program would fund VMT-reducing projects throughout Fresno. Through implementation of the proposed project, it is intended that through reduced VMT, the existing transportation system would be better utilized, and peak hour vehicle traffic would be reduced.
MT-2-i Transportation Impact Studies. Require a Transportation Impact Study (currently named Traffic Impact Study) to assess the impacts of new development projects on existing and planned streets for projects meeting one or more of the following criteria, unless it is determined by the City Traffic Engineer that the project site and surrounding area already has appropriate multi-modal infrastructure improvements. ● When a project includes a General Plan amendment that changes the General Plan Land Use Designation. ● When the project will substantially change the off-site transportation system (auto, transit, bike or pedestrian) or connection to the system, as determined by the City Traffic Engineer. ● Transportation impact criteria are tiered based on a project's location within the City's Sphere of Influence. This is to assist with areas being incentivized for development. The four zones, as defined on Figure MT-4, are listed below. The following criteria apply: ○ Traffic Impact Zone I (TIZ-I): TIZ-I represents the Downtown Planning Area. Maintain a peak hour LOS standard of F or better for all intersections and roadway segments. A TIS will be required for all development projected to generate 200 or more peak hour new vehicle trips. ○ Traffic Impact Zone II (TIZ-II): TIZ-II generally represents areas of the City currently built up and wanting to encourage infill development. Maintain a peak hour LOS standard of E or better for all intersections and roadway segments. A TIS will be required for all development projected to generate 200 or more peak hour new vehicle trips. ○ Traffic Impact Zone III (TIZ-III): TIZ-III generally represents areas near or outside the City Limits but within the SOI as of December 31, 2012. Maintain a peak hour LOS standard of D or better for all intersections and roadway segments. A TIS will be required for all development projected to generate 100 or more peak hour new vehicle trips. ○ Traffic Impact Zone IV (TIZ-IV): TIZ-IV represents the southern employment areas within and planned by the City. Maintain a peak hour LOS standard of E or better for all intersections and roadway segments. A TIS will be required for all development projected to generate 200 or more peak hour new vehicle trips.	Consistent. No land use development would occur as part of the project, and no Transportation Impact Studies would be required as a part of the proposed VMT Reduction Program. In addition, future VMT-reducing projects funded by the proposed project would be required to prepare project-specific analysis to assess potential related transportation impacts, if applicable.

Table 4.11.A: General Plan Consistency Analysis

Applicable General Plan Policies	Project Consistency Analysis
MT-2-j Funding for Multi-Modal Transportation System. Continue to seek and secure adequate financing to construct and maintain a complete multi-modal system through such measures as development impact fees, local sales tax measures, special tax measures, assessment/improvement districts, and regional, state and federal transportation funds and grants.	Consistent. The proposed VMT Reduction Program would provide funding to construct a multi-modal transportation system through mitigation fees for new development.
MT-2-l Region-Wide Transportation Impact Fees. Continue to support the implementation of metropolitan-wide and region-wide transportation impact fees sufficient to cover the proportional share of a development's impacts and need for a comprehensive multi-modal transportation system that is not funded by other sources. Work with the Council of Fresno County Governments, transportation agencies (e.g. Caltrans, Federal Transportation Agency) and other jurisdictions in the region to develop a method for determining: ● Regional transportation impacts of new development; ● Regional highways, streets, rail, trails, public transportation, and goods movement system components, consistent with the General Plan, necessary to mitigate those impacts and serve projected demands; ● Projected full lifetime costs of the regional transportation system components, including construction, operation, and maintenance; and ● Costs covered by established funding sources	Consistent. As discussed in response to Policy MT-2-j, the proposed VMT Reduction Program would provide funding to construct a multi-modal transportation system through mitigation fees for new development.
Objective MT-4: Establish and maintain a continuous, safe, and easily accessible bikeways system throughout the metropolitan area to reduce vehicle use, improve air quality and the quality of life, and provide public health benefits.	
MT-4-c Bikeway Linkages. Provide linkages between bikeways, trails and paths, and other regional networks such as the San Joaquin River Trail and adjacent jurisdiction bicycle systems wherever possible.	Consistent. The proposed program would fund bikeways and pedestrian facilities to link existing facilities.
MT-4-d Prioritization of Bikeway Improvements. Prioritize bikeway components that link existing separated sections of the system, or that are likely to serve the highest concentration of existing or potential cyclists, particularly in those neighborhoods with low vehicle ownership rates, or that are likely to serve destination areas with the highest demand such as schools, shopping areas, recreational and park areas, and employment centers.	Consistent. The proposed program would provide funding that would prioritize multi-modal transportation, including bikeway improvements.
Objective MT-5: Establish a well-integrated network of pedestrian facilities to accommodate safe, convenient, practical, and inviting travel by walking, including for those with physical mobility and vision impairments.	
MT-5-a Sidewalk Development. Pursue funding and implement standards for development of sidewalks on public streets, with priority given to meeting the needs of persons with physical and vision limitations; providing safe routes to school; completing pedestrian improvements in established neighborhoods with lower vehicle ownership rates; or providing pedestrian access to public transportation routes.	Consistent. The proposed program would provide funding that would prioritize multi-modal transportation, including improvements to pedestrian facilities.

Table 4.11.A: General Plan Consistency Analysis

Applicable General Plan Policies	Project Consistency Analysis
Objective MT-6: Establish a network of multi-purpose pedestrian and bicycle paths, as well as limited access trails, to link residential areas to local and regional open spaces and recreation areas and urban Activity Centers in order to enhance Fresno's recreational amenities and alternative transportation options.	
MT-6-c Link Paths and Trails and Recreational Facilities. Strive to provide path or trail connections to recreational facilities, including parks and community centers where appropriate, and give priority to pathway improvements within neighborhoods characterized by lower vehicle ownership rates and lower per capita rates of parks and public open space.	Consistent. The proposed program would fund bikeways and pedestrian facilities to link existing facilities. In addition, existing bicycle and pedestrian facilities would be enhanced to increase safety by providing improvements in underserved neighborhoods.
Objective MT-7: Pursue a variety of funding sources to maximize implementation and development of the City's path and trail system.	
MT-7-a Urban Path and Trail Development Funds. Continue to seek grants and other funding sources for trail construction and maintenance, and support the enactment of State and federal legislation that will expand urban path and trail development funds.	Consistent. The proposed VMT Reduction Program would result in the implementation of a mitigation fee that would fund construction of pedestrian connections and enhancements.
MT-7-c Citywide Funding Program for Path and Trail Network. Strive to establish an equitable citywide funding program for construction and maintenance of the path and trail network, in order to: ● Acquire right-of-way needed for paths and trails in already-developed neighborhoods and other areas, as identified in community plans, Specific Plans, and neighborhood plans; ● Reimburse developers for public path and trail development costs that they may incur in excess of the trail cost attributable to the impact of their development project (this may require a citywide nexus study); and ● Seek funding sources to add to and adequately maintain the citywide path and trail network	Refer to response to Policy MT-7-a.
Objective MT-8: Provide public transit options that serve existing and future concentrations of residences, employment, recreation and civic uses and are feasible, efficient, safe, and minimize environmental impacts.	
MT-8-b Transit Serving Residential and Employment Nodes. Identify the location of current and future residential and employment concentrations and Activity Centers throughout the transit service area in order to facilitate planning and implementation of optimal transit services for these uses. Work with California State University, Fresno to determine locations within the campus core for bus stops.	Consistent. The proposed VMT Reduction Program would support this goal by funding identified transit routes that would reduce VMT.
Objective MT-9: Provide public transit opportunities to the maximum number and diversity of people practicable in balance with providing service that is high in quality, convenient, frequent, reliable, cost- effective, and financially feasible.	
MT-9-e Area Specific Transit Improvements. Continue to evaluate and pursue the planning and implementation of area specific transit improvements, such as street car facilities.	Consistent. The proposed VMT Reduction Program would fund the implementation of area-specific transit improvements that would result in new bus routes.
Objective RC-4: In cooperation with other jurisdictions and agencies in the San Joaquin Valley Air Basin, take necessary actions to achieve and maintain compliance with State and federal air quality standards for criteria pollutants.	

Table 4.11.A: General Plan Consistency Analysis

Applicable General Plan Policies	Project Consistency Analysis
RC-4-a Support Regional Efforts. Support and lead, where appropriate, regional, State and federal programs and actions for the improvement of air quality, especially the SJVAPCD's efforts to monitor and control air pollutants from both stationary and mobile sources and implement Reasonably Available Control Measures in the Ozone Attainment Plan.	Consistent. The proposed VMT Reduction Program would fund projects that would reduce VMT in Fresno, thereby reducing mobile sources of emissions.
Objective RC-5: In cooperation with other jurisdictions and agencies in the San Joaquin Valley Air Basin, take timely, necessary, and the most cost-effective actions to achieve and maintain reductions in greenhouse gas emissions and all strategies that reduce the causes of climate change in order to limit and prevent the related potential detrimental effects upon public health and welfare of present and future residents of the Fresno community.	
RC-5-a Support State Goal to Reduce Statewide GHG Emissions. As is consistent with State law, strive to meet AB 32 goal to reduce greenhouse gas emissions to 1990 levels by 2020 and strive to meet a reduction of 80 percent below 1990 levels by 2050 as stated in Executive Order S-03-05. As new statewide GHG reduction targets and dates are set by the State update the City's Greenhouse Gas Reduction Plan to include a comprehensive strategy to achieve consistency with those targets by the dates established.	Consistent. The proposed VMT Reduction Program would fund projects that would reduce VMT in Fresno, thereby reducing mobile sources of emissions, including greenhouse gas emissions.

Source: LSA (2025)

City of Fresno Active Transportation Plan. The Fresno Active Transportation Plan (ATP), adopted in March 2017, provides a comprehensive guide outlining the vision for active transportation in Fresno. The Fresno ATP envisions a complete, safe, and comfortable network of trails, sidewalks, and bikeways that serve all residents of Fresno. This plan lays out specific goals to improve bicycle and pedestrian access and connectivity in Fresno. These goals include the following:

- Equitably improve the safety and perceived safety of walking and bicycling in Fresno;
- Increase walking and bicycling trips in Fresno by creating user-friendly facilities;
- Improve the geographical equity of access to walking and bicycling facilities in Fresno; and
- Fill key gaps in Fresno's walking and bicycling networks.

Fresno Area Express (FAX) Short-Range and Long-Range Transit Plans. The Short Range Transit Plan (SRTP) is a biennial update to the operating plans and capital programs of Fresno Area Express (FAX) and Clovis Transit. The purpose of the SRTP is to promote a comprehensive, coordinated, and continuous planning process for transit service in Fresno and Clovis over a five-year planning horizon. The SRTP proposes specific recommendations for implementing the long-range objectives of Fresno County's 2022-2046 Regional Transportation Plan/Sustainable Communities Strategy and will guide the provision of transit services over the next five years. Fresno County Regional Long-Range Transit Plan (LRTP) provides a guide to transit and multimodal investments and services in the Fresno region through the year 2050. The LRTP builds upon the Fresno COG's 2018 RTP and prior transit planning studies. More importantly, the LRTP will integrate appropriate and effective public

transportation planning and projects into the fabric of the region's overall circulation networks and systems.

Fresno Safe Routes to School Action Plan. The Safe Routes to School Action Plan was developed to guide the Fresno community in developing a robust and sustainable Safe Routes to School program that addresses local needs. The Safe Routes to School Action Plan provides a summary of current conditions related to walking and biking to school, including existing policies, plans, programs, and infrastructure. The Safe Routes to School Action Plan also outlines recommended strategies and actions to be undertaken in Southeast Fresno during the first implementation year (2018-2019) as well as additional longer-term actions in years two through five.

Southern Blackstone Smart Mobility Strategy. The Southern Blackstone Smart Mobility Strategy was developed to provide recommendations for both near-term and long-term multi-modal and streetscape improvements along the Blackstone Avenue Corridor. The Southern Blackstone Smart Mobility Strategy was prepared to address the following objectives:

- Increase access and safety along the Corridor for all travel modes and users, including the elderly, disabled, low-income, students and youth.
- Address deficiencies in the existing street design that are incompatible with the planned land uses outlined in the General Plan and impact business opportunities and performance in the identified activity centers along the Corridor.
- Recommend multi-modal access and safety improvements for pedestrians and bicyclists as well as transit riders.
- Recommend potential sidewalk and streetscape enhancements to support pedestrian comfort, access to transit, and access to businesses and services.
- Identify potential treatments that support the management of traffic speeds within activity centers along the corridor.
- Consider on-street and off-street parking in the context of recommended multi-modal improvements.
- Identify opportunities for gateway improvements and wayfinding signage.
- Recommend locally feasible implementation and funding strategies for recommended multi-modal improvements.

4.11.3 Impacts and Mitigation Measures

The following section presents a discussion of the impacts related to land use and planning that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds to determine if an impact is significant. The latter part of this section presents the impacts associated with implementation of the proposed project and the

recommended mitigation measures, if required. Mitigation measures are recommended, as appropriate, for significant impacts to eliminate or reduce them to a less than significant level. Cumulative impacts are also addressed.

4.11.3.1 Significance Criteria

Based on *State CEQA Guidelines* Appendix G, the proposed project would have a significant impact on land use and planning if it would:

a. Physically divide an established community; or

b. 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.

4.11.3.2 Project Impacts

The following discussion describes the potential impacts related to land use and planning that could result from implementation of the proposed project.

LU-1 The project would not physically divide an established community.

As described in Section 4.11.1, above, Fresno is generally characterized as a downtown core surrounded by suburban development, distinct neighborhoods, and growth areas. Fresno is located on the SR-99 corridor and regional access is also provided by SR-41, State Route 180 (SR-180) and State Route 168 (SR-168). The Planning Area for the City is the geographic area for which the City's General Plan establishes policies regarding future growth. The boundary of the Planning Area was determined in response to State law (California Government Code Section 65300) requiring each city to include in its General Plan all territory within the boundaries of the incorporated area as well as "any land outside its boundaries which in the planning agency's judgment bears relation to its planning". The Planning Area established by the City of Fresno includes all areas within the City's current city limits, including the Fresno-Clovis Regional Wastewater Reclamation Facility (RWRF), the areas within the current Sphere of Influence (SOI), and an area north of the city's most northeasterly portion (referred to as the North Area).

The proposed project is the adoption of the VMT Reduction Program, which aims to fund VMT-reducing projects within the City. The transportation improvements, which consist of bicycle, pedestrian and transit facilities and improvements, would primarily occur within existing rights-of-way and would not physically divide any established communities. Given the nature of the project, potential transportation improvements would improve the City's existing roadway, pedestrian, bicyclist, and transit network, and the proposed project would facilitate future VMT-reducing projects. As such, the proposed project would not physically divide an established community, and less-than-significant impacts would occur.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

LU-2 The project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

City of Fresno General Plan. The proposed VMT Reduction Program aims to implement VMT-reducing projects within the City to address regional VMT impacts. Table 3.A, Potential VMT-Reducing Improvements, provides a summary of VMT-reducing improvements that could occur with future funding provided by the proposed program. The VMT-reducing projects included in Table 3.A were identified based on existing local planning documents for active transportation, transit-related infrastructure, capital improvement projects, and other mobility related projects suggested by project stakeholders. These local planning documents from the Fresno area includes the following:

- Fresno Area Express (FAX) Short Range Transit Plan
- FAX Long Range Transit Plan
- Fresno Council of Governments (COG) Regional Transportation Plan (RTP)
- Fresno Safe Routes to School Action Plan
- Fresno Active Transportation Plan
- Southern Blackstone Avenue Smart Mobility Strategy

The proposed VMT Reduction Program aims to establish mitigation for projects that exceed the City's VMT thresholds under CEQA in the form of a mitigation fee and urban design calculator. The proposed program identifies relevant TDM strategies and VMT-reducing projects in Fresno to be funded by the VMT Reduction Program. Contributed funds would fund active transportation infrastructure projects in the City that have the potential to help the City meet its VMT reduction goals. The overall intent of the program is to streamline the SB 743 compliance process for development projects while funding future VMT improvement projects to reduce Citywide VMT. As such, the project would be consistent with the City's General Plan, specifically with Policy MT-2-b which calls for the reduction of VMT throughout Fresno. Additionally, the proposed VMT Reduction Program would be consistent with MT-2-g, which encourages implementation of Transportation Demand Management and Transportation System Management strategies to reduce peak hour vehicle traffic and supplement the capacity of the transportation system.

The proposed VMT Reduction Program would fund future transportation improvement projects that contribute to reducing VMT throughout Fresno. The proposed program would be implemented through collection of the mitigation fees. Future VMT-reducing projects identified by the Fresno VMT Reduction Program would be required to prepare project-specific analysis to assess potential impacts. As a result, the proposed VMT Reduction Program would be consistent with applicable General Plan policies and impacts would be less than significant.

City of Fresno Municipal Code. The proposed VMT Reduction Program would fund future transportation improvement projects that contribute to reducing Citywide VMT. Future transportation improvements funded by the proposed program would be subject to existing

Municipal Code standards and regulations. As a result, the proposed VMT Reduction Program would be consistent with the Fresno Municipal Code, and a less-than-significant impact would occur.

City of Fresno Active Transportation Plan. The proposed VMT Reduction Program would fund future transportation improvement projects that contribute to reducing Citywide VMT. Future transportation improvements funded by the proposed program would be consistent with the goals of the Fresno ATP by improving pedestrian and bicycle safety, enhancing existing facilities, and constructing new facilities. As a result, the proposed VMT Reduction Program would be consistent with the Fresno ATP, and a less-than-significant impact would occur.

Fresno Council of Governments 2022 RTP. The proposed VMT Reduction Program establishes mitigation for projects that exceed the City's VMT thresholds in the form of a mitigation fee and is not considered regionally significant based on criteria outlined in CEQA Guidelines Section 15206. However, as a transportation-related policy program, the proposed project is reviewed for consistency with the Fresno COG 2022 RTP goals as detailed in Table 4.11.B, below.

Table 4.11.B: Fresno COG 2022 RTP Consistency Analysis

Goal	Consistency Statement
Goal 1: Improved mobility and accessibility for all	**Consistent.** No land use development would occur as part of the project. However, the proposed project would fund VMT-reducing transportation improvements that would provide and expand multimodal transportation amenities and opportunities in Fresno. As such, the project would improve mobility and accessibility.
Goal 2: Vibrant communities that are accessible by sustainable transportation options	**Consistent.** No land use development would occur as part of the project. However, the proposed project would fund VMT-reducing transportation improvements that would provide expanded public transportation, and accessibility that would increase transportation options.
Goal 3: A safe, well-maintained, efficient, and climate-resilient multimodal transportation network	**Consistent.** No land use development would occur as part of the project. However, the proposed project would fund VMT-reducing transportation improvements that would provide expanded public transportation and would enhance the multimodal transportation network.
Goal 4: A transportation network that supports a sustainable and vibrant economy	**Not Applicable**. This goal was not adopted for the "purpose of avoiding or mitigating an environmental effect" per Appendix G of the CEQA Guidelines.
Goal 5: A region embracing clean transportation, technology, and innovation	**Consistent.** No land use development would occur as part of the project. However, the proposed project would fund VMT-reducing transportation improvements that would provide increased accessibility to public transportation and would enhance the multimodal transportation network. By providing these options, personal vehicle use would potentially decrease thereby increasing transportation, technology and innovation that reduces air quality impacts.

Source: LSA (2025)

As discussed in Table 4.11.A, the proposed VMT Reduction Program would be consistent with all applicable goals of the Fresno COG 2022 RTP, and a less-than-significant impact would occur.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

4.11.3.3 Cumulative Impacts

LU-3 The project, in combination with other projects, would not contribute to a significant cumulative impact related to land use and planning.

Cumulative projects developed within the Planning Area of the City and in accordance with the General Plan would be required to undergo project-level environmental review under CEQA and the City's discretionary review process to determine potential land use planning impacts. Each cumulative project would be analyzed independent of other projects, within the context of their respective land use and regulatory setting. As part of the review process, each cumulative project would be required to demonstrate compliance with the provisions of the project site's land use designation(s) and zoning district(s). Each project would be analyzed to ensure consistency and compliance with the General Plan goals and policies, Municipal Code regulations, and other applicable land use plans or policies.

The proposed VMT Reduction Program would be consistent with applicable goals, policies, and standards from the General Plan, Municipal Code, Fresno ATP, and 2022 RTP/SCS. Furthermore, implementation of the proposed VMT Reduction Program would consist of transportation improvements, which would include improvements to bicycle, pedestrian and transit facilities, which would improve the City's existing roadway, pedestrian, bicyclist, and transit network. These improvements would facilitate future VMT-reducing projects while also improving connectivity in Fresno. As a result, the proposed project would not significantly contribute to a cumulative impact relative to land use and planning, and a less-than-significant impact would occur.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

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4.12 MINERAL RESOURCES

This section provides a discussion of the existing mineral resources in the vicinity of the project area and evaluates potential impacts that could result from implementation of the proposed Fresno VMT Reduction Program (proposed project).

4.12.1 Existing Environmental Setting

The study area for project impacts regarding mineral resources is the city of Fresno because potential development under the proposed project is limited to areas within the city limits the City of Fresno.

Mineral resources, such as aggregate material, are necessary to support urban development, as all public and private projects utilize this material for roadway paving, structural elements, and hardscape, including sidewalks, curbing, and gutters. Within the city, mineral resources are concentrated along the San Joaquin River Corridor. The California Department of Mines and Geology classifies lands along the San Joaquin River Corridor as Mineral Resources Zones (MRZ) MRZ--1, MRZ-2, and MRZ-3; portions of the city classified as MRZ-2 indicate that mineral deposits are present or likely present.

The majority of the area within the existing city limits is urbanized, while areas located outside of the city limits are primarily rural. However, growth projections for the city's population indicate that demand for these aggregate materials will continue to increase as development occurs. Protection of mineral resources in the city is intended to assure that cost-effective locally available mineral resources (such as rock, gravel, and sand for concrete aggregate) are protected for future use by the construction industry.

Over time, the city's urbanized area has extended closer to classified mineral resource areas. This urbanization has caused land uses which are generally incompatible with surface mining and associated mineral processing activities to threaten opportunities for mineral extraction and processing. As discussed in Section 4.12.2, Regulatory Setting, the City regulates mining operations through objectives and policies identified in the General Plan, as well as the Surface Mining and Reclamation Ordinance. Regulation of mining operations in the city is intended to ensure that extraction of these resources is undertaken in a responsible manner that provides for beneficial end uses of surface mining sites.

4.12.2 Regulatory Setting

4.12.2.1 Federal Policies and Regulations

No federal policies or regulations pertaining to mineral resources are applicable to the proposed project.

4.12.2.2 State Policies and Regulations

Surface Mining and Reclamation Act. In 1975, the California Legislature enacted the Surface Mining and Reclamation Act (SMARA), which, among other things, provided guidelines for the classification and designation of mineral lands. Areas are classified on the basis of geologic factors without regard

to existing land use and land ownership. The areas are categorized into four Mineral Resource Zones (MRZs):

- **MRZ-1:** An area where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.
- **MRZ-2:** An area where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence.
- **MRZ-3:** An area containing mineral deposits, the significance of which cannot be evaluated.
- **MRZ-4:** An area where available information is inadequate for assignment to any other MRZ zone.

Of the four categories, lands classified as MRZ-2 are of the greatest importance. Such areas are underlain by demonstrated mineral resources or are located where geologic data indicate that significant measured or indicated resources are present. MRZ-2 areas are designated by the State of California Mining and Geology Board as being "regionally significant." Such designations require that a Lead Agency's land use decisions involving designated areas are to 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.

4.12.2.3 Local Policies and Regulations

City of Fresno General Plan. The City's General Plan is a set of policies and programs that form a blueprint for the physical development of the city. The following goals and policies related to mineral resources are presented in the approved General Plan:

> **Policy RC-10-b: Zoning in San Joaquin Riverbottom.** Maintain zoning consistent with on-going mineral extraction in the San Joaquin Riverbottom that also allows multiple open space uses in conformance with State law and the City's Surface Mining Ordinance.
>
> **Policy RC-10-d: Manage MRZ-2 Areas.** Prohibit land uses and development projects that preclude mineral extraction in potential high-quality mineral resource areas designated MRZ-2 by the California Department of Conservation Division of Mines and Geology.

4.12.3 Impacts and Mitigation Measures

The following section presents a discussion of the impacts related to mineral resources that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds to determine if an impact is significant. The latter part of this section presents the impacts associated with implementation of the proposed project and the recommended mitigation measures, if required. Mitigation measures are recommended, as appropriate, for significant impacts to eliminate or reduce them to a less than significant level. Cumulative impacts are also addressed.

4.12.3.1 Significance Criteria

Based on *State CEQA Guidelines* Appendix G, the proposed project would have a significant impact on land mineral resources if it would:

a. 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.

b. 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.

4.12.3.2 Project Impacts

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

MIN-1 The proposed project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.

According to the City's General Plan mineral resources are concentrated along the San Joaquin River Corridor. The California Department of Mines and Geology classifies lands along the San Joaquin River Corridor as MRZ-1, MRZ-2, and MRZ-3; portions of the city classified as MRZ-2 indicate that mineral deposits are present or are likely present. The mineral resources present in the city are comprised of aggregate materials and are being removed via surface mining operations.

The proposed project consists of the adoption of the Fresno VMT Reduction Program, which aims to establish mitigation for future projects that exceed the City's VMT thresholds in the form of a mitigation bank. The proposed project program would identify, quantify, and prioritize applicable mitigation measures and relevant VMT-reducing projects within the City to be funded by the proposed mitigation bank. The project would not result in any physical improvements or change the distribution or intensity of the land uses within the city. Future VMT-reducing projects identified by the Fresno VMT Reduction Program would be required to conduct project-specific environmental analysis to assess potential impacts to mineral resources. However, as shown in Figure 3-3 of Chapter 3.0, Project Description, no VMT-reducing projects associated with the proposed project would occur within a mineral resource zone identified by the City's General Plan. Therefore, the proposed project would not result in the loss of availability of a locally important mineral resource. As a result, a less-than-significant impact would occur.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

MIN-2 The proposed project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

As identified under impact discussion a above, the proposed project would not result in any physical improvements in the project area. Additionally, as shown in Figure 3-3 of Chapter 3.0, Project Description, future VMT-reducing projects to be funded by the proposed mitigation bank would not occur within mineral resource zone identified by the City's General Plan. As a result, a less-than-significant impact would occur.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

4.12.3.3 Cumulative Impacts

The proposed project would have a significant effect on the environment if it—in combination with other projects—would contribute to a significant cumulative impact related to mineral resources. The cumulative study area for mineral resources is the City of Fresno.

As identified in this section, implementation of the proposed project would not result in the loss of mineral resources in the city of Fresno. As a result, implementation of the proposed Fresno VMT Reduction Program, in combination with other projects, would not contribute to a significant cumulative impact to mineral resources. Therefore, the impact would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

4.13 NOISE

This section provides a discussion of the existing noise environment in the Planning Area and in the surrounding area, and evaluates the potential for changes in noise that could result from the implementation of the proposed Fresno VMT Reduction Program (project).

4.13.1 Methodology

4.13.1.1 Characteristics of Sound

Noise is usually defined as unwanted sound and consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, or sleep. To the human ear, sound has two significant characteristics: pitch and loudness. Pitch is generally related to annoyance, while loudness can affect our ability to hear through hearing damage. 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 that 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 pressure refers to how hard the sound wave strikes an object, which in turn produces the sound's effect. This characteristic of sound can be measured precisely with instruments. The project analysis defines the noise environment of the planning area in terms of sound pressure levels and the project's effect on sensitive land uses.

4.13.1.2 Measurement of Sound

Sound intensity is measured with the A-weighted decibel 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, unlike linear units (e.g., inches or pounds), are measured on a logarithmic scale representing points on a sharply rising curve.

For example, 10 decibels (dB) is 10 times more intense than 1 dB, 20 dB is 100 times more intense than 1 dB, and 30 dB is 1,000 times more intense than 1 dB. Thirty decibels (30 dB) represents 1,000 times as much acoustic energy as 1 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 sound's loudness. Ambient sounds generally range from 30 dB (very quiet) to 100 dB (very loud).

Sound levels generate from a source, and their decibel level decreases as the distance from that source increases. Sound levels dissipate exponentially with distance from their noise sources. 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. Line source sound levels decrease 4.5 dB for each doubling of distance in a relatively flat environment with absorptive vegetation.

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 noise occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and a 10 dBA weighting factor applied to noise 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 and sleeping hours. CNEL and L_{dn} are within 1 dBA of each other and are normally interchangeable. The City uses the CNEL noise scale for long-term noise impact assessment.

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 for short-term noise impacts are specified in terms of maximum levels denoted by L_{max}, which reflects peak operating conditions and addresses the annoying aspects of intermittent noise. It is often used together with another noise scale, or noise standards in terms of percentile noise levels, in noise ordinances for enforcement purposes. 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 than this level. 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, the L_{eq} and L_{50} are approximately the same.

Noise impacts can be described in three categories. The first category includes audible impacts that refer to increases in noise levels noticeable to humans. Audible increases in noise levels generally refer to a change of 3 dB or greater because 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 includes 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.

Table 4.13.A lists definitions of acoustical terms, and Table 4.13.B shows common sound levels and their sources.

Table 4.13.A: Definitions of Acoustical Terms

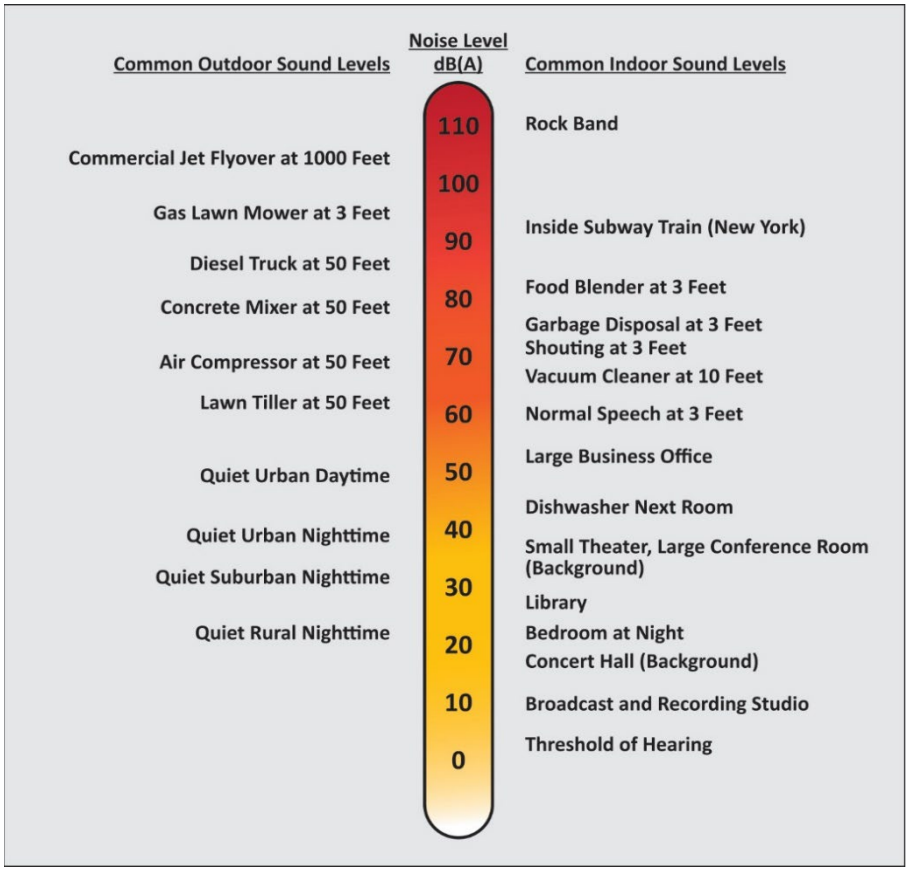
Term	Definitions
Decibel, dB	A unit of sound level that denotes the ratio between two quantities that are proportional to power; the number of decibels is 10 times the logarithm (to the base 10) of this ratio.
Frequency, Hz	Of a function periodic in time, the number of times that the quantity repeats itself in 1 second (i.e., the 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_{01}, L_{10}, L_{50}, L_{90}	The fast A-weighted noise levels that are equaled or exceeded by a fluctuating sound level 1%, 10%, 50%, and 90% of a stated time period, respectively.
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 dBA to sound levels occurring in the evening from 7:00 p.m. to 10:00 p.m. and after the addition of 10 dBA 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 dBA 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. It is 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 upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content, as well as the prevailing ambient noise level.

Sources: *Caltrans Technical Noise Supplement to the Traffic Noise Analysis Protocol* (Caltrans 2013), Federal Transit Administration's (FTA) *Transit Noise and Vibration Impact Assessment Manual* (2018).

4.13.1.3 Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to sound levels higher than 85 dBA. Exposure to high sound levels affects the entire system, with prolonged sound exposure in excess of 75 dBA increasing body tensions, thereby affecting blood pressure and functions of the heart and the nervous system. In comparison, extended periods of sound exposure above 90 dBA would result in permanent cell damage. When the sound level reaches 120 dBA, a tickling sensation occurs in the human ear, even with short-term exposure. This level of sound is called the threshold of feeling. As the sound reaches 140 dBA, the tickling sensation is replaced by a feeling of pain in the ear (i.e., the threshold of pain). A sound level of 160–165 dBA will result in dizziness or a 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.B: Typical A-Weighted Sound Levels



Source: Compiled by LSA (2016).

4.13.1.4 Vibration

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 sitting on shelves or hanging on walls, or a low-frequency rumbling noise. The rumbling noise is caused by the vibration of walls, floors, and ceilings that radiate sound waves. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by 10 dB or less. This is an order of magnitude below the damage threshold for normal buildings.

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. 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 the project and the 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 such as blasting and pile-driving to cause vibration of sufficient amplitudes to damage nearby buildings. 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 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. Vibration velocity level in decibels is defined as:

$$L_v = 20 \log_{10} [V/V_{ref}]$$

where "L_v" is the vibration velocity in decibels (VdB), "V" is the RMS velocity amplitude, and "V_{ref}" is the reference velocity amplitude, or 1 x 10^{-6} inches/second (in/sec) used in the United States. Table 4.13.C illustrates human response to various vibration levels, as described in the *Federal Transit Administration (FTA) Noise and Vibration Impact Assessment Manual* (FTA Manual).[1]

Table 4.13.C: Human Response to Different Levels of Ground-Borne Noise and Vibration

Vibration Velocity Level	Noise Level		Human Response
	Low Frequency[1]	Mid Frequency[2]	
65 VdB	25 dBA	40 dBA	Approximate threshold of perception for many humans. Low-frequency sound is usually inaudible; mid-frequency sound is excessive for quiet sleeping areas.
75 VdB	35 dBA	50 dBA	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find transit vibration at this level unacceptable. Low-frequency noise is acceptable for sleeping areas; mid-frequency noise is annoying in most quiet occupied areas.
85 VdB	45 dBA	60 dBA	Vibration is acceptable only if there are an infrequent number of events per day. Low-frequency noise is unacceptable for sleeping areas; mid-frequency noise is unacceptable even for infrequent events with institutional land uses, such as schools and churches.

Source: *Transit Noise and Vibration Impact Assessment* (FTA 2018).
[1] Approximate noise level when vibration spectrum peak is near 30 Hz.
[2] Approximate noise level when vibration spectrum peak is near 60 Hz.
dBA = A-weighted decibels
FTA = Federal Transit Administration
Hz = Hertz
VdB = vibration velocity decibels

[1] Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment Manual. Office of Planning and Environment*. Report No. 0123. September.

Factors that influence ground-borne vibration and noise include:

- **Vibration Source:** Vehicle suspension, wheel types and condition, railroad track/roadway surface, railroad track support system, speed, transit structure, and depth of vibration source.
- **Vibration Path:** Soil type, rock layers, soil layering, depth to water table, and frost depth.
- **Vibration Receiver:** Foundation type, building construction, and acoustical absorption.

Among the factors listed above, there are significant differences in the vibration characteristics when the source is underground compared to at the ground surface. In addition, soil conditions are known to have a strong influence on the levels of ground-borne vibration. Among the most important factors are the stiffness and internal damping of the soil and the depth to bedrock.

Experience with ground-borne vibration indicates (1) vibration propagation is more efficient in stiff, clay soils than in loose, sandy soils; and (2) shallow rock seems to concentrate the vibration energy close to the surface and can result in ground-borne vibration problems at large distances from a railroad track. Factors such as layering of the soil and the depth to the water table can have significant effects on the propagation of ground-borne vibration. Soft, loose, sandy soils tend to attenuate more vibration energy than hard, rocky materials. Vibration propagation through groundwater is more efficient than through sandy soils.

4.13.2 Existing Environmental Setting

The study area for project impacts regarding noise is the City of Fresno Planning Area and the immediate surrounding areas including the county of Fresno, county of Madera, and city of Clovis because potential development under the proposed project could affect areas inside and outside the Planning Area.

The study area for the analysis of cumulative noise impacts is similar to the study area for project impacts. The study area for cumulative noise impacts is the City of Fresno Planning Area and the immediate surrounding county of Fresno, county of Madera, and city of Clovis areas because cumulative development in the areas immediately surrounding the City of Fresno Planning Area could combine with development under the proposed project and result in cumulative noise impacts.

4.13.2.1 Existing Noise Levels

Generally, the three primary sources of substantial noise that affect the city of Fresno and its residents are all transportation-related and consist of local streets and regional highways; airport operations at the Fresno Yosemite International, the Fresno-Chandler Downtown, and the Sierra Sky Park Airports; and railroad operations along the Burlington Northern Santa Fe (BNSF) Railway and the Union Pacific Railroad lines.

The existing noise conditions in the Planning Area were measured at nine locations from May 30 to June 1, 2012. Noise monitoring sites were selected to be representative of typical residential, commercial, and industrial sites within the Planning Area, as well as arterial roadways, elevated and

below-grade freeways, and railroad crossings with and without train horn soundings. At each of the nine long-term 24-hour noise monitoring sites, day-night statistical noise level trends were recorded to develop DNL values. Descriptions of each location and the measured noise levels are provided in Table 4.13.D.

Table 4.13.D: Measured Existing Noise Levels from Approved General Plan

Location	Distance from Noise Source Centerline (feet)	Measured Noise Level (dBA L_{dn})
Railroad crossing at Shields Avenue	100	84
Along Railroad near W Barstow Avenue	100	74
SR 41 between W Barstow Avenue and W Shaw Avenue	100	76
SR 180 near N Peach Avenue	100	76
E Shaw Avenue near N Cedar Avenue	100	72
N Blackstone Avenue near E Ashlan Avenue	100	70
S Elm Avenue near E Jensen Avenue	100	68
N Valentine Avenue between W Ashlan Avenue and W Holland Avenue	100	67
S Fruit Avenue north of Church Avenue	100	65

Source: City of Fresno General Plan (2014).

4.13.2.2 Roadways

Those areas in the city that experience sound levels greater than 60 dBA L_{dn} are typically near major vehicular traffic corridors. Highway traffic noise levels typically depend on three factors: (1) the volume of traffic, (2) the average speed of traffic, and (3) the vehicle mix (i.e., the percentage of trucks versus automobiles in the traffic flow). Vehicle noise includes noises produced by the engine, exhaust, tires, and wind generated by taller vehicles. Other factors that affect the perception of traffic noise include the distance from the highway, terrain, vegetation, and natural and structural obstacles. While tire noise from automobiles is generally located at ground level, truck noise sources can be located as high as 10 to 15 feet above the roadbed due to tall exhaust stacks and higher engines.

Freeway traffic is the dominant noise source in Fresno. The freeways in Fresno consist of State Route (SR) 41. Although most noise sensitive land uses adjacent to these freeways are mitigated by existing sound walls, topography or buildings, there are still some noise sensitive land uses that currently exceed the City's 60 dBA L_{dn} noise standard. In addition to the freeways, there are places throughout the city where traffic volumes on every roadway classification are high enough to create noise levels that currently exceed the City's 60 dBA L_{dn} noise standard at the sensitive land uses.

4.13.2.3 Airport Operations

There are currently three airports located within the city of Fresno and consist of Fresno Yosemite International Airport, Fresno-Chandler Downtown Airport (also known as the "Fresno-Chandler Executive Airport"), and Sierra Sky Park Airport. CNEL Noise contours have been developed and are provided in the Land Use Policy Plan prepared for the airport (refer to Section 4.13.5.3, Local Regulations and Policies, below). The Airport Land Use Compatibility Plan includes CNEL noise

contours based on projected airport and aircraft operations. These noise contours are used to determine land use compatibility and locations for noise mitigation measures.

Commercial jet aircraft operations are limited to the Fresno Yosemite International Airport. The Air National Guard is also stationed there and operates military jets and other aircraft. Private and commercial operations with smaller aircraft use the Fresno Chandler Downtown Airport, while only small private aircraft use the Sierra Sky Park Airport.

4.13.2.4 Railroad Operations

The two major rail lines that traverse the city are the Union Pacific Railroad line, which is generally located along SR-99, and the BNSF Railway, which diverges from SR-99 in the southwest and travels through downtown (behind City Hall) to the northwest. The Union Pacific line is generally located within a heavy commercial and industrial corridor, although residential uses occur in the vicinity of the line north of Shaw Avenue. The Union Pacific line limits its use to only freight traffic.

South of the Downtown, the BNSF Railway is bound by industrial uses, while north of the Downtown the line is generally located within a residential area. The BNSF Railway carries both freight and passenger traffic (Amtrak).

4.13.2.5 Stationary Noise Sources

Stationary noise sources can also have an effect on the population, and unlike mobile, transportation-related noise sources, these sources generally have a more permanent and consistent impact on people. These stationary noise sources involve a wide spectrum of uses and activities, including various industrial uses, commercial operations, agricultural production, school playgrounds, high school football games, HVAC units, generators, lawn maintenance equipment, and swimming pool pumps.

Even with incorporation of the best available noise control technology, noise emanating from industrial uses can be substantial and exceed local noise standards. These noise sources can be continuous and may contain tonal components that may be annoying to nearby receptors. Although industrial uses in the city of Fresno are typically located in industrial districts near freeways and commercial uses, and away from residences and other sensitive noise receptors, noise sources associated with commercial uses such as automotive repair facilities, recycling centers, and loading docks may occur in the vicinity of residential uses.

4.13.3 Regulatory Setting

4.13.3.1 Federal Policies and Regulations

United States Environmental Protection Agency. In 1972, Congress enacted the United States Noise Control Act. This act authorized the United States Environmental Protection Agency (USEPA) 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.E. The USEPA cautions that these identified levels are not standards because they do not take into account the cost or feasibility of the levels.

For protection against hearing loss, 96 percent of the 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 USEPA 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.E: Summary of USEPA 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: *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety* (United States Environmental Protection Agency [USEPA] March 1974).
dB = decibels
L_{eq} = equivalent continuous sound level
USEPA = United States Environmental Protection Agency

Table 4.13.F 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. However, 1 percent of the population may complain about noise at this level, and 17 percent may indicate annoyance.

Table 4.13.F: 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: *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety* (United States Environmental Protection Agency [USEPA] March 1974).
CNEL = Community Noise Equivalent Level
dB = decibels
dBA = A-weighted decibels

Federal Transit Administration. Vibration standards included in the Federal Transit Administration's *Transit Noise and Vibration Impact Assessment Manual* (FTA Manual) are used in this analysis for ground-borne vibration impacts on human annoyance, as shown in Table 4.13.G. The criteria

presented in Table 4.13.G account for the variations in project types, which differ widely among projects.

The criteria for environmental impact from ground-borne vibration and noise are based on the maximum levels for a single event. Table 4.13.H lists the potential vibration building damage criteria associated with construction activities, as suggested in the FTA Manual.

Table 4.13.G: Interpretation of Vibration Criteria for Detailed Analysis

Land Use	Max Lv (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 offices 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 20×).
Residential Night and Operating Rooms	72	Vibration is not felt, but ground-borne noise may be audible inside quiet rooms. Suitable for medium-power microscopes (100×) and other equipment of low sensitivity.

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).
[1] As measured in 1/3-Octave bands of frequency over the frequency range 8 to 80 Hertz.
FTA = Federal Transit Administration
L_V = velocity in decibels
Max = maximum
VdB = vibration velocity decibels

Table 4.13.H: Construction Vibration Damage Criteria

Building Category	PPV (in/sec)	Approximate LV (VdB)1
Reinforced concrete, steel, or timber (no plaster)	0.50	102
Engineered concrete and masonry (no plaster)	0.30	98
Non-engineered timber and masonry buildings	0.20	94
Buildings extremely susceptible to vibration damage	0.12	90

Source: Transit Noise and Vibration Impact Assessment (FTA 2018).
[1] RMS vibration velocity in decibels (VdB) re 1 µin/sec.
µin/sec = microinches per second
FTA = Federal Transit Administration
in/sec = inch/inches per second
L_V = velocity in decibels
PPV = peak particle velocity
RMS = root-mean-square
VdB = vibration velocity decibels

FTA Manual guidelines show that a vibration level of up to 0.5 in/sec in PPV is considered safe for buildings consisting of reinforced concrete, steel, or timber (no plaster), and would not result in any construction vibration damage. For a non-engineered (those not designed by an engineer or architect) timber and masonry building, the construction building vibration damage criterion is 0.2 in/sec in PPV.

4.13.3.2 State Policies and Regulations

The State of California has established regulations that help prevent adverse impacts to occupants of buildings near noise sources. Referred to as the *State Noise Insulation Standard*, it requires noise-sensitive land uses to meet performance standards through design and/or building materials that would offset any noise source in the vicinity of the building. Chapter 5, Section 5.507 of the California Green Building Standards Code includes nonresidential mandatory measures, which require that buildings exposed to a noise level of 65 dB L_{eq}-1-hour during any hour of operation shall have building, addition, or alteration exterior wall and roof-ceiling assemblies exposed to the noise source meeting a composite Sound Transmission Class (STC) rating of at least 45 (or Outdoor/Indoor Transmission Class [OITC] 35) with exterior windows of a minimum STC of 40 (or OITC 30).

The State has also established land use compatibility guidelines for determining acceptable noise levels for specified land uses, as shown in Table 4.13.H.

4.13.3.3 Local Policies and Regulations

City of Fresno General Plan. The City of Fresno's General Plan Noise and Safety Element includes objectives and policies that work to protect the citizens of Fresno from the harmful and annoying effects of exposure to excessive noise. Policies related to noise applicable to the proposed project are listed below. In addition, Noise and Safety Element noise standards for transportation and stationary noise sources are listed below.

> **Policy NS-1-a: Desirable and Generally Acceptable Exterior Noise Environment.** Establish 65 dBA L_{dn} or CNEL as the standard for the desirable maximum average exterior noise levels for defined usable exterior areas of residential and noise-sensitive uses for noise, but designate 60 dBA L_{dn} or CNEL (measured at the property line) for noise generated by stationary sources impinging upon residential and noise-sensitive uses. Maintain 65 dBA L_{dn} or CNEL as the maximum average exterior noise levels for non-sensitive commercial land uses, and maintain 70 dBA L_{dn} or CNEL as maximum average exterior noise level for industrial land uses, both to be measured at the property line of parcels where noise is generated which may impinge on neighboring properties.
>
> **Policy NS-1-b: Conditionally Acceptable Exterior Noise Exposure Range.** Establish the conditionally acceptable noise exposure level range for residential and other noise sensitive uses to be 65 dB L_{dn} or require appropriate noise reducing mitigation measures as determined by a site-specific acoustical analysis to comply with the desirable and conditionally acceptable exterior noise level and the required interior noise level standards set in Table 4.13.H.
>
> **Policy NS-1-c: Generally Unacceptable Exterior Noise Exposure Range.** Establish the exterior noise exposure of greater than 65 dB L_{dn} or CNEL to be generally unacceptable for residential and other noise sensitive uses for noise generated by sources in Policy NS-1-a, and study alternative less noise-sensitive uses for these areas if otherwise appropriate. Require appropriate noise reducing mitigation measures as determined by a site-specific acoustical analysis to comply with the generally desirable or generally acceptable exterior noise level and the required 45 dB interior noise level standards set in Table 4.13.H as conditions of permit approval.

Policy NS-1-d: Allowable Exterior Noise Environment for BRT and Activity Centers. Exclude residential and noise sensitive uses located along Bus Rapid Transit corridors or within Activity Centers identified by this General Plan, from exterior noise standards in Policies NS-1-a through NS-1-c where it is determined application of noise mitigation measures will be detrimental to the realization of the General Plan's mixed use policies.

Policy NS-1-g: Noise mitigation measures which help achieve the noise level targets of this plan include, but are not limited to, the following:

- Façades with substantial weight and insulation;
- Installation of sound-rated windows for primary sleeping and activity areas;
- Installation of sound-rated doors for all exterior entries at primary sleeping and activity areas;
- Greater building setbacks and exterior barriers;
- Acoustic baffling of vents for chimneys, attic and gable ends;
- Installation of mechanical ventilation systems that provide fresh air under closed window conditions.

The aforementioned measures are not exhaustive and alternative designs may be approved by the City, provided that a qualified Acoustical Consultant submits information demonstrating that the alternative design(s) will achieve and maintain the specific targets for outdoor activity areas and interior spaces.

Policy NS-1-h: Interior Noise Level Requirement. Comply with the State Code requirement that any new multifamily residential, hotel, or dorm buildings must be designed to incorporate noise reduction measures to meet the 45 dB L_{dn} interior noise criterion, and apply this standard as well to all new single-family residential and noise sensitive uses.

Policy NS-1-i: Mitigation by New Development. Require an acoustical analysis where new development of industrial, commercial, or other noise generating land uses (including transportation facilities such as roadways, railroads, and airports) may result in noise levels that exceed the noise level exposure criteria established by Tables 4.13.I and 4.3.J to determine impacts and require developers to mitigate these impacts in conformance with Tables 4.13.I and 4.13.J as a condition of permit approval through appropriate means. Noise mitigation measures may include:

- The screening of noise sources such as parking and loading facilities, outdoor activities, and mechanical equipment;
- Providing increased setbacks for noise sources from adjacent dwellings;

- Installation of walls and landscaping that serve as noise buffers;
- Installation of soundproofing materials and double-glazed windows; and
- Regulating operations, such as hours of operation, including deliveries and trash pickup.

Table 4.13.I: Transportation (Non-Aircraft) Noise Sources

Noise-Sensitive Land Use[1]	Outdoor Activity Areas[2]	Interior Spaces	
	L_{dn}/CNEL, dB	L_{dn}/CNEL, dB	L_{eq} dB[2]
Residential	65	45	-
Transient Lodging	65	45	-
Hospitals, Nursing Homes	65	45	-
Theaters, Auditoriums, Music Halls	-	-	35
Churches, Meeting Halls	65	-	45
Office Buildings	-	-	45
Schools, Libraries, Museums	-	-	45

Source: General Plan (City of Fresno, 2014).
[1] Where the location of outdoor activity areas is unknown or is not applicable, the exterior noise level standard shall be applied to the property line of the receiving land use.
[2] As determined for a typical worst-case hour during periods of use.
CNEL = Community Noise Equivalent Level
dB = decibels
L_{dn} = day-night average noise level

Table 4.13.J: Stationary Noise Sources

	Daytime (7:00 a.m. – 10:00 p.m.)	Nighttime (10:00 p.m. to 7:00 a.m.)
Hourly Equivalent Sound Level (L_{eq}), dBA	50	45
Maximum Sound Level (L_{max}), dBA	70	60

Source: General Plan (City of Fresno, 2014).
[1] The Planning and Development Director, on a case-by-case basis, may designate land uses other than those shown in this table to be noise-sensitive, and may require appropriate noise mitigation measures.
[2] As determined at outdoor activity areas. Where the location of outdoor activity areas is unknown or not applicable, the noise exposure standard shall be applied at the property line of the receiving land use. When ambient noise levels exceed or equal the levels in this table, mitigation shall only be required to limit noise to the ambient plus five dB.
dB = decibels
dBA = A-weighted decibels

Alternative acoustical designs that achieve the prescribed noise level reduction may be approved by the City, provided a qualified Acoustical Consultant submits information demonstrating that the alternative designs will achieve and maintain the specific targets for outdoor activity areas and interior spaces. As a last resort, developers may propose to construct noise walls along roadways when compatible with aesthetic concerns and neighborhood character. This would be a developer responsibility, with no City funding.

Policy NS-1-j: Significance Threshold. Establish, as a threshold of significance for the City's environmental review process, that a significant increase in ambient noise levels is assumed if the project would increase noise levels in the immediate vicinity by 3 dB L_{dn} or CNEL or more above the ambient noise limits established in this General Plan Update.

Policy NS-1-k: Proposal Review. Review all new public and private development proposals that may potentially be affected by or cause a significant increase in noise levels, per Policy NS-1-i, to determine conformance with the policies of this Noise Element. Require developers to reduce the noise impacts of new development on adjacent properties through appropriate means.

Policy NS-1-m: Transportation Related Noise Impacts. For projects subject to City approval, require that the project sponsor mitigate noise created by new transportation and transportation-related stationary noise sources, including roadway improvement projects, so that resulting noise levels do not exceed the City's adopted standards for noise-sensitive land uses.

Policy NS-1-n: Best Available Technology. Require new noise sources to use best available control technology to minimize noise emissions.

Policy NS-1-o: Sound Wall Guidelines. Acoustical studies and noise mitigation measures for projects shall specify the heights, materials, and design for sound walls and other noise barriers. Aesthetic considerations shall also be addressed in these studies and mitigation measures such as variable noise barrier heights, a combination of a landscaped berm with wall, and reduced barrier height in combination with increased distance or elevation differences between noise source and noise receptor, with a maximum allowable height of 15 feet. The City will develop guidelines for aesthetic design measures of sound walls, and may commission area wide noise mitigation studies that can serve as templates for acoustical treatment that can be applied to similar situations in the urban area.

City of Fresno Municipal Code. Chapter 10, Article 1 of the Fresno Municipal Code (i.e., City's Noise Ordinance) establishes excessive noise guidelines and exemptions. Standards are set for ambient noise based on district type (residential, commercial, and industrial) and time of day, as shown in Table 4.13.K below.

Table 4.13.K : Ambient Noise Standards in Decibels

District	(7:00 a.m. – 7:00 p.m.)	(7:00 p.m. to 10:00 p.m.)	(10:00 p.m. – 7:00 a.m.)
Residential	60	55	50
Commercial	65	65	60
Industrial	70	70	70

Source: City of Fresno (January 2024).

Section 10-109 of the Municipal Code also addresses construction activity noise and states that construction activity noise is exempt from the noise standards when work takes place between the hours of 7:00 a.m. and 10:00 p.m. on any day except Sunday.

Airport Land Use Commission of Fresno County. The Airport Land Use Commission of Fresno County adopted the Fresno County Airport Land Use Compatibility Plan (ALUCP) on December 3, 2018. This document represents an update of the state-mandated ALUCP for the environs of the nine public use airports in Fresno County. The Fresno County public use airports include Coalinga Municipal, Firebaugh, Fresno Chandler Executive, Fresno Yosemite International, Harris Ranch, Reedley Municipal, Selma, Sierra Sky Park, and William Robert Johnston Municipal. The ALUCP includes policies designed to regulate the compatibility of land uses surrounding the airport and associated operations. In addition, the ALUCP provides compatibility policies and sets Airport/Land Use Noise Compatibility Criteria to avoid establishment of new noise- sensitive land uses and exposure of the users to levels of aircraft noise that can disrupt activities involved and establishes noise contours for the purpose of evaluating noise compatibility of land use.

4.13.4 Impacts and Mitigation Measures

The following section presents a discussion of the impacts related to noise and vibration that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds to determine if an impact is significant. The latter part of this section presents the impacts associated with implementation of the proposed project and the recommended mitigation measures, if required. Mitigation measures are recommended, as appropriate, for significant impacts to eliminate or reduce them to a less-than-significant level. Cumulative impacts are also addressed.

4.13.4.1 Significance Criteria

The thresholds for impacts related to noise used in this analysis are consistent with Appendix G of the *State CEQA Guidelines*. Development of the proposed project would result in a significant impact related to noise if it would:

a. Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;

b. Generate excessive groundborne vibration or groundborne noise levels;

c. For a project located within the vicinity of a private airstrip an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels.

4.13.4.2 Project Impacts

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

NOI-1 The project could generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Short-Term Construction Impacts. The proposed program would fund future VMT-reducing transportation improvements within the City, which would generate noise during construction activities. Construction noise levels are dependent upon the specific locations, site plans, and construction details of individual VMT improvements. Given the programmatic level of the proposed project, construction-related noise impacts that may occur at any one time are speculative and cannot be accurately determined at this stage of the planning process. Construction would be localized and would occur intermittently for varying periods of time. Because specific project-level information is not available at this time, it is not possible to quantify the construction noise impacts at specific sensitive receptors. Construction of individual transportation improvements funded by the proposed program could temporarily increase the ambient noise environment in the vicinity of each individual project. However, all future transportation improvements, including those implemented as part of development projects, would be required to undergo separate environmental review under CEQA (e.g., preparation of a Categorical Exemption, Mitigated Negative Declaration, or Environmental Impact Report) to evaluate project-specific construction noise impacts and identify any required mitigation. Moreover, based on the range of VMT-reducing facilities potentially funded by the proposed project, the majority of potential future improvements would be limited in scope and scale (e.g., sidewalk/path improvements, signal/crosswalk enhancements, etc.), requiring a limited range of construction equipment and a brief construction duration.

As set forth by Chapter 10, Article 1, Section 10-109 – Exemptions, the provisions of Article 1 – Noise Regulations of the Fresno Municipal Code shall not apply to:

> Construction, repair or remodeling work accomplished pursuant to a building, electrical, plumbing, mechanical, or other construction permit issued by the city or other governmental agency, or to site preparation and grading, provided such work takes place between the hours of 7:00 a.m. and 10:00 p.m. on any day except Sunday.

Construction impacts would be further reduced through implementation of Mitigation Measure NOI-1 which would require construction best management practices (BMPs). Specifically, Mitigation Measure NOI- 1 would require that all construction equipment be equipped with properly operating and maintained mufflers, locate stationary construction equipment so that emitted noise is directed away from the nearest noise sensitive receptors, locate equipment staging in areas furthest away from sensitive receptors, and limit haul truck deliveries to the same hours specified for construction equipment. Therefore, compliance with Noise Regulations of the Fresno Municipal Code and implementation of Mitigation Measure NOI-1 would reduce short-term construction noise impacts to less than significant levels.

Mobile Sources. The purpose of the proposed program is to establish a mitigation fee mechanism for development projects that trigger a potentially significant VMT impact under CEQA, and to utilize collected funds towards future VMT-reducing transportation improvements to reduce Citywide VMT. As such, the proposed program is not considered a trip-generating land use project. The majority of potential transportation improvements would not increase traffic volumes or cause an increase in ambient noise levels in the project vicinity.

For example, pedestrian improvements to underserved neighborhoods would not result in long-term mobile noise impacts.

Further, the transportation improvements would be required to implement any required mitigation measures on a project-by-project basis, as applicable, pursuant to CEQA provisions. Impacts would be less than significant in this regard.

Stationary Sources. Stationary noise sources are generally associated with residential, commercial, and industrial developments involving mechanical equipment, loading areas, parking areas, heating, and ventilation units, etc. Due to the scope and nature of the proposed project (VMT-reducing transportation improvements), no long-term stationary noise impacts are anticipated to occur. No noise-generating stationary operations are anticipated. Therefore, the proposed project would result in less than significant impacts in this regard.

Mitigation Measure NOI-1

Each transportation improvement funded by the proposed program subject to California Environmental Quality Act (CEQA) review shall ensure through contract specifications that construction best management practices (BMPs) are implemented by construction contractors to reduce construction noise levels. Contract specifications shall be included in construction documents, which shall be reviewed and approved by the City of Fresno Planning and Development Director prior to issuance of a grading or building permit (whichever is issued first). BMPs to reduce construction noise levels may include, but are not limited to, the following:

- Ensure that construction equipment is properly muffled according to industry standards and is in good working condition.
- Place noise-generating construction equipment and construction staging areas away from sensitive uses.
- Construction activities shall occur between the hours of 7:00 a.m. and 10:00 p.m. Monday through Saturday, pursuant to Section 10-109 of the City of Fresno Municipal Code.
- Implement noise attenuation measures, as needed, which may include, but are not limited to, temporary noise barriers or noise blankets around stationary construction noise sources.
- Use electric air compressors and similar power tools rather than diesel equipment, where feasible.
- Construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use for more than five minutes.

- The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment (between the hours of 7:00 a.m. and 10:00 p.m. Monday through Saturday). The haul route exhibit shall design delivery routes to minimize the exposure of sensitive land uses or residential dwellings to delivery truck-related noise.

- Construction hours, allowable workdays, and the phone number of the job superintendent shall be clearly posted at all construction entrances to allow surrounding owners and residents to contact the job superintendent. If the City or the job superintendent receives a complaint, the superintendent shall investigate, take appropriate corrective action, and report the action taken to the reporting party and the Director of Development.

Level of Significance: Less Than Significant Impact with Mitigation Incorporated.

NOI-2 The project could generate excessive groundborne vibration or groundborne noise levels.

Ground vibration generated by construction equipment and transportation sources spreads through the ground and diminishes in strength with distance. The effects of ground vibration can vary from no perceptible effects at the lowest levels, low rumbling sounds and detectable vibrations at moderate levels, and slight damage to nearby structures at the highest levels. At the highest levels of vibration, damage to structures is primarily architectural (e.g., loosening and cracking of plaster or stucco coatings) and rarely results in structural damage.

Construction activities associated with projects that could occur under the approved General Plan could result in exposure of sensitive land uses to excessive groundborne vibration and noise levels. Problems, such as disturbance, due to groundborne vibration and noise from these sources are usually contained to areas within about 100 feet of the vibration source.[2] Typically, the main effect of groundborne vibration and noise is to cause annoyances for occupants of nearby buildings.

Implementation of the approved General Plan would allow for infill development in more densely developed areas where offsite structures would be more prevalent. Even during these occurrences, the mandatory buffers set forth by the City of Fresno Development Code (e.g., setbacks, easements, right-of-ways) would ensure that in most cases onsite and offsite structures would be separated by at least 25 feet, and thus construction activities would be buffered by at least 25 feet from existing offsite structures. However, if construction activities would occur within 25 feet of existing structures, short-term construction impacts associated with groundborne vibration would be potentially significant. Therefore, implementation of Mitigation Measure NOI-2 would be required to increase the distance between heavy construction equipment and the surrounding structures to a minimum of 25 feet. Implementation of Mitigation Measure NOI-2, would ensure that construction

[2] U.S. Department of Transportation, 1995. Federal Transit Administration, *Transit Noise and Vibration Impact Assessment.* April.

vibration level would be below the threshold of 0.2 in/sec PPV for building damage and would reduce impacts to a less-than-significant level.

Mitigation Measure NOI-2 Prior to issuance of a grading permit, each transportation improvement funded by the proposed program subject to California Environmental Quality Act (CEQA) review with construction activities requiring operation of groundborne vibration generating equipment (i.e., vibratory compactor/roller, large bulldozer, caisson drilling, loaded trucks, and jackhammer) within 25 feet of an existing structure shall be required to prepare a project-specific vibration impact analysis to evaluate potential construction vibration impacts associated with the project, and to determine any specific vibration control mechanisms that shall be incorporated into the project's construction bid documents to reduce such impacts. Contract specifications shall be included in construction documents, which shall be reviewed and approved by the City prior to issuance of a grading permit.

Level of Significance: Less Than Significant Impact with Mitigation Incorporated.

NOI-3 The proposed would not expose people residing or working in the project area to excessive noise levels.

One public commercial airport, Fresno Yosemite International Airport, and two public general aviation airports, Fresno-Chandler Downtown Airport, and Sierra Sky Park Airport, are located in the city of Fresno. Future improvements associated with the proposed project would be required to comply with applicable noise standard requirements if the future improvements are located within Fresno County ALUCP. Additionally, given the nature of future transportation improvements, the improvements would not introduce new residents or employees to the area. Thus, the proposed project would not expose people to excessive noise levels, and less-than-significant impact would occur.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

4.13.4.3 Cumulative Impacts

CEQA Guidelines Section 15355 requires an analysis of cumulative impacts, which are defined as, "two or more individual effects which, when considered together, are considerable, or which compound or increase other environmental impacts." The cumulative analysis below considers the proposed project's impacts in conjunction with future buildout of the General Plan.

NOI-4 The project, in combination with other projects, could contribute to a significant cumulative impact related to noise.

Construction. Construction activities associated with the proposed project and cumulative projects may overlap, resulting in construction noise in the area. However, construction noise impacts primarily affect the areas immediately adjacent to the construction site. As previously discussed, future VMT-reducing transportation improvements within the City would generate noise during construction activities. However, all future improvements would undergo environmental review under CEQA to evaluate project-specific construction noise impacts and identify any required mitigation. Further, implementation of Mitigation Measure NOI-1 would ensure BMPs related to construction noise are implemented to further reduce such impacts. Future construction activities associated with cumulative development projects in accordance with the General Plan would also be required to comply with the Municipal Code and incorporate mitigation measures on a project-by-project basis, as applicable, to reduce construction noise pursuant to CEQA provisions. Therefore, the project's contribution to cumulative noise impacts would be less than significant with implementation of Mitigation Measure NOI-1.

Vibration. As discussed above, project-related construction and operational activities would not generate groundborne vibration on-site above the significance criteria (i.e. 0.2 in-per-second PPV threshold as established by Caltrans) with implementation of Mitigation Measure NOI-2. Groundborne vibration generated from cumulative projects developed in accordance with the General Plan 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. Therefore, the project's contribution to cumulative vibration impacts would be less than significant with implementation of Mitigation Measure NOI-2.

Mobile Noise. The project's potential traffic redistribution noise levels would not exceed the established significance criteria (i.e., 3.0 dB increase and exceedance of 65 dBA CNEL). 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. Therefore, the proposed project, in combination with cumulative traffic noise levels, would result in less than significant impacts.

Stationary Noise. Although cumulative development could occur in proximity to future transportation improvements implemented under the proposed project, the proposed transportation improvements would not involve stationary noise sources. Further, each cumulative project would require separate discretionary approval and CEQA analysis, which would address potential noise impacts and identify necessary attenuation measures, where appropriate. 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. Thus, the project and any cumulative development in the project vicinity are not anticipated to result in a significant cumulative impact. A less than significant impact would occur in this regard.

Mitigation Measures: Refer to Mitigation Measure NOI-1 and Mitigation Measure NOI-2.

Level of Significance: Less Than Significant Impact with Mitigation Incorporated.

4.14 POPULATION AND HOUSING

This section provides an evaluation of the potential environmental effects related to population and housing associated with implementation of the proposed Fresno VMT Reduction Program (proposed project).

4.14.1 Existing Environmental Setting

The study area for project impacts regarding population and housing is the Planning Area established by the City's General Plan because potential development under the proposed project is limited to areas within the Planning Area. The Planning Area established by the City includes all areas within the city's current city limits, including the Fresno-Clovis Regional Wastewater Reclamation Facility (RWRF), the areas within the current Sphere of Influence (SOI), and an area north of the city's most northeasterly portion of the city (referred to as the North Area).

In 1885, the city of Fresno was incorporated and had a population of 10,000 by 1890. Based on 2025 population estimates by the California Department of Finance, Fresno was the fifth largest city in the state of California with 557,032.[1] Centrally located within the Central San Joaquin Valley, Fresno is the financial, industrial, trade, and commercial capital in the region.

The current Fresno Council of Governments (Fresno COG) Fresno Regional Transportation Plan (2022) utilized population projections for Fresno county identified in the Fresno County 2050 Growth Projections prepared for Fresno COG in May 2017.[2] The population estimates for the county are provided in Table 4.14.A. The Fresno County 2050 Growth Projections only forecasted population to 2050, but based on the growth forecasted for the previous five years (i.e., between 2040 and 2045), a similar growth rate was used to forecast growth between 2050 and 2055. In addition, a similar growth rate was used to project the population for one additional year to 2056.

1 United States Census Bureau. QuickFacts. Fresno city, California. Website: https://www.census.gov/quickfacts/fact/table/fresnocitycalifornia/PST120223 (accessed May 2024).

2 Fresno Council of Governments (Fresno COG). 2017. Executive Summary - Fresno County 2050 Growth Projections. May 4. Website: https://www.fresnocog.org/wp-content/uploads/publications/Demographics/Fresno_COG_2050_Projections_Exec_Sum_0517.pdf (accessed May 2024).

Table 4.14.A: Population Estimate for City of Fresno Planning Area

Year	Population Estimate for County of Fresno	Population Estimate for City of Fresno Planning Area
2015	972,300[1]	583,380[2]
2020	1,047,440[1]	628,464[2]
2025	1,122,840[1]	673,704[2]
2030	1,191,850[1]	715,110[2]
2035	1,258,860[1]	755,316[2]
2040	1,323,070[1]	793,842[2]
2045	1,383,690[1]	830,214[2]
2050	1,447,090[1]	868,254[2]
2055	1,519,445[3]	911,667[2]
2056	1,535,095[4]	921,057[2]

Source: City of Fresno (2019).

1 Fresno County 2050 Growth Projections, Fresno Council of Governments, Table 1.

2 Planning Area population estimate is 60 percent of the County's population.

3 Estimated County Population in 2055 based upon previous 5 year growth increments of approximately 5%.

4 The one-year growth increment used for 2056 was approximately 1.03%, which was generally a similar increment if the growth. increment was extended over 5-years, and it was based upon the previous 5-year growth of approximately 5%.

Historically, the population within the City of Fresno Planning Area has been approximately 60 percent of the population within the county of Fresno. This population percentage of 60 percent was used to provide a population forecast for the Planning Area, as shown in Table 4.14.A. In 2024, Fresno COG published new estimates prepared by Applied Development Economics, Inc for the upcoming RTP update in 2026. These estimates forecast the City of Fresno population to be 648,980 by 2055 (0.24% growth rate). In 2025, the Department of Finance (DOF) projected the City of Fresno's population to be 718,074 by 2055 (assuming a city share of 63% of the county population). The Department of Finance is tracking population growth of California cities annually and documented that over the last year, the city's population increased by 4,281, a 0.77% growth rate).[3]

4.14.1.1 Employees to Housing Ratio

An important indicator of providing adequate housing within a community is to determine the number of employees who currently reside there compared to the number of occupied housing units. As shown in Table 4.14.B below, the employees to occupied housing ratio estimate for Fresno County in has generally remained stable between 2019 and 2022 at 1.33.

3 Fresno Council of Governments. 2024. Fresno County 2023-2060. Growth Projections Website: https://www.fresnocog.org/wp-content/uploads/2023/11/2024-Fresno-COG-2023-2060-Growth-Projections-REPORT.pdf (accessed June 2025).

Table 4.14.B: Employees per Occupied Housing Unit in Fresno County

Year	Number of Employees Living in Fresno County	Number of Occupied Housing Units in Fresno County	Employees per Occupied Housing Unit Ratio
2019	407,511[1]	307,142[2]	1.33
2020	408,625[1]	310,097[2]	1.32
2021	415,669[1]	314,421[2]	1.32
2022	423,399[1]	318,322[2]	1.33

Sources:
[1] United States Census Bureau. Table DP-3 – Selected Economic Characteristics. Fresno County, California. Website: https://data.census.gov/table/ACSDP1Y2019.DP03?q=DP03&g=050XX00US06019 (accessed May 2024).
[2] United States Census Bureau. Table DP04 – Selected Housing Characteristics. Fresno County, California. Website: https://data.census.gov/table/ACSDP5Y2019.DP04?q=DP04&g=050XX00US06019 (accessed May 2024).

4.14.1.2 Jobs to Housing Ratio

An additional housing indicator for Fresno County is to determine the number of jobs within the county compared to the total number of housing units within the county. Employment and housing estimates for the county were identified in the Fresno County 2050 Growth Projections. The Fresno County 2050 Growth Projections only forecasted job and housing growth to 2050, but based on the growth forecasted for the previous five years (i.e., between 2040 and 2045), a similar growth rate was used to forecast growth between 2050 and 2055. In addition, a similar growth rate was used to project the job and housing growth for one additional year to 2056, the estimated buildout date for the General Plan. Table 4.14.C below shows that the projected job estimate under buildout conditions within Fresno county is 533,812 jobs by 2056. The projected total number of housing units in the county under full buildout conditions is 450,832 housing units by 2056. The jobs per housing unit ratio is projected to decrease from 1.24 in 2015 to 1.18 in 2056 indicating that there will be fewer jobs per housing unit under projected conditions.

Table 4.14.C: Number of Jobs per Housing Unit in Fresno County

Year	Number of Jobs in Fresno County	Total Number of Housing Units in Fresno County	Jobs Per Housing Unit Ratio
2015	372,400[1]	299,450[2]	1.24
2020	398,100[1]	328,300[2]	1.21
2025	422,000[1]	348,120[2]	1.21
2030	441,200[1]	362,860[2]	1.22
2035	460,100[1]	375,290[2]	1.23
2040	476,800[1]	388,930[2]	1.23
2045	491,300[1]	405,260[2]	1.21
2050	506,300[1]	424,480[2]	1.19
2055	529,056[3]	446,254[4]	1.19
2056	533,812[5]	450,832[6]	1.18

Sources:
[1] Fresno County Council of Governments. 2017. Fresno County 2050 Growth Projections. Table 1.
[2] Fresno County Council of Governments. 2017. Fresno County 2050 Growth Projections. Table 9.
[3] Number of Jobs in Fresno County in 2055 is based upon previous 5-year growth increments of approximately 4.49%.
[4] Total Number of Housing Units in Fresno County in 2055 is based upon previous 5-year growth increments of approximately 5.13%
[5] The one-year growth increment used for 2056 was approximately 1.03%, which was generally a similar increment if the growth increment was extended over 5-years, and it was based upon the previous 5-year growth of approximately 5%.
[6] The one-year growth increment used for 2056 was approximately 0.90%, which was generally a similar increment if the growth increment was extended over 5-years, and it was based upon the previous 5-year growth of approximately 5%.

When comparing the number of employees and jobs in Tables 4.14.B and 4.14.C, the data shows that in the year 2020, there were a greater number of employees who lived in Fresno county (408,625 employees) compared to the number of jobs in Fresno county (398,100). Therefore, some employees who lived in Fresno county travelled outside the county to their place of employment.

4.14.2 Methodology

The potential project-related impacts related to population and housing were evaluated on a qualitative basis due to the programmatic nature of this EIR. Qualitative impacts were assessed by evaluating the project's potential for impacting population and housing within the Planning Area.

4.14.3 Regulatory Setting

4.14.3.1 Federal Policies and Regulations

No federal policies or regulations pertaining to population and housing are applicable to the proposed project.

4.14.3.2 State Policies and Regulations

2017 Legislative Housing Package. In 2017, Governor Jerry Brown signed a housing package that consisted of 15 bills aimed at addressing the State's affordable housing crises. While each of these bills takes different approaches to increasing the supply of affordable housing units, several bills aim to facilitate privately funded housing by streamlining local and environmental review processes for certain types of high-priority housing developments.

Senate Bill 35. Senate Bill (SB) 35 requires cities and counties to follow a streamlined local review process for particular housing projects if the city or county has failed to meet established goals for accommodating a fair share of new housing development, as identified in the City's Regional Housing Needs Assessment (RHNA). SB 35 requires cities and counties to streamline the review and approval of certain affordable housing projects by providing a ministerial process to approve such processes, thereby removing the requirement for CEQA review. Under this process, a project applicant may request a streamlined review and a ministerial approval if a project meets specific eligibility criteria. SB 35 also requires local jurisdictions to report more complete information about their progress in meeting housing goals to the California Department of Housing and Community Development.

4.14.3.3 Regional Policies and Regulations

Fresno Council of Governments (Fresno COG). Fresno COG is a voluntary association of local governments, one of California's 38 regional planning agencies, and one of more than 500 nationwide. Regional planning agencies such as Fresno COG recognize that planning issues extend beyond the boundaries of individual cities. Efforts to address regional planning issues such as affordable housing, transportation, and air pollution have resulted in the adoption of regional plans that affect the City of Fresno.

Regional Transportation Plan and Sustainable Communities Strategy. Fresno COG prepares a Regional Transportation Plan (RTP), a long-range planning document that defines how the

region plans to invest in the transportation system over the next 20 years or more. The RTP is based on regional goals, multi-modal transportation needs for people and goods, and estimates of available funding. Fresno COG's first RTP was adopted in 1975. Updated editions are required every four years, with the latest version being the 2022 RTP, which charts regional transportation's long-range vision through 2046.

California's Senate Bill 375 (SB 375) encourages coordinated transportation and land-use planning to reduce greenhouse gas (GHG) emissions and requires each metropolitan planning organization (MPO) to prepare a sustainable communities strategy (SCS) as an integrated element of the regional transportation plan (RTP) that is updated every four years. The SCS 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. Under SB 375, an SCS must:

- Set forth a future land-use pattern that, if implemented, will meet the GHG emission reduction targets when integrated with the proposed transportation network
- Accommodate the Regional Housing Needs Assessment (RHNA) determination
- Use the most recent planning assumptions

The 2022 SCS is Fresno COG's third SCS; the first was adopted in 2014 and the second in 2018. The 2022 SCS builds on lessons learned in the previous SCSs, as well as advancements in approaches and strategies, modeling tools and capabilities, an updated growth regional forecast, and new GHG emission reduction targets.

Growth Forecasts. Fresno COG prepared the *Fresno County 2050 Growth Projections* report in 2017 to assist with updating the Regional Transportation Plan (RTP) as well as the Sustainable Communities Plan (SCP). The report provides growth projections for Fresno County and the spheres of influence of each of its cities between 2015 and 2050. Growth projections provided include both population and employment projections for the Fresno County region.

4.14.3.4 Local Policies and Regulation

City of Fresno General Plan. The General Plan is a set of policies and programs that form a blueprint for the physical development of the city. The following objectives and policies related to population and housing are contained in the City's Housing Element and are applicable to the project:

Housing Element. Housing Elements are the only elements of general plans that require approval and certification by a state agency, the California Department of Housing and Community Development (HCD). Due to the nature of economic cycles related to real estate, housing elements are on a 5-to-8-year cycle, and are often updated independent of the general plan.

Currently, the County of Fresno and 14 cities in Fresno County including the City of Fresno are completing a Multi-Jurisdictional Housing Element for the 6th round of housing element

updates. Fresno COG is helping to coordinate the effort. The Multi-Jurisdictional Housing Element covers the planning period of December 31, 2023, through December 31, 2031. The Fresno City Council adopted Fresno's 6th Cycle Multi-Jurisdictional Housing Element and Fresno Appendix on December 12, 2024 and HCD certified it on January 21, 2025.

2024 Housing Element Policies. The following Fresno Housing Element policies that address transportation are the following:

- **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 1.9:** 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.

In addition, Housing Element Program 31 will determine the unit percentage threshold to allow affordable housing projects to be exempt from Vehicle Miles Traveled fees. The objective of this program is to reduce costs and application processing times associated with VMT analysis for new developments that include affordable housing and support improvements for active transportation infrastructure.

4.14.4 Impacts and Mitigation Measures

The following section presents a discussion of the impacts related to population and housing that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds to determine if an impact is significant. The latter part of this section presents the impacts associated with implementation of the proposed project and the recommended mitigation measures, if required. Mitigation measures are recommended, as appropriate, for significant impacts to eliminate or reduce them to a less-than-significant level. Cumulative impacts are also addressed.

4.14.4.1 Significance Criteria

The thresholds for impacts related to population and housing used in this analysis are consistent with Appendix G of the State CEQA Guidelines. Development of the proposed project would result in a significant impact related to population and housing if it would:

a. 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

b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

4.14.4.2 Project Impacts

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

POP-1 The proposed project would not induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).

The proposed project consists of the adoption of the Fresno VMT Reduction Program which aims to establish mitigation for future projects that exceed the City's VMT thresholds in the form of a mitigation bank. The program would identify, quantify, and prioritize applicable mitigation measures and relevant VMT-reducing projects within the City to be funded by the proposed mitigation bank. The proposed project would not result in any physical improvements or change the distribution or intensity of the land uses within the Planning Area. As such, the proposed project would not result in population growth within the City, either directly or indirectly.

The adoption of the proposed Fresno VMT Reduction Program would support future multi-modal or transportation improvements in accordance with the program. These future VMT-reducing projects identified by the Fresno VMT Reduction Program would be required to conduct project-specific environmental analyses to assess potential impacts to population and housing. However, these future projects would not include residential components that would directly contribute to growth in the City. Future improvements may include the extension and widening of roadways within the Planning Area, but such projects would be required to identify and address potential impacts with appropriate mitigation measures once they are proposed for development.

As such, the proposed project would not result in direct or indirect unplanned population growth, and the impact would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

POP-2 The proposed project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

The proposed project consists of the adoption of the Fresno VMT Reduction Program which aims to establish mitigation for future projects that exceed the City's VMT thresholds in the form of a mitigation bank. The proposed project would not include physical improvements that could displace people or housing, necessitating the construction of replacement housing within the Planning Area.

However, the adoption of the proposed Fresno VMT Reduction Program would support future multi-modal or transportation improvements in accordance with the program. These future VMT-reducing projects identified by the Fresno VMT Reduction Program would be required to conduct project-specific environmental analyses to assess potential impacts to population and housing, as well as provide appropriate mitigation measures if it is determined a project would result in the displacement of people or housing.

Therefore, implementation of the proposed project would not displace substantial numbers of people or existing housing units that would necessitate the construction of replacement housing elsewhere. As a result, a less-than-significant impact would occur.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

4.14.4.3 Cumulative Impacts

The proposed project would have a significant effect on the environment if, in combination with other projects, it would contribute to a significant cumulative impact related to population and housing. The cumulative impact analysis for population and housing considers the larger context of future development of the City of Fresno as envisioned by the General Plan. Cumulative impacts on population and housing would be those impacts that result from incremental changes from increased development.

As described above, the proposed project would establish a mitigation bank to support the development of future VMT-reducing projects in the City. The project itself would not result in physical improvements that would result in unplanned population growth or displace existing people and housing. Additionally, future VMT-reducing projects identified by the proposed Fresno VMT Reduction Program would be required to prepare project-specific analysis to assess potential impacts related to population and housing, and provide appropriate mitigation if applicable.

As such, the proposed project would be consistent with planned growth projections in the City's General Plan and would not contribute to cumulative unplanned growth in the City of Fresno. Therefore, a less-than-significant cumulative impact would occur.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

4.15 PUBLIC SERVICES AND RECREATION

This section addresses potential impacts to public services such as police protection, fire protection, schools, parks/recreation, and other public facilities resulting from implementation of the proposed Fresno VMT Reduction Program.

4.15.1 Existing Environmental Setting

The study area for project impacts regarding public services is the City of Fresno Planning Area because potential development under the proposed project would be limited to areas within the Planning Area.

4.15.1.1 Fire Protection

City of Fresno Fire Department. The City of Fresno Fire Department (FFD) provides fire suppression, fire prevention, hazardous material mitigation, rescue, and emergency medical services to 124 square miles through five divisions. The five divisions that comprise the City's Fire Department are the Operations Division; the Fire Prevention and Support Services Division; the Training Division; the Personnel and Investigations Division; and the Administration Division.[1] In 2007, the Fire Department merged operational services with the Fig Garden Fire Protection District (FGFPD). As of July 2019 the Fire Department no longer provides contractual fire protection for the North Central Fire Protection District (NCFPD). However, there are new automatic aid contracts in place for the NCFPD areas within the Fresno's sphere of influence, and mutual aid contracts for the areas outside Fresno's sphere of influence.

The 2025 FFD staffing consists of 366 sworn firefighting personnel, 25 sworn non-safety personnel, and 26 civilian positions.[2] Daily staffing for the Fire Department and FGFPD service area consists of a minimum of 109 on-duty firefighters. Other services provided by the FFD include hazardous material services, swift water rescue, and heavy rescue apparatus.

The City of Fresno participates in aid agreements with surrounding emergency response agencies within Fresno county to ensure that the nearest responding fire agency responds to an emergency regardless of jurisdiction within which it is located. The combination of these agreements and the City of Fresno Fire Department's own resources ensure that a high quality of fire suppression, fire protection, and emergency medical services are provided to the residents within the Planning Area. Emergency medical response is provided by the Fire Department, but emergency transport (such as ambulance service) is provided by private carriers/companies.

The FFD aims to provide response to the scene of an emergency within four minutes from the time the station receives notification. In 2022, depending on the specific service area, the Fire Department was able to respond to structure fires within four minutes 68 percent of the time, and to calls for medical aid within four minutes 63 percent of the time.[3] Given the Planning Area

1 Fresno Fire Department. 2022. *Annual Report*. Website: https://www.fresno.gov/wp-content/uploads/2023/02/2022-Annual-Report.pdf (accessed June 2025).
2 Ibid
3 Ibid.

population of approximately 557,000 and the 2025 number of sworn fire-fighting personnel, the Fire Department has a staffing level of 0.66 firefighters per 1,000 persons.[4]

Non-emergency services provided by the Fire Department include the review of building permits and subdivision maps to ensure proper location and access to fire suppression equipment, and annual business safety inspections.

In 2007, the NCFPD, whose service area is located to the west of the Planning Area, entered into a service agreement with the Fresno Fire Department for fire service and protection. As of July 2019 the service agreement was no longer in place and the Fire Department no longer provides contractual fire protection for the North Central Fire Protection District. There are new automatic aid contracts in place for the NCFPD areas within the sphere of influence, and mutual aid contracts for the areas outside the sphere of influence. The North Central Fire Protection District serves approximately 50,000 residents over 230 square miles, and includes five fire stations. Three NCFPD fire stations (Station Nos. 21, 22, and 23) were part of the merger between the Fresno Fire Department and the NCFPD.

The Fresno County Fire Protection District service area includes 2,655 square miles and 220,000 citizens, and 15 stations throughout the San Joaquin Valley. Station 87 is located within the southern portion of the Planning Area. Station 89 is located outside of the Planning Area to the south, but provides service to residents and businesses within the unincorporated communities in the southern portion of the Planning Area.

Fire protection is provided to the community of Fig Garden through the Fig Garden Fire Protection District (FGFPD) contract with the Fresno Fire Department. The 30-year contract began in 2006, and as a result, FGFPD Station No. 80 (originally a Fresno County Fire Protection District Station) was changed to Fresno Fire Department Station No. 20. Station No. 20 is staffed with three firefighters and one fire investigator every day. Station No. 20 is located within the Planning Area in the unincorporated area of Fig Garden.

City of Fresno Fire Hazards. The City of Fresno Planning Area and greater region is bound by high and very high fire hazard severity zones, and some areas along the San Joaquin River Bluff area at the northern boundary of the Planning Area are classified as Moderate Fire Hazard Severity Zones within the City's Local Responsibility Area (LRA),[5] However, the City of Fresno Planning Area does not contain high or very high fire hazard zones and is categorized as having a moderate or no fire hazard. This is largely attributable to the non-vegetated/built-out nature of Fresno. Fire activity is more likely to occur in the form of a structure or an urban fire, and a wildland fire is unlikely to affect the area. Some small areas along the San Joaquin River Bluff in the northern portion of Fresno are prone to wildfire due to the relatively steep terrain and vegetation.

[4] 557,000 / 1,000 = 557; 366 / 557 = 0.66

[5] High and Very High Hazard Severity Zones are classification zones established by the California Department of Forestry and Fire Protection (CAL FIRE) Maps. Website: https://osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones (accessed June 2025).

Table 4.15.A: Existing City of Fresno Fire Stations

Station No.	Address (Fresno)	Equipment/Personnel
ARFF (Airport)	5065 E. Anderson	The ARFF Specialty Team provides ARFF response, hazardous materials response, first responder calls, and response to all structure fires within airport boundaries.
1	1264 N. Jackson	Single engine company, a ladder truck, a Battalion Chief, and the HMRT
2	7114 N West	Single engine company, and an ICS/FIRESCOPE type 6 patrol vehicle
3	1406 Fresno	Single engine company, a ladder truck, an ICS/FIRESCOPE type 3 brush engine, a mobile ventilation unit, EMT, and the CERT vehicle.
4	3065 E Iowa	EMT and single engine company
5	3131 N Simpson	EMT and single engine company
6	4343 E Gettysburg	Single engine company
7	2571 S Cherry	Single engine company, an ICS/FIRESCOPE type 6 patrol, and a water tender
8	1428 S Cedar	Single engine company and FFD Communications Team
9	2340 N Vagedes	EMT, single engine company, a ladder truck, and a Battalion Chief.
10	5545 Aircorp Way	Single engine company
11	5544 N Fresno	Single engine company, a truck company, a rescue vehicle, and a Battalion chief.
12	2874 W Acacia	Single engine company
13	815 E Nees	Single engine company and one water tender.
14	6239 N Polk	Ladder truck and an ICS/FIRESCOPE type 3 brush engine rig. Central location for the tracking, repair, and maintenance of the miles of fire hose used by the Fresno Fire Department.
15	5630 E Park Circle	Single engine company, an ICS/FIRESCOPE type 3 brush engine, and an OES engine, used for the "Office of Emergency Services," or as a reserve engine when needed.
16	2510 N Polk	Single engine company
17	10512 N Maple	Single engine company and an ICS/FIRESCOPE type 5 brush vehicle.
18	5938 N La Ventana	Single engine company
19	3187 W Belmont	Station equipped with an engine and one Battalion Chief. Also houses the Water Rescue Team (WRT) which provides swift water rescue, rescue boat operations, and rescue/recovery dive operations. Specialty apparatus assigned to WRT include Dive 19, a utility vehicle that carries various types of SCUBA equipment including surface supplied dive helmets, and Boat 19, a rescue type utility truck towing a trailer carrying two rescue boats.
20	4537 N Wishon (FGFPD)	Single engine company and a 24-hour Arson Investigator

Source: City of Fresno Fire Department Station Locations (2025) (website: https://www.fresno.gov/fire/station-locations/).
FFD = Fresno Fire Department
ARFF = Aircraft Rescue and Fire Fighting
HMRT = Hazardous Materials Response Team
ICS = Incident Command System
FIRESCOPE = Firefighting Resources of Southern California Organized for Potential Emergencies
CERT = Community Emergency Response Team
OES = Office of Emergency Services
WRT = Water Rescue Team
FGFPD = Fig Garden Fire Protection District

4.15.1.2 Police Protection

The Planning Area contains numerous agencies that provide police protection services: the City of Fresno Police Department, the Fresno County Sheriff's Department, the California Highway Patrol, Fresno State Police Department, and Fresno City College Police Department.

City of Fresno Police Department. The City of Fresno Police Department (Police Department) provides a full range of police services, including: uniformed patrol response to calls for service, crime prevention, tactical crime enforcement (such as gang/violent crime suppression), as well as traffic enforcement/accident prevention. Other services and special units include the Explosive Ordinance Disposal Unit (EOD), Internal Affairs, the K9 Unit, horse-mounted Mounted Patrol, Skywatch, Specialized Weapons and Tactics (SWAT), and the Records Bureau. The Department consists of four divisions: The Support Division, the Investigations Division, the Patrol Division, and the Administration Division. The Police Department has a target staffing ratio of 1.5 unrestricted officers per 1,000 residents. Given the 2024 staffing level of 900 sworn officers[6] and the Planning Area population of 545,000, the staffing ratio is currently 1.5 officers per 1,000 residents. However, of the 825 sworn officers, 64 are restricted. As a result, the staffing ration is currently 1.4 unrestricted officers per 1,000 residents, and the Police Department's Standard is currently not being met.

The Police Department Patrol Division is divided into five policing districts. The Southwest Policing District is located south of McKinley Avenue and West of East Avenue and SR 99. The Northwest Policing District is located north of McKinley Avenue to the San Joaquin River to and west of Blackstone Avenue to the western city limits. The Southeast Policing District is located south of Ashlan Avenue (east of Clovis Avenue), south of McKinley Avenue between East Avenue and Clovis Avenue, and east of SR 99 south of Church Avenue to the southern city limits. The Northeast Policing District is located north of McKinley Avenue to the San Joaquin River and east of Blackstone Avenue to Clovis. The Central Policing District encompasses the area south of Ashlan to Belmont and from SR 99 to First Street.

The Police Department operates six police stations within Fresno, listed below:

- Headquarters: 2323 Mariposa Mall, Fresno CA 93721
- Southwest: 1211 Fresno Street, Fresno, CA 93706
- Southeast: 224 South Argyle, Fresno, CA, 93727
- Northeast: 1450 East Teague Avenue, Fresno, CA 93720
- Northwest: 3080 West. Shaw Avenue, Fresno, CA 93711
- Central: 3502 North Blackstone Avenue, Suite 201, Fresno, CA 93726

Fresno County Sheriff's Department. The Fresno County Sheriff's Department (Sheriff's Department) provides law enforcement/crime prevention to the unincorporated portions of the metropolitan area and Fresno County. The Sheriff's Department is divided into four Patrol Areas. The unincorporated communities within the Planning Area are Calwa, Malaga, Mayfair, Sunnyside, Fig Garden, and Tarpey. These areas are served by the Sheriff's Department Patrol Area 2. Patrol Area 2 serves communities within the boundaries of American Avenue to the Madera county line, and Chateau Fresno to McCall Avenue. The Area 2 Sheriff's Department office is located at 5717 E. Shields Avenue, which is located in the southeast portion of the Planning Area.

6 Fresno, City of. 2024. Adopted Fiscal Year 2024 Budget.

Other Law Enforcement Agencies. Other law enforcement agencies that serve the Planning Area include the California Highway Patrol, Fresno State Police Department, and Fresno City College Police Department. The California Highway Patrol (CHP) is responsible for providing uniform traffic law enforcement throughout the State highway system. CHP assists the City of Fresno by providing law enforcement within the city under Special Programs. The CHP offices within the Planning Area are the CHP Central Division office (located at 5179 North Gates Avenue, in the northwestern portion of the Planning Area) and the CHP Area office (located at 1382 West Olive Avenue, also located in the northwest portion of the Planning Area). The CHP Central Division office oversees the Area offices that are located throughout the San Joaquin Valley.

The Fresno State Police Department is responsible for providing safety and security for students, staff, and faculty within the Fresno State University campus, which is located in the northeast portion of the Planning Area. Their jurisdiction extends one mile beyond the University's boundary. Additionally, State Center Community College District (SCCCD) Police Department (SCCCDPD) serves communities across SCCCD campuses, including the Fresno City College campus which is located within the Planning Area. The SCCCDPD provides a full range of police-related services, and immediate response to all medical and fire emergencies on campus.[7]

4.15.1.3 Schools

The Planning Area includes various schools that provide primary, secondary, and post-secondary education.

Primary and Secondary Schools (Kindergarten through Twelfth Grades). The Planning Area, which includes areas with the city limits, the areas within the SOI, and an area north of the city's most northeasterly portion, is served by a number of school districts. These school districts are described below.

Fresno Unified School District (FUSD) contains seven sub-districts and 99 schools. With an enrollment of over 68,000 students, FUSD is the fourth largest school district in California. FUSD completed a District Master Plan in 2009 aimed at addressing overcrowding in the District's schools and proposes a new high school in the southern portion of the city of Fresno.

Clovis Unified School District (CUSD) is the city's second largest school District. Of CUSD's 50 schools/campuses, 35 are elementary schools, 6 are intermediate schools, and 6 are high schools. CUSD also has one adult school and six alternative education campuses. Approximately 44 percent of the students in CUSD are residents of the city of Fresno, and approximately 20 percent of the city of Fresno is located within CUSD's boundaries.[8] CUSD currently serves nearly 43,000 students, and has a maximum capacity of 49,915 students.[9] The District has a staff of approximately 6,400. CUSD

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7 State Center Community College District. 2024. *Annual Security & Fire Report*. Website: https://www.scccd.edu/_uploaded-files/documents/departments/police/2024-annual-security-and-fire-safety-report.pdf (accessed June 2025).

8 Clovis Unified School District. 2025. Demographics. Website: https://www.cusd.com/demographics (accessed May 2025).

9 Ibid.

predominantly serves Fresno's northeast and north-central areas, and the city of Clovis, which is not included in the Planning Area.

Central Unified School District (Central USD) serves the northwestern and west area (i.e., west of SR 99) as well as a large rural area west of the city. Central USD currently serves 15,730 students at 24 schools, and has experienced significant growth necessitating the expansion of facilities over the past decade.[10]

Sanger Unified School District (Sanger USD) serves the Sunnyside area of the city of Fresno, in addition to the city of Sanger and the surrounding unincorporated communities. Sanger West High School, which services students currently living in the Sunnyside/southeast portion of Fresno, is located in southeast Fresno. Sanger USD covers 180 square miles serves 13,634 students across 22 schools.[11]

Washington Unified School District serves a small portion of the southwest area of the city of Fresno through two schools (one elementary school and one combined elementary/intermediate school) located within the boundaries of the City of Fresno.[12]

Post-Secondary Schools. Post-secondary schools are institutions that provide education after twelfth grade, or higher education. The academic institutions that provide higher education within the Planning area are California State University, Fresno (Fresno State University), Fresno Pacific University, Fresno City College, Clovis Community College, and a wide variety of vocational and technical schools that prepare students for the workplace.

Fresno State University, which is one of 23 campuses within the California State University system, had a spring 2025 total enrollment of 22,759 undergraduate and graduate students.[13] The 388-acre main-campus and 1,011-acre University Farm are located within the northeast portion of the city.

Fresno Pacific University is a private college with 30 undergraduate and graduate degree programs and nearly 4,000 students. The 44-acre campus is located in central southeast Fresno.

The State Center Community College District is comprised of four educational centers and serves 57,341 students from the communities of Fresno, Reedley, Oakhurst, Madera, and Clovis. Fresno City College, which provides general education programs for nearly 36,800 students intending to transfer to an undergraduate university or a vocational program. Clovis Community College, one of the State Center Community College District campuses, is located within the Planning Area and offers

[10] Central Unified School District. 2023. 2023/24 District at a Glance. Available online at: https://www.centralunified.org/apps/pages/index.jsp?uREC_ID=739772&type=d&pREC_ID=2520980 (accessed May 2025).

[11] Sanger Unified School District. 2025. About Our District. Website https://www.sanger.k12.ca.us/about/ (accessed May 2025).

[12] Washington Unified School District. 2025. Maps and Boundaries. Website: www.washingtonunified.org/district/maps (accessed May 2025).

[13] Fresno State University. 2024. Headcount Enrollment from Spring 2021 to Spring 2025. Website: tableau.fresnostate.edu/views/Enrollment/Headcount?:isGuestRedirectFromVizportal=y&:embed=y (accessed June 2025).

programs in general education to students who intend to transfer to a four-year institution or obtain a Certificate or Associate Degree.

4.15.1.4 Parks and Recreation

As identified in the City's Parks Master Plan,[14] the City of Fresno owns and operates a park system that includes more than 100 public parks, trails, regional parks, neighborhood parks, educational facilities, community pools, splash parks, and dual-use ponding basins. Many of the public parks include additional amenities. School facilities supplement the City's park system by adding acreage and facilities that are available for recreational use through Joint-Use agreements.

Overall, there are more than 9,000 acres of planned open space in the Planning Area, as shown in Table 4.15.B. Table 4.15.B shows the acreage of all types of open space in the city. Further, as depicted in the table below, ponding basins, which are owned and operated by the Fresno Metropolitan Flood Control District (FMFCD) comprise a substantial portion of the open space in the city. Ponding basins account for 1,893 acres within the city and aid in either storm water drainage or year-round groundwater recharge basin.

Table 4.15.B: Planning Area Planned Open Space

Facility	Acreage
Multi-Use	4,067
Recreational	8
Ponding Basins	1,893
Airport Approach/Clear Zone	368
Golf Courses	982
Parks	1,688
Canals/Open Space	42
Lake/Water Feature	86
Total:	9,134

Source: City of Fresno (2019)

4.15.1.5 Other Public Facilities

Courts. The Planning Area contains two State and one federal court. The two State courts are a trial court (the Fresno County Superior Court) and the Appellate Court. The federal court is the U.S. District Court for the Eastern District of California, Eastern Division.

State Courts

Fresno County Superior Court. Within the Planning Area, there are three Superior Court locations: the Fresno Superior Courthouse Downtown, the B.F. Sisk Courthouse, and the "M" Street Courthouse. One additional Superior Court location lies outside of the Planning Area to the south.

[14] City of Fresno. 2017. *Fresno Parks Master Plan*. December 14.

The Fresno Superior Courthouse Downtown is located at 1100 Van Ness Avenue. The Fresno Superior Courthouse Downtown hears criminal (felony, infraction, and misdemeanor), domestic violence, drug, juvenile dependency, and traffic cases.

The B. F. Sisk Courthouse is located at 1130 O Street. The B.F. Sisk Courthouse hears non-criminal cases, such as civil cases, conservatorship, restraining order, probate, small claims, and unlawful detainer cases. The B.F. Sisk Courthouse provides family court/family law services.

The "M" Street Courthouse is located at 2317 Tuolumne Street. The "M" Street Courthouse hears Criminal and Traffic infractions.

In addition to the three courthouses identified above, there is a Juvenile Delinquency Court immediately south of the Planning Area, located at 333 East American Avenue. All cases at this facility are matters involving juveniles, and include misdemeanor and felony criminal, drug, traffic, and school attendance cases.

5th District Court of Appeals. The State of California 5th District Court of Appeals is located in the city of Fresno at 2424 Ventura Street. The Fifth Appellate District represents nine central California counties, Kern, Kings, Madera, Mariposa, Merced, Stanislaus, Tulare, and Tuolumne. With the exception of death penalty cases, the Courts of Appeal have appellate jurisdiction when trial courts have original jurisdiction and in other cases prescribed by statute. Appeals filed in the trial court are reviewed and hear by the appellate district where the trial court is located.

Federal Court System. The U.S. District Court has a courthouse in the city of Fresno, located at 2500 Tulare Street. This federal district court is the Fresno Division within the Eastern District of California. This court hears civil, criminal, and miscellaneous actions arising in the counties of Calaveras, Fresno, Inyo, Kern, Kings, Madera, Mariposa, Merced, Stanislaus, Tulare, and Tuolumne. The Fresno Divisional Office is currently staffed with three district court judges, and four magistrate judges.[15]

Libraries. Libraries in the Planning Area are provided by the Fresno County Public Library System. This library system consists of 38 libraries and one Community Bookmobile throughout Fresno County.[16] Libraries within the Planning Area are shown in Table 4.15.C.

Table 4.15.C: Libraries in the Planning Area

Library Name	Address
Woodward Park Regional Library	944 East Perrin Avenue, Fresno, CA 93720
Pinedale Branch Library	7170 North San Pablo Avenue, Fresno, CA 92650
Fig Garden Regional Library	3071 West Bullard Avenue, Fresno, CA 93711
Politi Branch Library	5771 North First Street, Fresno, CA 92710

[15] U.S. District Court. 2019. Eastern District of California. All Judges. Website: www.caed.uscourts.gov/caednew/index.cfm/judges (accessed June 2025).

[16] Fresno County Public Library. 2025. All Branches at a Glance. Website: www.fresnolibrary.org/branch/all.html (accessed June 2025).

Table 4.15.C: Libraries in the Planning Area

Library Name	Address
Teague Branch Library	4718 North Polk Ave, Fresno, CA 93722
Gillis Branch Library	629 West Dakota Avenue, Fresno, CA 93705
Betty Rodriguez Library	3040 North Cedar Ave, Fresno, CA 93703
Talking Book Library for the Blind	770 North San Pablo Avenue, Fresno, CA 93728
Fresno County Central Library	2420 Mariposa Street, Fresno, CA 93721
Sunnyside Regional Library	5566 East Kings Canyon Road, Fresno, CA 93727
Mosqueda Branch Library	4670 East Butler Avenue, Fresno, CA 93720
West Fresno Branch Library	188 East Cesar Chavez Boulevard, Fresno, CA 93706

Source: Fresno County Public Library, 2025. Website: www.fresnolibrary.org/branch/all.html

Hospitals. There are nine hospitals that are located within the city of Fresno Planning Area. These hospitals provide a variety of services. There are three hospitals that provide emergency services and one hospital that provides Level 1 trauma service. The location, services offered, and capacity of each of the hospitals are provided in Table 4.15.D.

As shown below, the hospital with the greatest capacity and widest range of services is the Community Regional Medical Center, located in Downtown Fresno. The total number of hospital beds available within the Planning Area is approximately 1,647.

Table 4.15.D: Hospitals in the City of Fresno Planning Area

Hospital Name	Location	Services Offered	Capacity
Fresno Surgical Hospital	6125 North Fresno Street Fresno CA 93710	General Acute Care Hospital	27 Beds
Fresno Heart and Surgical Hospital	15 East Audubon Drive Fresno, CA 93720	General Acute Care Hospital, Cardiac, Vascular, and Bariatric Surgical Services	57 Beds
St. Agnes Medical Center	1303 East Herndon Avenue Fresno, CA 93720	General Acute Care Hospital, Emergency Services	436 Beds
Kaiser Foundation Hospital – Fresno	7300 North Fresno Street Fresno, CA 93720	General Acute Care Hospital, Emergency Services	169 Beds
Community Regional Medical Center	2823 Fresno Street Fresno, CA 93721	General Acute Care Hospital, Emergency Services, Neuroscience Institute, Level 3 Neonatal ICU, Level 1 Trauma and Comprehensive Burns Center	685 Beds
Community Behavioral Health Center	7171 North Cedar Avenue Fresno, CA 93720	Inpatient and outpatient acute psychiatric care	73 Beds
Community Subacute and Transitional Care Center	3003 N. Mariposa Street Fresno, CA	Chronic Subacute Conditions	106 Beds
San Joaquin Valley Rehabilitation Hospital	7173 North Sharon Avenue Fresno, CA 93720	General Acute Care Hospital, Outpatient and Inpatient Rehabilitation Services	62 Beds
Central Star Psychiatric Health Facility	4411 E. Kings Canyon Road Fresno, CA 93702	Psychiatric Health Facility	16 Beds
Exodus Psychiatric Health Facility Fresno	4411 E. Kings Canyon Road Fresno, CA 93702	Psychiatric Health Facility	16 Beds

Source: California Department of Health Care Access and Information, 2025. Website: https://hcai.ca.gov/facility-finder/

4.15.2 Regulatory Setting

4.15.2.1 Fire Protection

City of Fresno General Plan. The following objectives and policies from the current General Plan are relevant to the provision of fire protection services within the Planning Area.

> ***PU-2-e: Service Standards.*** Strive to achieve a community wide risk management plan that includes the following service level objectives 90 percent of the time:
>
> First Unit on Scene – First fire unit arriving with minimum of three firefighters within 5 minutes and 20 seconds from the time the unit was alerted to the emergency incident.
>
> Effective Response Force – Provide sufficient number of firefighters on the scene of an emergency within 9 minutes and 20 seconds from the time of unit alert to arrival. The effective response force is measured as 15 firefighters for low risk fire incidents and 21 firefighters for high risk fire incidents and is the number of personnel necessary to complete specific tasks required to contain and control fire minimizing loss of life and property.
>
> > **Policy PU-3-d: Review Development Applications.** Continue Fire Department review of development applications, provide comments and recommend conditions of approval that will ensure adequate on-site and off-site fire protection systems and features are provided.
> >
> > **Policy PU-3-e: Building Codes.** Adopt and enforce amendments to construction and fire codes, as determined appropriate, to systematically reduce the level of risk to life and property from fire, commensurate with the City's fire suppression capabilities.
> >
> > **Policy PU-3-f: Adequate Infrastructure.** Continue to pursue the provision of adequate water supplies, hydrants, and appropriate property access to allow for adequate fire suppression throughout the City.
> >
> > **Policy PU-3-g: Cost Recovery.** Continue to evaluate appropriate codes, policies, and methods to generate fees or other sources of revenue to offset the ongoing personnel and maintenance costs of providing fire prevention and response services.

City of Fresno Municipal Code

> ***Section 12-4.901.*** In order to implement the goals, objectives and policies of the City's General Plan, and to mitigate the impacts caused by future development in the city, certain fire department facilities must be constructed. The City Council has determined that a Fire Facilities Fee is needed in order to pay for (a) land acquisition for, and design, engineering, and construction of the public facilities designated in the Council resolution and reasonable costs of outside consultant studies related thereto; (b) to reimburse the City for designated public facilities construction by the City with funds (other than gifts or grants) from other sources together with accrued interest; (c) to reimburse developers who have designed and constructed designated public facilities which are oversized and supplemental size, length, or capacity; and/or (d) to pay for and/or reimburse costs of program development and ongoing administration of the Fire

Facilities Fee program. Table 4.15.E below describes the Fire Facilities Fee by type of development as established in the City's Master Fee Schedule.

Table 4.15.E: Fire Facilities Fee Program

Type	Fee
Single-Family Residential/per unit	$2,326.13
Multi-Family Residential(>7.5 units/acre)/per unit	$1,774.37
Industrial (fee per 1,000 Sq. Ft. of building)	$350.19
Retail (per 1000 sf of building)	$612.84
Office (per 1000 sf of building)	$700.38

Source: City of Fresno Master Fee Schedule, Effective July 2023.

4.15.2.2 Police Protection

City of Fresno General Plan. The following objectives and policies from the approved General Plan are relevant to the provision of police services within the Planning Area.

PU-1-c: Safety Considerations in Development Approval. Continue to identify and apply appropriate safety, design and operational measures as conditions of development approval, including, but not limited to, street access control measures, lighting and visibility of access points and common areas, functional and secure on-site recreational and open space improvements within residential developments, and use of State licensed, uniformed security.

PU-1-d: New Police Station Locations. Consideration will be given to co-locating new police station facilities with other public property including, but not limited to, schools, parks, playgrounds, and community centers to create a synergy of participation in the neighborhood with the potential result of less vandalism and promotion of a better sense of security for the citizens using these facilities.

City of Fresno Municipal Code

Section 12-4.801 of the Municipal Code. In order to implement the goals, objectives and policies of the City's General Plan, and to mitigate the impacts caused by future development in the city, certain police facilities must be constructed. The City Council has determined that a Police Facilities Fee is needed in order to pay for (a) land acquisition for, and design, engineering, and construction of the public facilities designated in the Council resolution and reasonable costs of outside consultant studies related thereto; (b) to reimburse the city for designated public facilities construction by the city with funds (other than gifts or grants) from other sources together with accrued interest; (c) to reimburse developers who have designed and constructed designated public facilities which are oversized and supplemental size, length, or capacity; and/or (d) to pay for and/or reimburse costs of program development and ongoing administration of the Police Facilities Fee program. Table 4.15.F below describes the Police Facilities Fee by type of development as established in the City's Master Fee Schedule.

Table 4.15.F: Police Facilities Fee Program

Type	Fee
Single-Family Residential/per unit	$965.06
Multi-Family Residential(>7.5 units/acre)/per unit	$736.01
Industrial (per 1,000 sf of building)	$429.60
Retail (per 1000 sf of building)	$901.95
Office (per 1000 sf of building)	$859.19

Source: City of Fresno Master Fee Schedule, Effective July 2023

4.15.2.3 Schools

Senate Bill 50. Senate Bill (SB) 50 limits the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development and provides instead for a standardized developer fee. SB 50 generally provides for a 50/50 State and local school facilities funding match. SB 50 also provides for three levels of statutory impact fees. The application level depends on whether State funding is available, whether the school district is eligible for State funding, and whether the school district meets certain additional criteria involving bonding capacity, year-round school, and the percentage of moveable classrooms in use.

City of Fresno General Plan. The following objectives and policies from the General Plan are relevant to the provision of schools within the Planning Area.

> ***POSS-8-b: Appropriate School Locations.*** Support school locations that facilitate safe and convenient access by pedestrian and bicycle routes, are compatible with surrounding land uses, and contribute to a positive neighborhood identity and Complete Neighborhoods. Commit to the following:
>
> - Work with representatives of public and private schools during the preparation and amendment of plans and the processing of development proposals to ensure that General Plan policies are implemented.
> - Require school districts to provide necessary street improvements, pedestrian facilities, public facilities, and public services at each new school site as authorized by law.
> - Continue to designate known school sites on the Land Use Diagram (Figure LU-1), and in community plans, Specific Plans, and other plans compatible with the locational criteria of each school district, and to facilitate safe and convenient walking and biking to schools in neighborhoods.
> - Meet regularly with school district staff and trustees to provide ongoing communication and coordination of plans, projects, and priorities.
> - Collaborate with school districts to plan and implement new school sites in a manner that supports and reinforces objectives to develop walkable Complete Neighborhoods.

POSS-8-c: Park and School Site Coordination. Pursue the cooperative development and use of school sites with adjacent neighborhood parks for both school activities and non-school related recreational activities.

Fresno County General Plan. The following policies from the Fresno County General Plan are relevant to the provision of schools within the Planning Area.

Policy PF-I.2: The County shall encourage school facility siting that establishes schools as focal points within the neighborhoods and community in areas with safe pedestrian and bicycle access.

Policy PF-I.4: The County shall work cooperatively with school districts in monitoring housing, population, and school enrollment trends and in planning for future school facility needs and shall assist school districts in locating appropriate sites for new schools.

Policy PF-I.8: The County and school districts should work closely to secure adequate funding for new school facilities. The County shall support the school districts' efforts to obtain appropriate funding methods such as school impact fees.

4.15.2.4 Parks

City of Fresno General Plan. The following objectives and policies from the approved General Plan are relevant to the provision of parks within the Planning Area.

POSS-1-a: Parkland Standard. Implement a standard of at least three acres of public parkland per 1,000 residents for Pocket, Neighborhood, and Community parks throughout the city, while striving for five acres per 1,000 residents for all parks throughout the city, subject to identifying additional funding for Regional Parks, Open Space/Natural Areas, and Special Use Parks/Facilities.

POSS-2-b: Park and Recreation Priorities. Use the following priorities and guidelines in acquiring and developing parks and recreation facilities:

- Acquire and develop neighborhood park space in existing developed neighborhoods that are deficient of such space and in areas along BRT corridors that are designated as priorities for encouraging new mixed-use transit-oriented development;
- Provide accessible recreation facilities in established neighborhoods with emphasis on those neighborhoods currently underserved by recreation facilities;
- Improve established neighborhood parks with emphasis on those neighborhoods with the greatest need;
- Acquire and develop neighborhood and community parks in new Development Areas;

- Recognize community parks as a special need in areas that lack these facilities or are planned for transit supportive urban densities, and explore all potential sources of revenue to secure and develop appropriate sites including joint use facilities;

- Develop new special purpose parks, such as outdoor gym equipment, natural resource based trail parks, equestrian centers, dog parks, and amphitheaters, as well as alternative recreation facilities, such as community recreation centers, passive wildlife observation park, cultural heritage and diversity park, military veterans memorial park, and universal access open space park; and

- Acquire and develop park and open space in established neighborhoods and Development Areas, prioritizing existing neighborhoods with the greatest deficiencies, so that all residents have access to park or open space within one-half mile of their residence. Develop these facilities to be fully accessible to individuals with disabilities as required by law.

POSS-2-c: Review of Development Applications. Coordinate review of all development applications (i.e., site plans, conditional use permits, and subdivision maps) in order to implement the parks and open space standards of this Plan.

- Assure the provision of adequate active and passive open spaces and facilities as appropriate within residential subdivisions through Development Code requirements for mandatory dedication and improvement of land and/or development fees.

- Require the provision of appropriate outdoor living areas or private open space in multi-family residential developments not subject to the Subdivision Map Act.

- Request open space easements where feasible and warranted to secure appropriate public use of sensitive areas with scenic or recreation values, and for buffering space for sensitive areas.

- Require provision of appropriate open space areas in private projects, in the form of trails, enhanced landscaped setbacks, parks, and water features.

- Evaluate the merits of establishing a development bonus entitlement program in which development incentives (i.e., bonus densities, bonus floor area square footage) are provided for contributions to public recreational facilities on-site or in the vicinity of the development project.

POSS-2-d: Creation Opportunities near Freeway Corridors. Negotiate with Caltrans, other public agencies, and private property owners to develop remnant parcels along freeway corridors for appropriate recreational uses.

POSS-3-a: Centralized Park Locations. Site parks central and accessible to the population served, while preserving the integrity of the surrounding neighborhood.

POSS-3-b: Park Location and Walking Distance. Park Location and Walking Distance. Site Pocket and Neighborhood Parks within a half-mile walking distance of new residential development.

POSS-3-c: Link Parks with Walkways. Link public open space to adjacent, schools, and residential uses and Activity Centers through a series of landscaped linear walkways and bikeways that enhance and encourage pedestrian use.

POSS-3-e: Minimum Park Size for Active Recreation. Minimize City acquisition or acceptance of dedication of park sites less than two acres in size for active recreational uses, except where maintenance costs are secured through a CFD, HOA, or other such mechanism.

POSS-3-g: Park Security and Design. Park Security and Design. Promote safety, attractiveness, and compatibility between parks and adjacent residential areas through design, maintenance, and enforcement of park regulations

- Require the installation of security lighting for parking, points of access, and building areas at all public recreation and park sites.

- Keep neighborhood eyes on parks to increase security.

POSS-3-h: Coordination with School Districts. Continue to coordinate with school districts to explore opportunities for joint use of both outdoor and indoor recreation facilities, such as playgrounds, play fields, and gymnasiums, for City recreation programs.

City of Fresno Municipal Code

- Section 12-4.701 of the Municipal Code: In order to implement the Goals, objectives and policies of the City's General Plan, and to mitigate the impacts caused by future development in the city, certain park facilities must be constructed. The City Council has determined that a Park Facilities Fee is needed in order to pay for (a) land acquisition for, and design, engineering, and construction of the public facilities designated in the Council resolution and reasonable costs of outside consultant studies related thereto; (b) to reimburse the city for designated public facilities construction by the city with funds (other than gifts or grants) from other sources together with accrued interest; (c) to reimburse developers who have designed and constructed designated public facilities which are oversized and supplemental size, length, or capacity; and/or (d) to pay for and/or reimburse costs of program development and ongoing administration of the Park Facilities Fee program. Table 4.15.G below describes the Park Facilities Fees under different fee programs by type of development, as established in the City's Master Fee Schedule.

Table 4.15.G: Park Facilities Fee Program

Type	Park Facility Impact Fee	Quimby Parkland Dedication Fee
Single-Family Residential/per unit	$3,630.19	$1,569.76
Multi-Family Residential/per unit	$2,736.38	$1,184.95

Source: City of Fresno Master Fee Schedule Effective July 2023.

4.15.2.5 Other Public Facilities

County of Fresno General Plan. The following policy policies from the County General Plan are relevant to the provision of library facilities within the Planning Area.

> **Policy PF-I.9:** The County shall promote provision of library services throughout the county and create new facilities as appropriate or expand existing facilities to meet additional demand from new growth.

4.15.3 Impacts and Mitigation Measures

The following section presents a discussion of the impacts related to public services and recreation that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds to determine if an impact is significant. The latter part of this section presents the impacts associated with implementation of the proposed project and the recommended mitigation measures, if required. Mitigation measures are recommended, as appropriate, for significant impacts to eliminate or reduce them to a less-than-significant level. Cumulative impacts are also addressed.

4.15.3.1 Significance Criteria

The thresholds for impacts to public services and recreation facilities used in this analysis are consistent with Appendix G of the *State CEQA Guidelines*. The proposed project may be deemed to have a significant impact related to public services and recreation if it would:

a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection services, police protection services, schools, parks and other public facilities.

b. 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;

c. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

4.15.3.2 Project Impacts

PSR-1 The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities.

A project would result in a potentially significant impact if it would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or

other performance objectives for fire protection services, police protection services, schools, parks and other public facilities.

The proposed project consists of the adoption of a VMT Reduction Program which aims to establish mitigation for future projects that exceed the City's VMT thresholds in the form of a mitigation bank. The program would identify, quantify, and prioritize applicable mitigation measures and relevant VMT-reducing projects within the City to be funded by the proposed mitigation bank. The proposed project would not result in any physical improvements or change the distribution or intensity of the land uses within the Planning Area. As such, the proposed project would not result in increased demand for public services in the City, including fire protection services, police protection services, schools, parks and other public facilities.

The adoption of the proposed VMT Reduction Program would support future multi-modal or transportation improvements in accordance with the program. These future VMT-reducing projects identified by the VMT Reduction Program would be required to conduct project-specific environmental analyses to assess potential impacts to public services in Fresno. However, future VMT-reducing improvements would not include residential components that would result in increased demand for public services in Fresno.

Therefore, the proposed project would not result in substantial adverse physical impacts associated with the construction of new or physically altered fire protection facilities, and the impact would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

PSR-2 The proposed project would not 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.

Refer to impact discussion PSR-2, above. The proposed project consists of the adoption of a VMT Reduction Program which aims to establish mitigation for future projects that exceed the City's VMT thresholds in the form of a mitigation bank. The proposed project would not result in physical improvements or changes in the distribution or intensity of the land uses within the Planning Area. Therefore, the proposed project would not result in increased demand for park facilities in the City that could lead to the physical deterioration of existing recreational facilities. Therefore, implementation of the proposed project would not result in additional use of existing neighborhood and regional parks or other recreational facilities or lead to the accelerated deterioration of such facilities. Therefore, the impact would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

PSR-3 The proposed project would not include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

Refer to impact discussions PSR-1 and PSR-2, above. The proposed project would not result in physical improvements that would increase demand for recreational facilities, such as neighborhood and regional parks, in the City, such that construction of new facilities or expansion of existing facilities, would be needed to meet demand. Therefore, the proposed project would not result in substantial adverse physical impacts associated with the construction of new or physically altered recreational facilities, and the impact would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

4.15.3.3 Cumulative Impacts

The proposed project would have a significant effect on the environment if it—in combination with other projects—would contribute to a significant cumulative impact related to public services and recreation.

Fire Protection. The cumulative setting for fire protection includes the City of Fresno and the Fresno Fire Department's service area.

Buildout under the City's General Plan would require additional fire-related services and equipment to adequately serve the anticipated population and employment growth. As discussed above, proposed project consists of the adoption of a VMT Reduction Program which aims to establish mitigation for future projects that exceed the City's VMT thresholds in the form of a mitigation bank. The proposed project would not result in physical improvements or changes in the distribution or intensity of the land uses within the Planning Area, and would not increase demand for fire protection services or contribute to cumulative impacts related to fire protection.

Police Protection. The cumulative setting for police protection includes the City of Fresno and the Fresno Police Department's service area.

As discussed above, the proposed project would not result in physical improvements or changes in the distribution or intensity of the land uses within the Planning Area, and would not increase demand for police protection services beyond what is projected in the General Plan, or contribute to cumulative impacts related to police protection.

Parks and Recreation. The cumulative setting for parks and recreation is the City of Fresno and Fresno County.

The proposed project consists of the adoption of a VMT Reduction Program which aims to establish mitigation for future projects that exceed the City's VMT thresholds in the form of a mitigation bank, and it would not result in physical improvements or changes in the distribution or intensity of the land uses within the Planning Area that would increase demand for park and recreational facilities

and result in the construction of, or alteration of existing facilities beyond what is planned in the City General Plan. Furthermore, future VMT-reducing projects identified in the proposed Fresno VMT Reduction program would not include residential components that would result in additional use and accelerated deterioration of existing recreational facilities. Therefore, the proposed project would not result in cumulatively considerable construction impacts related to parks and recreation in the City and Fresno County.

Other Public Facilities. The cumulative setting for other public facilities, such as hospitals and libraries, includes the Fresno Planning Area established by the City's General Plan.

The proposed project would be consistent with planned growth under the Fresno General Plan and would not increase demand for, and construction of additional or altered public facilities beyond what is planned in the City's General Plan.

Therefore, the proposed project would not result in an incremental cumulative demand for public facilities in Fresno.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

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4.16 TRANSPORTATION

This section describes the environmental setting, including regulatory framework and existing conditions, and potentially significant environmental impacts of the proposed project on transportation.

4.16.1 Existing Environmental Setting

4.16.1.1 Roadway Network

The roadway network in Fresno is generally a traditional grid-based network of north/south and east/west streets, except for the Downtown area, where the grid-based network is northeast/southwest. Buildout of the street and roadway system within Fresno is not completed, and there is potential for expanding vehicle capacity on some roadways, which would increase opportunities for economic development, encourage a diversity of development types, and promote multi-modal mobility options.

The functionality of a street is related to traffic mobility and land access. Access to a roadway is correlated to the potential for conflicting vehicles and therefore the speed and capacity of the roadway. As such, higher-level facilities, such as freeways and expressways, have lower access and therefore fewer conflicting vehicles, which allows for higher speeds and capacities. Conversely, lower-level facilities, such as local streets, collectors, and minor arterials, have greater access and therefore greater potential for conflicting vehicles, which enforces lower speeds and capacities.

The following is a description of the functional classification groups of roadways according to the type of service they are intended to provide.

State Facilities. A State facility is a highway, or State Route (SR), upon which the rights of access are controlled and that provides separated grades at intersecting streets. The minimum right-of-way width and number of lanes are determined by the California Department of Transportation (Caltrans).

- **SR-99** is a northwest to southeast freeway that links Sacramento to Bakersfield, and the Central Valley to the Los Angeles area. SR-99 extends through Fresno from the southeastern city limits to the northwestern city limits. The freeway includes three lanes in each direction. Through Fresno, the southbound direction toward Downtown is generally the peak morning commute direction and northbound is the peak evening commute direction.

- **SR-41** is a north-south freeway in Fresno, connecting Kings County to the south and Madera County to the north, that extends from the southern city limits to the northern city limits. SR-41 is the main freeway that connects north Fresno with Downtown Fresno. The freeway includes three lanes in each direction. Through Fresno, the southbound direction toward Downtown is generally the peak morning commute direction and northbound is the peak evening commute direction.

- **SR-168** is a north-south freeway that connects northeastern Fresno and Clovis with Downtown Fresno. SR-168 connects Downtown Fresno to its terminus at the SR-180 interchange. The

freeway includes three lanes in each direction. Through Fresno, the southbound direction is the peak morning commute direction and northbound is the peak evening commute direction.

- **SR-180** is an east-west freeway that connects southeast and southwest Fresno with Downtown Fresno. The freeway includes three lanes in each direction. The direction toward Downtown from both the eastern and western outer fringes of the City is the peak morning commute direction and the opposite direction is the peak evening commute direction.

Expressways. Expressways are generally four- or six-lane divided roadways primarily serving through and crosstown vehicle traffic, with major street intersections located at approximately 0.5 mile intervals and no driveways for direct motor vehicle access to abutting property. The posted speed limit along Expressways is generally 50 miles per hour (mph). Expressways typically experience high capacities and low accessibility. According to the Fresno General Plan Mobility and Transportation Element and Circulation Element, Expressways provided within Fresno are Friant Road and Herndon Avenue.

Super Arterials. Super Arterials are generally four- or six-lane divided roadways with a primary purpose of moving multiple modes of travel traffic to and from major traffic generators and among subregions. Super Arterials provide a select number of motor vehicle access points to adjacent properties or local streets between the major street intersections. The posted speed limit along Super Arterials is typically 50 mph. According to the Fresno General Plan Mobility and Transportation Element, Super Arterials include Herndon Avenue, Friant Road, Veterans Boulevard, Willow Avenue, Grantland Avenue, Copper Avenue, and Jensen Avenue.

Arterials. Arterials are generally two-, four-, or six-lane divided roadways, with the primary purpose of moving traffic within and between neighborhoods and to and from freeways and expressways. The typical posted speed limit along an Arterial is generally 40 mph.

Collectors. Collectors are generally two- or four-lane undivided roadways, with the primary function of connecting local streets and arterials and neighborhood traffic generators and providing access to abutting properties. Collectors typically have a center two-way left-turn lane. The posted speed limit of a Collector is commonly 40 mph.

4.16.1.2 Public Transportation

The City's Department of Transportation operates the Fresno Area Express (FAX), its primary transportation service provider. FAX's role is to provide dependable public transit that runs smoothly and efficiently to serve the people of Fresno. FAX operates 18 fixed-routes, including the Bus Rapid Transit (known as the "Q") and the FAX 15 routes, as well as paratransit services (Handy Ride), extended late-night services, and service to major regional destinations, including colleges, universities, shopping malls, medical facilities, and major employment centers. The FAX fixed-route system integrates with the City of Clovis' fixed-route system and other incorporated cities within the County through the Fresno County Rural Transit Agency (FRCTA) to serve the region. The FAX fixed-route system is comprised of routes that typically follow many of Fresno's major roadways, which are generally spaced with a one-half mile separation. Most of the FAX routes operate at 30-minute frequencies, with exception of the following:

- The Q providing 10-minute frequencies during peak periods and 15-minute frequencies during off-peak periods.
- Three routes providing 15-minute frequencies (the FAX 15 Routes 9, 34, and 38).
- One route providing 20-minute frequencies all day (Route 28).

Additionally, the FAX bus system provides connections to the Amtrak passenger rail station and the Greyhound bus station, both of which are located in Downtown. The FAX bus system will establish future connections to the approved High-Speed Rail Fresno station also located in Downtown. Public transportation serving Fresno is shown in Figure 2.7 of the TIA.

Demand-Response Service. Serviced through FAX, the demand-response service (Handy Ride) provides transportation for persons with disabilities. It is responsible for meeting the needs of eligible persons with disabilities who cannot functionally use the FAX fixed-route bus system. The service area boundaries are generally Copper Avenue to the north, east to Willow Avenue, south to Ashlan Avenue, east to Temperance Avenue, south to Central Avenue, west to Polk Avenue, north to the Fresno County line, and east to Copper Avenue.

Bus Rapid Transit. A first-phase Bus Rapid Transit (BRT) system began operating in 2018 to run along the Ventura Street/Kings Canyon Road (now known as Cesar Chavez Boulevard) and the Blackstone Avenue corridors, meeting in Downtown Fresno at Courthouse Park. The General Plan supports the proposed BRT system through its designation of complementary land uses and higher densities along key portions of its routes, such as higher-density development and mixed land uses that may gravitate toward use of BRT.

High-Speed Rail. The California High-Speed Rail (HSR) System will be a statewide system that will serve as a regional transportation system for Fresno and the surrounding communities. The HSR system would extend through the San Joaquin Valley, linking San Francisco with Los Angeles. Construction began in March 2018 in Madera County just north of Fresno, with a station to be located in Fresno's Downtown, along H Street at Mariposa Street. The HSR tracks through Fresno-Clovis Metropolitan Area would run generally parallel to the Union Pacific Railroad tracks.

Once implemented, the HSR system will increase the accessibility of Fresno to the major population and economic hubs of California. It will also provide an opportunity for redevelopment and infill development of the area around the HSR station that takes advantage of the proximity of the HSR station.

The City has proposed to accommodate the access and space requirements and the potential effects upon surrounding properties and land uses through Specific Plans in the Downtown Planning Area and a HSR Station Area Master Plan (incorporated into the Fulton Corridor Specific Plan, adopted in October 2016). As stated in the General Plan, when the HSR system is fully built, the City ultimately plans to link the FAX and BRT systems with the HSR station.

4.16.1.3 Pedestrian and Bicycle Circulation

Fresno has made a strong commitment to improving non-motorized travel. The City established a Bicycle-Pedestrian Advisory Committee in 2002 and subsequently completed the Bicycle, Pedestrian,

and Trails Master Plan (BMP), which was presented to the City Council in 2010. Although the BMP was a separate document and not a part of the General Plan, the General Plan supported the BMP's aspirations for a comprehensive bicycle and pedestrian facilities network consisting of sidewalks, lanes, paths, and trails while recognizing that the BMP identified more facilities and programs than discussed in the General Plan.

Subsequent to the BMP (2010) and the General Plan (2014), the City Council adopted the Active Transportation Plan (ATP) in March 2017 as an update to the BMP. The ATP is a comprehensive guide outlining the vision for active transportation in Fresno and includes more robust planning for pedestrian travel and infrastructure than is presented in the BMP. The City has established the following goals as part of the ATP:

- To equitably improve the safety and perceived safety of walking and bicycling in the City;
- To achieve an increased number of walking and bicycling trips by creating user-friendly facilities;
- To improve the geographic equity of access to walking and bicycling facilities in the City; and
- To fill key gaps in the City's walking and bicycling networks.

Pedestrian Circulation. The presence of sidewalks and the quality of the pedestrian realm is a critical factor in the ability to walk around Fresno. Certain areas of Fresno lack continuous sidewalks, leaving pedestrians to share road space with cars. The City began addressing this problem with the "No Neighborhood Left Behind" program in 2005, which added new gutters, curbs, sidewalks, and streetlights to inner-city neighborhoods at a budget of $45 million over six years starting in fiscal year 2005, and has since been completed. With the integration of the ATP, the City has begun providing pedestrian treatments and supportive facilities. Strategies for a comprehensive pedestrian system include the implementation of interconnected sidewalks, continued addition of controlled crosswalks at traffic-controlled intersections, median refuge islands, bulb-outs, in-street and overhead pedestrian crossing signs, and rectangular rapid flashing beacons.

Accessible Design. Most of the city was built before the Federal Americans with Disabilities Act (ADA), which required streets to be accessible to persons in wheelchairs or with impaired mobility. In accordance with the ADA (1990), the City has been committed to ongoing efforts to ensure accessibility for all. In 2016, the ADA Transition Plan for the Right of Way (ROW) and the ADA Facilities Transition Plan were adopted, which set action plans and standards for ADA facilities within Fresno. Additional details on sidewalks and pedestrian treatments and support facilities in Fresno are provided in the ATP.

Bicycle Circulation. Bicycle facilities consist of the following four classifications:

- **Bike Paths (Class I)** are often referred to as shared-use paths or trails, or multiuse paths, which are off-street facilities that provide exclusive use for non-motorized travel, including bicyclists and pedestrians. Class I facilities are typically 10- to 12-foot wide concrete/asphalt paved surfaces with 2-foot wide shoulders. Bike paths have minimal cross flow with motorists and are typically located along landscaped corridors. Bike paths can be utilized for both recreational and commute trips. These paths provide an important recreational amenity for bicyclists,

pedestrians, dog walkers, runners, skaters, and all residents using other non-motorized forms of travel.

- **Bike Lanes (Class II)** are designated on-street facilities that use striping, stencils, and signage to denote preferential or exclusive use by bicyclists. On-street bikes lanes are typically 5 feet wide and are adjacent to motor vehicle traffic. Bike lanes are intended to alert drivers about the predictable movements of bicyclists and provide adequate space for comfortable bicycle riding. Current City standards require Class II bike lanes on all new Collectors and Arterials; many existing Collectors are already constructed with Class II bike lanes.

- **Bike Routes (Class III)** are on-street pavement markings or signage that connect the bicycle roadway network. Class III bike routes can be utilized to connect bicycle lanes or paths along corridors that do not provide enough space for dedicated lanes on low-speed and low-volume streets.

- **Separated Bikeways (Class IV)** are designated on-street bicycle facilities separated by a physical boundary such as a vertical curb, a painted buffer with flexible posts, parked cars, a landscape area, or a fixed barrier. Cycle tracks are typically 7 feet wide with 3-foot wide shoulders and can include one-way or two-way lanes, accommodating a single direction of travel or both. Cycle tracks can be utilized along streets with high vehicular volumes and speeds, and located in areas with fewer driveways.

The ATP includes existing (2016) and 2010 citywide bicycle lane mile coverage identified for all bicycle classifications. As illustrated, Bike Paths (Class I) include 38 miles of coverage in 2016, compared to 14 miles during 2010. Bike Lanes (Class II) include 431 miles of coverage in 2016 compared to 226 miles in 2010. Bike Routes (Class III) include 22 miles of coverage in 2016 compared to 14 miles in 2010. Three Cycle Tracks (Class IV) projects have been constructed in Fresno and several others are planned but not yet constructed. Additional details on bicycle facilities in the City are provided in the ATP.

Rail/Highway Freight. Fresno is served by The San Joaquin Line, one of Amtrak's passenger rail services with connections between the San Joaquin Valley, the Sacramento Valley, the San Francisco Bay Area, and Los Angeles. Greyhound provides similar (more frequent) bus service to these regions. In 2024, the San Joaquins Line carried approximately 910,000 passengers.[1]

Fresno is served by two freight lines:

- **Burlington Northern and Santa Fe Railway Company (BNSF).** This rail corridor has one track and travels through northwest Fresno and the middle of Downtown.

- **Union Pacific Railroad (UPRR).** This corridor has two tracks and generally runs parallel to SR-99.

[1] Amtrak, Amtrak FY24 Ridership, Amtrak Route Ridership FY24 vs FY23. 2024. Available online at: https://media.amtrak.com/wp-content/uploads/2023/11/FY24-Year-End-Ridership-Fact-Sheet.pdf (accessed May 2025).

Aviation. Fresno is served by three airports: Fresno Yosemite International Airport (FYI), Fresno Chandler Executive Airport, and Sierra Sky Park. Each of the three airports is described below.

- **Fresno Yosemite International Airport.** The City manages Fresno Yosemite International Airport (FYI) which is located in the eastern portion of the city along East Clinton Way, and is a joint use civilian/military airport. It is used by commercial air carriers, air cargo operators, charter operators, the State of California, general aviation, and the United States military. In 2024, the airport served approximately 1.1 million passengers.[2]

- **Fresno Chandler Executive Airport.** Fresno Chandler Executive Airport is located in the southwestern portion of the city, northwest of the intersection of West Kearny Boulevard and South Thorne Avenue. The airport is designated as a general aviation reliever airport for FYI. One small cargo carrier operates out of the facility, and nine general aviation businesses operate out of the airport. Approximately 180 general aviation aircraft are based at Fresno Chandler Executive Airport.

- **Sierra Sky Park.** Sierra Sky Park airport is located in the northern portion of the city adjacent to the San Joaquin River north of Herndon Avenue. The facility is a privately owned public use general aviation airport. Sierra Sky Park functions as a reliever airport for small general aviation aircraft, and includes a hangar and office complex.

4.16.2 Regulatory Setting

4.16.2.1 Federal Regulatory Setting

Federal Highway Administration. The Federal Highway Administration (FHWA) is a major agency of the United States Department of Transportation. In partnership with State and local agencies, the FHWA carries out federal highway programs to meet the nation's transportation needs. The FHWA administers and oversees federal highway programs to ensure that federal funds are used efficiently.

Americans with Disabilities Act of 1990. Titles I, II, III, IV, and V of the ADA have been codified in Title 42 of the United States Code, beginning at Section 12101. Title III prohibits discrimination on the basis of disability in "places of public accommodation" (businesses and nonprofit agencies that serve the public) and "commercial facilities" (other businesses). The regulation includes Standards for Accessible Design, which establish minimum standards for ensuring accessibility when designing and constructing a new facility or altering an existing facility.

Federal Transit Administration. The Federal Transit Administration (FTA) is an authority that provides financial and technical assistance to local public transit systems, including buses, subways, light rail, commuter rail, trolleys, and ferries. The FTA is funded by Title 49 of the United States Code, which states the FTA's interest in fostering the development and revitalization of public

[2] Fresno Yosemite International Airport. 2024. Website: https://flyfresno.com/wp-content/uploads/2025/02/2024-12.pdf (accessed May 2025).

transportation systems. The FTA invests approximately $12 billion annually to support and expand public transit.

4.16.2.2 State Regulatory Setting

Assembly Bill 32 (Global Warming Act of 2006) and Senate Bill 375. Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006, requires California to reduce its greenhouse gas (GHG) emissions to levels presented in the year 1990 by 2020. In response, the California Air Resources Board (CARB) is responsible for creating guidelines for this act. In 2008, CARB adopted its proposed Scoping Plan, which included the approval of Senate Bill (SB) 375 as a means of achieving regional transportation-related GHG targets. SB 375 provides guidance on how curbing emissions from cars and light trucks helps the State comply with AB 32.

Established through CARB, SB 375 lists four major components and requirements: (1) it requires regional GHG emissions targets; (2) it requires creating a Sustainable Communities Strategy (SCS) that provides a plan for meeting the regional targets; (3) it requires that regional housing elements and transportation plans be synchronized on 8-year schedules; and (4) it requires transportation and air pollutant emissions modeling techniques consistent with guidelines prepared by the California Transportation Commission (CTC).

Assembly Bill 1358 (Complete Streets). The California Complete Streets Act requires general plans updated after January 30, 2011, to include Complete Streets policies so that roadways are designed to safely accommodate all users, including bicyclists, pedestrians, transit riders, children, the elderly, and persons with disabilities, as well as motorists. The goal of this act is to encourage cities to rethink policies that emphasize automobile circulation and prioritize motor vehicle improvements and come up with creative solutions that emphasize all modes of transportation. Complete Streets roadways allow for more transportation options, more non-single-occupancy vehicles, and less traffic congestion. Additionally, increased transit ridership, walking, and biking can reduce air pollution while improving the overall travel experience for road users.

While there is no standard for a Complete Streets design, it generally includes one or more of the following features: bicycle lanes, wide shoulders, well-designed and well-placed crosswalks, crossing islands in appropriate mid-block locations, bus pullouts or special bus lanes, audible and accessible pedestrian signals, sidewalk bulb-outs, center medians, street trees, planter strips, and groundcover.

Senate Bill (SB) 743. On September 27, 2013, Governor Jerry Brown signed SB 743 into law and codified a process that changed transportation impact analysis as part of California Environmental Quality Act (CEQA) compliance. SB 743 directs the California Office of Planning and Research (OPR) to administer new CEQA guidance for jurisdictions that removes automobile vehicle delay and level of service (LOS) or other similar measures of vehicular capacity or traffic congestions from CEQA transportation analysis. Rather, it requires the analysis of vehicle miles traveled (VMT) or other measures that “promote the reduction of greenhouse gas emissions, the development of multi-modal transportation networks, and a diversity of land uses,” to be used as a basis for determining significant impacts to circulation in California. The goal of SB 743 is to appropriately balance the needs of congestion management with statewide goals related to reducing GHG emissions, encourage infill development, and promote public health through active transportation.

Guide for the Preparation of Traffic Impact Studies. Caltrans' "Guide for the Preparation of Traffic Impact Studies"[3] provides general guidance regarding the preparation of traffic impact studies for projects that may have an impact on the State Highway System. The guidance includes when a traffic study should be prepared and the methodology to use when evaluating operating conditions on the State highway system.

The "Guide for the Preparation of Traffic Impact Studies" states, "Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" on state highway facilities, however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS." In accordance with this recommendation, consultation with Caltrans staff indicated that Caltrans would be willing to consider LOS D at the LOS D/E threshold when improvements become infeasible for State facilities. The Guide for the Preparation of Traffic Impact Studies also states that where "an existing State highway facility is operating at less than the appropriate target LOS, the existing [measure of effectiveness (MOE)] should be maintained."

4.16.2.3 Regional Regulatory Setting

Fresno County Council of Governments. The Fresno Council of Governments (COG) is a voluntary association of local governments and a regional planning agency comprising 16 member jurisdictions, including the City of Fresno. The members are represented by a Policy Board consisting of mayors of each incorporated city and the Chairman of the County Board of Supervisors, or their designated elected official. The Policy Advisory Committee (PAC), composed of the Chief Administrative Officer of each member agency, assists the Board in its decision-making process. Others involved in the decision process include expert staff from member agencies, citizen and interest groups, and other stakeholders. The Fresno COG's purpose is to establish a consensus on the needs of the Fresno County area and further action plans for issues related to the Fresno County region. The current regional transportation plan, known as the Fresno County Regional Transportation Plan (RTP) (2046), was adopted in 2022. The RTP addresses GHG emissions reductions and other air emissions related to transportation, with the goal of preparing for future growth in a sustainable way. The plan specifies how funding will be sourced and financed for the region's planned transportation investments, ongoing operations, and maintenance. The goals, objectives, and policies of the RTP are established to direct the courses of action that will provide efficient, integrated multi-modal transportation systems to serve the mobility needs of people, including accessible pedestrian and bicycle facilities, and freight, while fostering economic prosperity and development, and minimizing mobile sources of air pollution. They are organized into six broad transportation mode-based categories: general transportation; highways, streets, and roads; mass transportation; aviation; active transportation; and rail.

4.16.2.4 Local Regulatory Setting

City of Fresno CEQA Guidelines for Vehicle Miles Traveled Thresholds (VMT Guidelines). In June 2020, the City adopted VMT thresholds and guidelines to address VMT to be effective on July 1, 2020, as required by SB 743. The City's document serves as a detailed guideline for preparing VMT

[3] California Department of Transportation. 2002. Guide for the Preparation of Traffic Impact Studies. December.

analyses consistent with SB 743 requirements for development projects, transportation projects, and plans. Project applicants are required to follow the guidance provided in the City's document for preparation of CEQA VMT analysis. The document includes the following:

- Definition of region for VMT analysis;
- Standardized screening methods for VMT threshold compliance data;
- Recommendations for appropriate VMT significance thresholds for development projects, transportation projects, and plans; and
- Feasible mitigation strategies applicable for development projects, transportation projects, and plans.

City of Fresno Traffic Impact Study Report Guidelines. The City of Fresno adopted Traffic Impact Study Report Guidelines in October 2006, which were updated in February 2009. The Traffic Impact Study Report Guidelines establish general procedures and requirements for the preparation of traffic impact studies associated with development within the City of Fresno. The guidelines are intended as a checklist for study preparers to be sure they have not missed any regular study items.

City of Fresno Active Transportation Plan. The City's Active Transportation Plan (ATP), adopted in March 2017, provides a comprehensive guide outlining the vision for active transportation in Fresno. The ATP supersedes the Bicycle, Pedestrian, and Trails Master Plan that was adopted in 2010. The ATP envisions a complete, safe, and comfortable network of trails, sidewalks, and bikeways that serves all residents of Fresno. This plan lays out specific goals to improve bicycle and pedestrian access and connectivity in Fresno. These goals include the following:

- Equitably improve the safety and perceived safety of walking and bicycling in Fresno;
- Increase walking and bicycling trips in Fresno by creating user-friendly facilities;
- Improve the geographical equity of access to walking and bicycling facilities in Fresno; and
- Fill key gaps in Fresno's walking and bicycling networks.

City of Fresno Complete Streets Policy. In 2019 the City of Fresno adopted Policy 240.3 as policy and procedure to be implemented by the City's Public Works Department. The policy was adopted to solidify City practices and ensure consistency in the application of complete streets. As a result the Department of Public Works is required to lead implementation across all City Departments to aid in of planning, design, and construction of transportation facilities that balance safety, access, and mobility for users of all abilities and ages.

City of Fresno General Plan. The City of Fresno's General Plan Mobility and Transportation Element includes objectives and policies that work to create and maintain a transportation system that is safe, efficient, provides access in an equitable manner, and optimizes travel by all modes. The following policies related to transportation are applicable to the proposed project:

- **Policy MT-1-d: Integrate Land Use and Transportation Planning.** Plan for and maintain a coordinated and well integrated land use pattern, local circulation network and transportation system that accommodates planned growth, reduces impacts on adjacent land uses, and preserves the integrity of established neighborhoods.

- **Policy MT-2-b: Reduce Vehicle Miles Traveled and Trips.** Partner with major employers and other responsible agencies, such the San Joaquin Valley Air Pollution Control District and the Fresno Council of Governments, to implement trip reduction strategies, such as eTRIP, to reduce total vehicle miles traveled and the total number of daily and peak hour vehicle trips, thereby making better use of the existing transportation system.

- **Policy MT-2-g: Transportation Demand Management and Transportation System Management.** Pursue implementation of Transportation Demand Management and Transportation System Management strategies to reduce peak hour vehicle traffic and supplement the capacity of the transportation system.

- **Policy MT-2-i: Transportation Impact Studies.** Require a Transportation Impact Study (currently named Traffic Impact Study) to assess the impacts of new development projects on existing and planned streets for projects meeting one or more of the following criteria, unless it is determined by the City Traffic Engineer that the project site and surrounding area already has appropriate multi-modal infrastructure improvements.

- **Policy MT-5-d Pedestrian Safety:** Minimize vehicular and pedestrian conflicts on both major and non-roadways through implementation of traffic access design and control standards addressing street intersections, median island openings and access driveways to facilitate accessibility while reducing congestion and increasing safety. Increase safety and accessibility for pedestrians with vision disabilities through the installation of Accessible Pedestrian Signals at signalized intersections.

- **Policy MT-8-d: Coordination of Transportation Modes.** Plan, design, and implement transportation system improvements promoting coordination and continuity of transportation modes and facilities, such as shared parking or park and ride facilities at Activity Centers.

4.16.3 Impacts and Mitigation Measures

The following section presents a discussion of the impacts related to transportation that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds to determine if an impact is significant. The latter part of this section presents the impacts associated with implementation of the proposed project and the recommended mitigation measures, if required. Mitigation measures are recommended, as appropriate, for significant impacts to eliminate or reduce them to a less than significant level. Cumulative impacts are also addressed.

4.16.3.1 Significance Criteria

The thresholds for impacts related to transportation used in this analysis are consistent with Appendix G of the State CEQA Guidelines. Development of the proposed project would result in a significant impact related to transportation if it would:

a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities;

b. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b);

c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or

d. Result in inadequate emergency access.

4.16.3.2 Project Impacts

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

TRA-1 The project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

The proposed VMT Reduction Program aims to establish mitigation for projects that exceed the City's VMT thresholds in the form of a VMT Urban Design Calculator and mitigation impact fee. The proposed program identifies relevant Transportation Demand Management (TDM) strategies and VMT-reducing projects within Fresno to be funded by the proposed impact fee. These TDM strategies and VMT-reducing projects were identified in the following existing City documents that could contribute towards reducing Citywide VMT:

- Fresno Council of Governments (COG) Short Range Transit Plan
- Fresno Council of Governments (COG) Long Range Transit Plan
- Fresno Council of Governments (COG) Regional Transportation Plan (RTP)
- Fresno Safe Routes to School Action Plan
- Fresno Active Transportation Plan
- Southern Blackstone Avenue Smart Mobility Plan

Table 3.A, Potential VMT-Reducing Improvements, provides a summary of VMT-reducing infrastructure improvements that could be funded and implemented with the support of the proposed VMT Reduction Program. Potential improvements include, but are not limited to, development and implementation of a mobile ticketing trip planning application, a TDM coordinator, new buses for increased frequency, pedestrian safety enhancement corridors, and assorted pedestrian improvements. As such, the proposed program would help implement many of the City's planned infrastructure improvement projects that have yet to be funded. As a result, the proposed program would be consistent with adopted transportation-related plans and programs and help fund existing planned and unfunded infrastructure improvement projects, and would not conflict with adopted policies, plans, or programs supporting alternative transportation. Impacts in this regard would be less than significant.

Mitigation Measures: No mitigation measures are required beyond the VMT-reducing components identified by the proposed VMT Reduction Program.

Level of Significance: Less Than Significant Impact.

TRA-2 The project would conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).

The intent of the proposed VMT Reduction Program is to support reductions in Citywide VMT. If a future development project screens out of VMT analysis or is located in a VMT efficient zone, the impact fee would not be applicable. VMT efficient zones are areas of the City where the VMT is already below the adopted thresholds. Therefore, the proposed program incentivizes future development to occur within VMT efficient zones of Fresno.

However, should future projects be developed in areas outside of the City's VMT efficient zones and result in potentially significant VMT impact, the future projects would be required to pay the mitigation impact fee. Payment of the impact fee is intended to serve as mitigation for future development projects that exceed the City's established VMT threshold. However, while the proposed program would fund and help implement TDM measures and VMT-reducing projects within the City at a program level, potentially significant VMT impacts could still occur on a project-level. For example, a future development project outside of the City's VMT efficient zones could pay the required impact fee, but their required fee may not fund the full cost of what is necessary to construct/complete an identified infrastructure improvement project. Therefore, it cannot be determined with certainty whether improvements would be implemented at the time a future development project's VMT impacts occur (e.g., at project opening), and whether those impacts would be mitigated to less-than-significant levels. Additionally, the impact fee would only apply to VMT generated above the City's established VMT threshold and thus, would not be able to fully fund all the identified TDM improvements.

Given the speculative timing of when the TDM measures and VMT-reducing transportation improvements would be implemented, and the fact that the proposed VMT Reduction program cannot fully fund all identified improvements, the timing of VMT reductions may not exactly correspond to project level openings. Furthermore data is still being collected on effectiveness of VMT reduction methods and it is unknown if the VMT-reducing projects funded by the proposed project would reduce impacts to less-than-significant levels. As such, impacts in this regard would be significant and unavoidable.

Mitigation Measures: No feasible mitigation measures are available.

Level of Significance: Significant and Unavoidable Impact.

TRA-3 The project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

The proposed VMT Reduction Program does not propose any specific changes to roadways. However, transportation improvements would be funded and eventually implemented as a result of the proposed program. Nevertheless, future funded VMT-reducing transportation improvements would undergo separate environmental review under CEQA to evaluate project-specific impacts

regarding potential hazards due to a geometric design feature or incompatible uses. Additionally, future roadway improvements would be required to comply with existing City standards related to street improvements. In addition, the proposed program is anticipated to result in beneficial impacts with respect to future projects implementing improvements for pedestrians, bicyclists, and transit users. As a result, future improvements funded and implemented in accordance with the proposed program would result in less than significant impacts.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

TRA-4 The project would not result in inadequate emergency access.

Future infrastructure improvements implemented in accordance with the proposed program would be required to comply with all applicable City codes and policies related to emergency access, including the California Fire Code and the City's Development Code. Future improvement projects would also be required to undergo separate environmental review to evaluate project-level impacts with regards to emergency access. Thus, the proposed program's impacts related to emergency access would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

4.16.3.3 Cumulative Impacts

CEQA Guidelines Section 15355 requires an analysis of cumulative impacts, which are defined as, "two or more individual effects which, when considered together, are considerable, or which compound or increase other environmental impacts." The cumulative analysis below considers the proposed project's impacts in conjunction with future buildout of the General Plan.

TRA-5 The project, in combination with other projects, would contribute to a significant cumulative impact related to transportation.

The proposed project would fund TDM measures and VMT-reducing projects identified in existing City planning documents related to transportation. Thus, the proposed VMT Reduction Program would help improve roadway, pedestrian, bicycle, and transit facilities within Fresno. The proposed project would be consistent with existing transportation programs and plans and result in less than significant impacts. Thus, the project's contribution towards cumulative impacts in conjunction with development associated with the General Plan buildout are not cumulatively considerable. Impacts in this regard would be less than significant.

The proposed program's intent is to reduce Citywide VMT by establishing a mitigation impact fee and funding TDM measures and VMT-reducing projects. However, as stated above, it cannot be determined with certainty whether the identified transportation improvements would be implemented at the time a future project's VMT impacts occur, and whether those potential impacts would be mitigated to a less than significant level. Additionally, the impact fee would only

apply to VMT generated above the established threshold and thus, would not be able to fully fund all the identified improvements. As such, VMT impacts associated with the proposed program could be significant and unavoidable. Given that, the project could also cumulatively contribute towards significant impacts when considered in conjunction with impacts associated with buildout of the General Plan. No feasible mitigation is available given the speculative timing of when the TDM measures and VMT-reducing transportation improvements would be implemented and the fact that the proposed VMT Reduction Program cannot fully fund all identified improvements. Thus, cumulative impacts in this regard would remain significant and unavoidable.

Similar to future roadway improvements funded by the program, future cumulative projects developed in accordance with the General Plan would be required to comply with existing City standards related to street improvements. Future cumulative projects would also be required to undergo separate environmental review to evaluate project-specific impacts.

Future roadway improvement projects funded by the proposed program would be required to comply with existing City standards related to street improvements and thus, would result in less than significant impacts. In addition, the prosed program is anticipated to result in beneficial impacts in this regard, as a range of the identified future improvements (crosswalks, pedestrian refuge islands, neighborhood traffic circles, widened sidewalks, and multi-purpose paths) would improve safety for alternate modes of transportation. Therefore, the proposed project would not contribute towards cumulatively considerable impacts with regards to increasing hazards due to geometric design features or introducing incompatible uses. Impacts would be less than significant.

Similarly, future infrastructure improvements funded by the proposed program would not result in inadequate emergency access given that the improvements are intended to provide enhanced and safer multimodal amenities within the City. Additionally, all improvements would be required to comply with existing codes and standards and thus, would result in less than significant impacts. Therefore, the project would not contribute towards cumulatively considerable impacts with regards to emergency access. Impacts would be less than significant.

Although, the proposed VMT Reduction Program would not contribute to cumulative considerable impacts related to consistency with existing transportation plans, design standards, and emergency access, the proposed VMT Reduction Program would implement VMT-reducing projects that may not fully reduce VMT impacts due to timing, funding and effectiveness.

Mitigation Measures: No feasible mitigation measures are available beyond the VMT-reducing components identified by the proposed VMT Reduction Program.

Level of Significance: Significant and Unavoidable Impact.

4.17 UTILITIES AND SERVICE SYSTEMS

This section addresses potential impacts to utilities and service systems including water supply, wastewater, stormwater, and solid waste resulting from implementation of the proposed project.

4.17.1 Existing Environmental Setting

The following outlines the utilities and service systems in the Fresno area and in the vicinity of the project site.

4.17.1.1 Water Supply

The City of Fresno Department of Public Utilities (DPU) relies on groundwater from the North Kings Subbasin; surface water from Central Valley Project (CVP), through a contract with the United States Bureau of Reclamation (USBR); Kings River water, through a contract with Fresno Irrigation District (FID); and recycled water.

DPU provides potable water to the majority of the City, and some users within the portion of the Planning Area outside of the City limits. Fresno's primary source of potable water comes from groundwater. Water production in the City had consisted of 100% groundwater prior to the commissioning of its first surface water treatment facility in 2004. The City's first surface water treatment facility (Northeast Surface Water Treatment Facility [NESWTF]) came online and began delivering approximately 4,060 acre-feet (AF) in 2004 to residents in northeast Fresno. By 2015, the NESWTF in combination with the T-3 Surface Water Treatment Facility (T-3 SWTF) delivered approximately 28,347 AF of treated surface water to the residents of Fresno. In 2018, the City completed construction of its new 54 millions of gallons per day (mgd) surface water treatment facility in southeast Fresno (SESWTF) and large diameter water mains that serve nearly one-half of the City. With the SESWTF operational, along with the NESWTF and T-3 SWTF, the City provided greater than 50 percent of its potable supply through using surface water.

The 2020 Urban Water Management Plan (UWMP) was adopted by the City Council in July 2021. It describes the current and planned water conservation programs, provides a water shortage contingency plan should it need to be implemented in the event of a severe water shortage or water supply emergency, and a future water supply plan for a variety of water sources including treated surface water, groundwater and recycled water. Also included in the 2020 UWMP is an aggressive water conservation plan to reduce demand throughout the City's service area. The 2020 UWMP is in accordance with the Urban Water Management Planning Act that stipulates that every urban water supplier in California supplying water directly or indirectly to 3,000 or more customers or supplying more than 3,000 AF of water annually shall adopt and submit an Urban Water Management Plan to the California Department of Water Resources every five years. Failure to submit a plan, as required, could result in ineligibility to receive certain grants or receive drought assistance from the State.

Groundwater Supply. The City overlies the Kings Subbasin, which is part of the greater San Joaquin Valley Groundwater Basin. Historically, water demand within the city has been met by extracting groundwater from the Kings Subbasin. Like much of the Kings Subbasin, groundwater levels beneath Fresno were relatively shallow at 25 feet below ground surface in 1940, prior to the start of World War II. After the war, the State, including Fresno, began growing at a rapid rate. For the period from

1959 to 1968, it was reported groundwater levels declined at a rate of 2.8 feet per year. Groundwater levels since 1990 have declined at a lower rate than previously, from less than 0.5 feet per year in the southwest portion of the downtown area, to a rate of 1.5 feet per year for northern and southern areas of town, to a maximum of 3 feet per year in the northeastern area.

Groundwater used by the City to meet its demands is replenished by three different methods:

- Natural recharge
- Subsurface inflow
- Intentional recharge

Based on the natural groundwater recharge (24,970 AF), subsurface inflow (47,510 AF), and intentional normal precipitation year recharge (60,000 AF), the total groundwater yield anticipated for 2020 for a normal year supply is approximately 132,480 AF. By 2045, the City anticipates that the natural groundwater recharge will increase to 26,760 AF/year, subsurface inflow will be 59,530 AF/year, and intentional groundwater recharge will increase to 73,500 AF/year due to an increase in the capacity of surface water treatment. The total groundwater yield in 2045 is expected to be approximately 159,820 AF/year.

The City has a network of 285 municipal wells, approximately 200 of which are currently active pump stations that pump an average of 74 mgd. Groundwater pumping data provided by the City indicates that approximately 55,000 AF was pumped in 2020. Groundwater pumping has significantly dropped since 2003, the City's peak year for groundwater production (i.e., 165,200 AF).

Groundwater will continue to be an important part of the City's water supply but will not be heavily relied upon as it has been in the past. With the recent investments in surface water infrastructures, the City has been able to drastically reduce its reliance on groundwater pumping. The City will continue expanding their delivery and treatment of surface water supplies and groundwater recharge activities to maximize water usage.

4.17.1.2 Wastewater

Wastewater Collection System. The City of Fresno owns and operates the Fresno-Clovis Regional Wastewater Reclamation Facility (RWRF), and the smaller North Fresno Water Reclamation Facility (NFWRF). In addition, the City owns and maintains a wastewater collection system that serves the City and other participating agencies: County of Fresno, the majority of the City of Clovis, Pinedale Public Utility District, and Pinedale County Water District. The City's wastewater collection system consists of about 1,630 miles of gravity sewer lines, ranging in size from 4 inches in diameter to 84 inches in diameter, force mains, over 25,000 manholes, and 18 lift stations throughout Fresno, ranging in pumping capacity from 0.25 mgd to 2.2 mgd.

The City of Fresno commissioned a team of engineering consultants to prepare the initial 2006 Wastewater Collection System Master Plan. The master plan effort included hydraulic modeling of the wastewater collection system to evaluate system capacity for both then-existing conditions and full build-out conditions under the City's General Plan. Building on the 2006 master plan, an updated version was adopted in 2015. In these master plans, a number of capacity-deficient sewers were

identified, and recommendations for capacity relief projects were developed, including point repairs, pipe rehabilitations, upgrading existing facilities to mitigate current capacity deficiencies and serve future users, as well as build-out improvements necessary to accommodate future demand.

Both versions of the Wastewater Collection System Master Plan (2006 and 2015) incorporated the results of a number of prior sewer inspection and evaluation efforts, including recommendations for prioritized sewer rehabilitation projects - most or all of which were necessary as a result of microbiologically influenced corrosion (MIC) activity. The master plans also identified several trunk sewer projects and infill projects identified by the City of Fresno. These recommended sewer projects were included as part of the recommended Capital Improvement Program (CIP) for future implementation, covering a period from 2006 through 2025. Since the adoption of the master plans, the City of Fresno has been regularly implementing various elements of the CIP.

As required by the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, the City of Fresno prepared the 2009 Sewer System Management Plan (SSMP) for the Wastewater Collection System. The SSMP was revised and updated in 2014 and 2019 to reflect changes and revisions from former versions of the document.

The SSMP provides a framework for the proper management, operation, and maintenance of all elements of the wastewater collection system, with the objectives of reducing and preventing sanitary sewer overflows (SSOs) and mitigating any SSOs that may occur. An SSO is a release of untreated or partially treated wastewater resulting in public exposure, regardless of whether the wastewater reaches waters of the United States. SSOs also include wastewater backups into buildings and onto private property that are caused by blockages in the City's portion of the sanitary sewer system.

All of the mandatory elements of the SSMP were already in place and in use by the City of Fresno through other programs and ordinances, such as the Fresno Municipal Code, the Wastewater Collection System Master Plan, the Fats, Oils and Grease (FOG) Control Program, the Sanitary System Overflow Prevention and Response Plan, Performance Measures and Public Information/Education opportunities. The City of Fresno operates the wastewater collection system under the SSMP and related programs and ordinances to accomplish the SSMP objectives.

Wastewater Treatment and Disposal. The City Fresno/Clovis Regional Wastewater Reclamation Facility (RWRF) is located southwest of the City in the area generally bounded by Jensen, Cornelia, Central and Chateau Fresno Avenues. It provides wastewater treatment for a service area that includes most of the Cities of Fresno and Clovis, and some unincorporated areas of Fresno County. Flows received at this facility peaked at 81,100 AFY in 2006 and have been steadily decreasing since, with the average influent flow about 63,000 AFY over the last 5 years. The RWRF includes preliminary, primary, secondary, and tertiary treatment units with disinfection. Secondary treatment consists of three treatment trains with an annual average capacity of 87 mgd, consisting of 30 mgd for Train A and 57 mgd for Trains B and C combined. In 2017, a 5 mgd tertiary treatment system—the

Tertiary Treatment and Disinfection Facility (TTDF)—was completed. The system can be expanded to 15 mgd and ultimately to 30 mgd.

The City's RWRF diverts a portion of the undisinfected secondary effluent to irrigate non-food crops grown adjacent to this facility. The practice of using the secondary effluent to irrigate non-food crops has been carried out for decades and is expected to continue for the foreseeable future. The City owns nearly 3,300 acres of land for and around the RWRF, consisting of percolation ponds (1,750 acres) and other land available to farm non-food crops.

Additionally, the RWRF produces Title 22 disinfected tertiary-treated effluent through the TTDF completed in 2017 and through tertiary-equivalent soil aquifer-treated recycled water recovered from the percolated secondary effluent. A series of 15 groundwater wells located at the RWRF are used to extract previously percolated effluent groundwater from beneath the facility. The tertiary-equivalent soil aquifer-treated recycled water (recovered groundwater) is used for on-site irrigation and transport to FID canals for delivery to customers during the irrigation season, as facilitated through an exchange agreement with FID.

Since the completion of the 2010 Recycled Water Master Plan (RWMP), the City has constructed most of the southwest recycled water system. The southwest recycled water system consists of a 3.2-million-gallon recycled water reservoir located at the RWRF, a 6,000 gallons per minute (gpm) (8.64 mgd) recycled water pump station located at the RWRF, a 640 gpm booster pump station (Roeding Park Booster), and 15.7 miles of 10-inch to 54-inch recycled water pipeline. Roughly 7.5 miles of pipeline remain to be constructed. The City also updated the demand and distribution system from the 2010 RWMP with the 2019 Citywide Recycled Water Demand and Southwest Recycled Water System Analysis to identify potential recycled water customers.

4.17.1.3 Stormwater

Stormwater collection and disposal, and flood control for the City of Fresno, City of Clovis, and the unincorporated areas within the City of Fresno's sphere of influence are provided by the Fresno Metropolitan Flood Control District (FMFCD). The FMFCD is a special district created by the State of California Legislature and ratified by the voters of the district in 1956. FMFCD has more than 170 urban watersheds that collect stormwater runoff and dispose of the runoff in retention basins, local canals, or the San Joaquin River. Each urban watershed, called a drainage area by FMFCD, consists of a collection system and, in most cases, a retention basin to store and dispose of the runoff. Pipeline collection systems have diameters that range from 15 inches to 18 inches. Retention basins range in size from 5 acres to 25 acres, with most being 8 to 10 acres in size. The FMFCD drainage area for stormwater from the project site is basin "AS", located southwest from the site.[1]

Stormwater Collection and Disposal. FMFCD provides drainage service to the Fresno metropolitan area. In order to provide this service, the FMFCD has organized the metropolitan area into over 170 urban drainage areas or watersheds. Watersheds are delineated along topographic boundaries and

[1] Fresno Metropolitan Flood Control District. Storm Drainage and Flood Control Master Plan. Exhibit A. Website: http://www.fresnofloodcontrol.org/wp-content/uploads/2022/09/District-Wall-Map.png (accessed March 25, 2025).

are limited in size to between 200 acres to 600 acres. The area limitation reduces the size of the required collection facilities and disposal facilities. Service is provided through the combination of surface drainage improvements, chiefly curbs and gutters, that direct runoff to storm drainage inlets which collect the runoff and convey the runoff to underground pipeline collection systems. The collection systems convey the stormwater to disposal facilities, which in the majority of cases are excavated, unlined basins. In three cases, the collection systems discharge to pump wet wells from which the stormwater is lifted into an adjacent canal, and in six cases, the stormwater is discharged into the San Joaquin River. Two of these systems discharge directly to the San Joaquin River and four discharge to a water quality basin before discharge to the river occurs.

The collection systems are designed to provide one foot of freeboard in the pipeline collection system designed to convey runoff rates generated by rainfall intensity up to and including a 50 percent probability of occurrence (a 2-year return frequency). There are exceptions to this design standard in areas of the City where older drainage systems were installed prior to the formation of the FMFCD, or constructed in the very early years of the FMFCD, and shifts in land use densities have eroded the level of service. FMFCD documents the deficiencies and develops master planned solutions to these deficiencies as they are identified. The proposed project would include construction of a new curb and gutter along North Marks Avenue, West Nielsen Avenue, and North Hughes Avenue to connect to the City's existing stormwater system.

Retention basins are designed to provide storage for up to 6 inches of rainfall on the drainage area watershed given typical runoff to rainfall ratios used for urban drainage design. There are exceptions to this design standard, notably in those retention basins constructed prior to 1969 when the design criteria were changed to increase the storage volume. The change resulted from the extreme rainfall events of the spring of 1969 and the resulting flooding at the then-existing basins. Water quality basins are designed in accordance with the US Environmental Protection Agency's design standards to remove sediments and trash prior to discharge of stormwater to the San Joaquin River. They provide quiescent conditions for settling of suspended solids within a holding basin prior to discharge from the basin via an overflow weir. The water quality basins alternate between wet and dry, depending on the season and amount of rainfall that has occurred within the drainage area.

FMFCD has utilized three means to implement drainage systems for the metropolitan area. One method has been to use Community Block Grants and low interest infrastructure loans from the State of California to construct drainage facilities in the older, previously developed areas of the City. A second method has been to form assessment districts under the provisions of the 1915 Bond Act. Assessment districts were formed based on drainage area boundaries, the parcels within the assessment districts were assessed a proportional share of the cost of the collection and disposal system, and the drainage system for the drainage area was constructed. The third and currently employed method is to collect drainage fees from parcels as they develop based on their prorated share of the cost of the drainage area collection and disposal systems. The implementing ordinance for the drainage fee structure is adopted by the City of Fresno, and the drainage fees are collected by the City when entitlements are granted or building permits are issued.

FMFCD is a primary participant in groundwater recharge for the City of Fresno. Unlined retention basins provide recharge of both stormwater runoff and imported water from the San Joaquin River and Kings River. It is estimated that 80-percent of the stormwater that falls within the metropolitan

area is recharged via FMFCD's retention basins. FMFCD has identified retention basins within the metropolitan area that have significant recharge capability. The City of Fresno, through a cooperative agreement, utilizes the Fresno Irrigation District (FID) canal system to deliver allocated water from the San Joaquin River and the Kings River to these basins where the water infiltrates through the underlying soil strata and into the groundwater beneath the basins. FMFCD retention basins, largely in part through a cooperative agreement with the City, provide groundwater recharge for an estimated annual average of 30,000 AF of water.

Flood Control. The City of Fresno is located in the alluvial fans of numerous foothill streams and creeks that drain the western slope of the Sierra Nevada foothills. These streams include Big Dry Creek, Alluvial Drain, Pup Creek, Dog Creek, Redbank Creek, Mud Creek, and Fancher Creek. Numerous smaller, unnamed drainage courses also drain into the City from the rural areas east of the City. FMFCD provides flood control measures on the major creeks for the 0.5-percent exceedance interval (200-year return frequency) flood flow event with a series of dams and detention basins located east of the City. These dams include Big Dry Creek Dam, Fancher Creek Dam, and Redbank Dam. The detention basins include the Alluvial Drain Detention Basin, Pup Creek Detention Basin, Redbank Creek Detention Basin, Fancher Creek Detention Basin, and Big Dry Creek Detention Basin.

The Big Dry Creek Dam was originally constructed in 1948 by the U.S. Army Corps of Engineers. It was subsequently raised and enlarged by the U.S. Army Corps of Engineers as part of the Redbank and Fancher Creek Flood Control Project in 1993 to provide a flood pool with 30,200 AF of storage. Redbank Creek Dam was constructed by FMFCD in 1961. It provides a gross pool storage of 1,030 AF. The U.S. Army Corps of Engineers also constructed the Alluvial Drain Detention Basin in 1993, the Pup Creek Detention Basin in 1993, the Redbank Detention Basin in 1990 and the Fancher Creek Dam in 1991. The Redbank and Fancher Creek Flood Control Project was a jointly funded Federal, State, and local project. FMFCD constructed the Fancher Creek Detention Basin in 2003 and recently completed the Big Dry Creek Detention Basin.

FMFCD has master planned the Dog Creek, Pup Creek, and a portion of Redbank Creek channels to convey the 0.5-percent exceedance level flood flows within bank. The improvement of these channels will occur as funding and legal authority to proceed with the improvements are provided either through grants and purchase of right of way or through the entitlement process. Each of these channels are ephemeral streams that flow only during the latter parts of the wet season.

4.17.1.4 Solid Waste

Fresno diverts a majority of its solid waste away from landfills and into recycling and composting programs. Diversion conserves limited landfill space, keeps toxic chemicals and materials from contaminating landfills, and enhances the reuse of materials. Recycling of construction & demolition

is required for any City-issued building, relocation or demolition permitted project that generates at least 8 cubic yards of material by volume and all waste must be hauled to a City-approved facility.[2]

The Solid Waste Management Division (SWMD) of the City of Fresno provides waste management services for about 119,000 participating residential customers. This includes weekly collection of solid waste, recycling, and green waste via a three-cart system. These residents also have access to community services like waste and oil filter collection. Other key community services provided include: Operation Clean Up, Free Dump Days, Citywide Litter Control, Recycling Education and Outreach, and Free Shred Events. In 2011, the City of Fresno granted franchises for non-exclusive roll off services to 16 roll off companies for bins which were 10 cubic yards or greater. The City also granted exclusive franchise agreements for the collection of commercial solid waste, recyclables and green waste to two franchises. Allied Waste Services (formally Republic) is responsible for all commercial services north of Ashlan Avenue. Mid Valley Disposal has all commercial locations south of Ashlan. Both City and (non-exclusive) / exclusive franchise haulers provide and maintain containers; respond to customer complaints/concerns and provide roll-off and compactor services to residential, multi-family and commercial customers respective to their agreements. The proposed project would be serviced by Mid Valley Disposal.

Garbage disposed of in the City of Fresno is taken to Cedar Avenue Recycling and Transfer Station (CARTS). Once trash has been off-loaded at the transfer station, it is sorted and non-recyclable solid waste is loaded onto large trucks and taken to the American Avenue Landfill (i.e., American Avenue Disposal Site, Site Solid Waste Information System [SWIS] Number 10-AA-0009) located approximately six miles southwest of Kerman. American Avenue Landfill is owned and operated by Fresno County and began operations in 1992 for both public and commercial solid waste haulers. The American Avenue Landfill is a sanitary landfill, meaning that it is a disposal site for non-hazardous solid waste spread in layers, compacted to the smallest practical volume, and covered by material applied at the end of each operating day.[3]

The American Avenue Landfill has a maximum permitted capacity of 32,700,000 cubic yards and a remaining capacity of 29,358,535 cubic yards, with an estimated closure date of August 31, 2031. The maximum permitted throughput is 2,200 tons per day.[4]

One other active disposal site is located in Fresno County. The City of Clovis Landfill (SWIS Number 10-AA-0004) has a maximum permitted capacity of 7,800,000 cubic yards and a remaining capacity

[2] Fresno, City of. Department of Public Utilities, Trash Disposal & Recycling, Multi-Family & Commercial Services, Construction & Demolition Waste. Website: www.fresno.gov/publicutilities/trash-disposal-recycling/multi-family-commercial-services/#tab-3 (accessed March 25, 2025).

[3] Fresno, City of. Department of Public Utilities, Facilities & Infrastructure, American Avenue Landfill. Website: https://www.fresno.gov/publicutilities/trash-disposal-recycling/solid-waste-facilities/ (accessed March 25, 2025).

[4] CalRecycle. SWIS Facility/Site Summary. American Avenue Disposal Site (10-AA-0009). Website: https://www2.calrecycle.ca.gov/SolidWaste/Site/Summary/352, (accessed March 25, 2025).

of 7,740,000 cubic yards, with an estimated closure date of April 30, 2047. The maximum permitted throughput is 2,000 tons per day.[5]

Commercial green waste and organics delivered to Elm Avenue Recycling by Mid Valley are then transferred to the Kerman facility and composted with organic compost, which is then used by organic farms in the region. Commercial green waste and organics being delivered by Allied Waste are taken to Rice Road Transfer Station, which are then trans-loaded into trucks, which are delivered to Kochergen Farms for composting and land application.

4.17.1.5 Electric Power, Natural Gas and Telecommunications

Electricity. The City of Fresno receives its electricity from Pacific Gas and Electric (PG&E). PG&E provides electrical service to business and residents throughout the City via underground and above-ground service lines. PG&E owns and maintains all service and transmission lines in the City and operates several electrical substations throughout Fresno. According to the California Energy Commission (CEC), total electricity consumption in the PG&E service area in 2022 was 77,887 gigawatt hours (GWh) (77,886,999,998 kilowatt-hours [kWh]).[6] Total electricity consumption in Fresno County in 2022 was 8,3484.4 GWh (83,484,400,000 KWh).[7]

Natural Gas. PG&E is the natural gas service provider in the City of Fresno. PG&E owns and maintain several natural gas transmission lines in the City that feed local distribution lines that connect to individual service lines. PG&E is the natural gas service provider for the City of Fresno. According to the CEC, total natural gas consumption in the PG&E service area in 2022 was 4,421.6 million therms.[8] Total natural gas consumption in Fresno County in 2022 was 319.4 million therms.[9]

Telecommunications. Several providers provide telecommunication services to the City of Fresno. AT&T is the largest provider of cellular and fixed telephone services. Telephone lines are located throughout the City.

5 CalRecycle. SWIS Facility/Site Summary. City Of Clovis Landfill (10-AA-0004). Website: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/4529?siteID=347 (accessed March 25, 2025).

6 CEC. 2022a. Electricity Consumption by Entity. Website: http://www.ecdms.energy.ca.gov/elecbyutil.aspx (accessed March 25, 2025).

7 CEC. 2022b. Electricity Consumption by County. Website: https://ecdms.energy.ca.gov/elecbycounty.aspx (accessed March 25, 2025).

8 CEC. 2022c. Gas Consumption by Entity. Website: https://ecdms.energy.ca.gov/gasbyutil.aspx (accessed June 2025).

9 CEC. 2022d Gas Consumption by County. Website: https://ecdms.energy.ca.gov/gasbycounty.aspx (accessed June 2025).

4.17.2 Regulatory Setting

4.17.2.1 Federal Policies and Regulations

Clean Water Act. The Federal Clean Water Act (CWA) establishes regulatory requirements for potable water supplies including raw and treated water quality criteria. The County would be required to monitor water quality and conform to the regulatory requirements of the CWA.

Safe Drinking Water Act. The Federal Safe Drinking Water Act (SDWA) is enforced by the EPA and sets standards for drinking water quality and oversees the states, localities, and water suppliers who implement those standards. SDWA requires many actions to protect drinking water and its sources including rivers, lakes, and groundwater.

4.17.2.2 State Policies and Regulations

Urban Water Management Planning Act. The Urban Water Management Planning Act of 1983, California Water Code Sections 10610 et seq., requires publicly or privately owned water suppliers that provide more than 3,000 acre-feet (AF) of water annually or supply more than 3,000 customers to prepare a plan that:

- Plans for water supply and assesses reliability of each source of water over a 20-year period in 5-year increments.
- Identifies and quantifies adequate water supplies, including recycled water, for existing and future demands, in normal, single-dry, and multiple-dry years.
- Implements conservation and the efficient use of urban water supplies. Significant new requirements for quantified demand reductions have been added by the Water Conservation Act of 2009 (Senate Bill 7 of Special Extended Session 7 [SBX7-7]), which amends the act and adds new water conservation provisions to the Water Code

Senate Bills 610 and 221, Water Supply Planning. To assist water suppliers, cities, and counties in integrated water and land use planning, the state passed Senate Bill (SB) 610 (Chapter 643, Statutes of 2001) and SB 221 (Chapter 642, Statutes of 2001), effective January 1, 2002. SB 610 and SB 221 improve the link between information of water supply availability and certain land use decisions made by cities and counties. SB 610 and SB 221 are companion measures that promote more collaborative planning between local water suppliers and cities and counties. Both statutes require detailed information regarding water availability to be provided to city and county decision makers prior to approval of specified large development projects. This detailed information must be included in the administrative record as the evidentiary basis for an approval action by the city or county on such projects. The statutes recognize local control and decision making regarding the availability of water for projects and the approval of projects. Under SB 610, water supply assessments (WSA) must be furnished to local governments for inclusion in any environmental documentation for certain projects subject to CEQA, as defined in Water Code Section 10912[a].

Under SB 221, approval by a city or county of certain residential subdivisions requires an affirmative verification of sufficient water supply. SB 221 is intended as a fail-safe mechanism to ensure that

collaboration on finding the needed water supplies to serve a new large subdivision occurs before construction begins.

The Urban Water Management Planning Act states that every urban water supplier that provides water to 3,000 or more customers or provides over 3,000 AF of water annually should make every effort to ensure the appropriate level of reliability in its water service to meet the needs of its various categories of customers during normal, dry, and multiple dry years. Both SB 610 and SB 221 identify the Urban Water Management Plan (UWMP) as a planning document that can be used by a water supplier to meet the standards in both statutes. Thorough and complete UWMPs are foundations for water suppliers to fulfill the specific requirements of these two statutes, and they are important source documents for cities and counties as they update their general plans. Conversely, general plans are source documents as water suppliers update the UWMPs. These planning documents are linked, and their accuracy and usefulness are interdependent.

Additionally, pursuant to the California Water Code Section 10632, urban water suppliers that serve more than 3,000 AF per year or have more than 3,000 connections are required to prepare and adopt a standalone Water Shortage Contingency Plan (WSCP) as part of its Urban Water Management Plan. A WSCP is a detailed plan on how an urban water supplier intends to respond to foreseeable and unforeseeable water shortages. A water shortage occurs when the water supply is reduced to a level that cannot support typical demand at any given time. The WSCP is used to provide guidance by identifying response actions to allow for responsible management of any water shortage with predictability and accountability. Preparation provides the tools to maintain reliable supplies and reduce the impacts of supply interruptions due to extended drought and catastrophic supply interruptions.

AB 3030, California Groundwater Management Act. The Groundwater Management Act of the California Water Code (AB 3030) provides guidance for applicable local agencies to develop a voluntary Groundwater Management Plan in state-designated groundwater basins.

Senate Bill 1383, Short-lived Climate Pollutants. In September 2016, Governor Edmund Brown Jr. set methane emissions reduction targets for California (SB 1383 Lara, Chapter 395, Statutes of 2016) in a statewide effort to reduce emissions of short-lived climate pollutants (SLCP). The targets must:

- Reduce organic waste disposal 50% by 2020 and 75% by 2025.
- Rescue for people to eat at least 20% of currently disposed surplus food by 2025.

SB 1383 requires counties to take the lead collaborating with the jurisdictions located within the county in planning for the necessary organic waste recycling and food recovery capacity needed to divert organic waste from landfills into recycling activities and food recovery organizations.

California Green Building Standards Code—Part 11, Title 24 (CALGreen). CALGreen requires covered projects to recycle and/or salvage for reuse a minimum 65 percent of the nonhazardous construction and demolition waste or meet a local construction and demolition waste management ordinance, whichever is more stringent.

Assembly Bill 939, California Integrated Waste Management Act. California's Integrated Waste Management Act of 1989 requires cities and counties to reduce the amount of waste disposed of in landfills. The Local Government Construction and Demolition (C&D) Guide of 2002 (SB 1374) amended this act to include construction and demolition material. Fresno County created the County of Fresno's Construction and Demolition (C&D) Debris Recycling Program to fulfill requirements under these bills.

Beginning January 1, 2014, the County of Fresno required permit applicants to submit a Waste Management Plan for approval prior to issuance of permit for projects. The Waste Management Plan required as part of Fresno County's C&D Debris Recycling Program is designed to assist County compliance with State mandates, and to provide builders with a means of documenting the waste reduction requirements included in the California Green Building Standards Code (CALGreen).

California Green Building Standards Code. Section 5.408, Construction Waste Reduction, Disposal, and Recycling, of CALGreen (Title 24, California Code of Regulations, Part 11) requires at least 50 percent of nonhazardous construction and demolition waste from non-residential construction operations be recycled and/or salvaged for reuse. CALGreen is updated on a three-year cycle; the 2019 CALGreen took effect on January 1, 2020.

Assembly Bill 1826. Assembly Bill 1826 (AB 1826) (California Public Resources Code Sections 42649.8 et seq.) requires recycling of organic matter by businesses generating such wastes in amounts over certain thresholds. AB 1826 also requires that local jurisdictions implement an organic waste recycling program to divert organic waste generated by businesses and multi-family developments that consist of five or more units.

Water Discharge Requirements. The Central Valley Regional Water Quality Control Board (RWQCB) typically requires a Waste Discharge Requirements (WDR) permit for any facility or person discharging or proposing to discharge waste that could affect the quality of the waters of the state, other than into a community sewer system. Those discharging pollutants (or proposing to discharge pollutants) into surface waters must obtain an National Pollutant Discharge Elimination System (NPDES) permit from the Central Valley RWQCB.

The NPDES serves as the WDR. For other types of discharges, such as those affecting groundwater or in a diffused manner (e.g., erosion from soil disturbance or waste discharges to land), a Report of Waste Discharge must be filed with the Central Valley RWQCB in order to obtain a WDR. For specific situations, the Central Valley RWQCB may waive the requirement to obtain a WDR for discharges to land or may determine that a proposed discharge can be permitted more effectively through enrollment in a general NPDES permit or general WDR.

4.17.2.3 Local Policies and Regulations

City of Fresno General Plan. The City of Fresno's General Plan Public Utilities and Services Element includes objectives and policies that relate to public services. The following policies are applicable to the proposed project:

- **Policy PU-8-b: Potable Water Supply and Cost Recovery.** Prepare for provision of increased potable water capacity (including surface water treatment capacity) in a timely manner to facilitate planned urban development consistent with the General Plan. Accommodate increase in water demand from the existing community with the capital costs and benefits allocated equitably and fairly between existing users and new users, as authorized by law, and recognizing the differences in terms of quantity, quality and reliability of the various types of water in the City's portfolio.

- **Policy PU-8-c: Conditions of Approval.** Set appropriate conditions of approval for each new development proposal to ensure that the necessary potable water production and supply facilities and water resources are in place prior to occupancy.

- **Policy PU-8-g: Review Project Impact on Supply.** Mitigate the effects of development and capital improvement projects on the long-range water budget to ensure an adequate water supply for current and future uses.

- **Policy PU-7-a: Reduce Wastewater.** Identify and consider implementing water conservation standards and other programs and policies, as determined appropriate, to reduce wastewater flows.

- **Policy PU-7-b: Reduce Stormwater Leakage.** Reduce storm water infiltration into the sewer collection system, where feasible, through a program of replacing old and deteriorated sewer collection pipeline; eliminating existing stormwater sewer cut-ins to the sanitary sewer system; and avoiding any new sewer cut-ins except when required to protect health and safety.

- **Policy PU-9-a: New Techniques.** Continue to collaborate with affected stakeholders and partners to identify and support programs and new techniques of solid waste disposal, such as recycling, composting, waste to energy technology, and waste separation, to reduce the volume and toxicity of solid wastes that must be sent to landfill facilities.

- **Policy PU-9-b: Compliance with State Law.** Continue to pursue programs to maintain conformance with the Solid Waste Management Act of 1989 or as otherwise required by law and mandated diversion goals.

4.17.3 Impacts and Mitigation Measures

The following section presents a discussion of the impacts related to utilities and service systems that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds to determine if an impact is significant. The latter part of this section presents the impacts associated with implementation of the proposed project and the recommended mitigation measures, if required. Mitigation measures are recommended, as appropriate, for significant impacts to eliminate or reduce them to a less-than-significant level. Cumulative impacts are also addressed.

4.17.3.1 Significance Criteria

The thresholds for impacts related to utilities and service systems used in this analysis are consistent with Appendix G of the State CEQA Guidelines. Development of the proposed project would result in a significant impact related to utilities and service systems if it would:

a. 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 effect;

b. Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years;

c. Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments;

d. 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

e. Fail to comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

4.17.3.2 Project Impacts

The following discussion describes the potential impacts related to utilities and service systems that could result from implementation of the proposed project.

UTL-1 The project would not require nor 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.

The proposed project would provide a funding mechanism for future VMT-reducing improvement projects in the City. These improvements would primarily be transportation-related improvements, and would not involve land use development (e.g., new residential or non-residential development). For example, development of widened sidewalks, multi-purpose paths, and pedestrian refuge islands, would not result in increased demand for water, or increase the generation of wastewater or stormwater drainage. Furthermore, increases in demand for electric power, natural gas, and telecommunications are expected to be nominal based on the proposed improvements. Overall, the proposed program itself would not result in increased demand and thus, would not require or result in the relocation or construction of new or expanded infrastructure. Impacts in this regard would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

UTL-2 The project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.

The proposed project would provide a funding mechanism for future VMT-reducing improvement projects in Fresno. These improvements would primarily be transportation-related improvements, and would not involve land use development (e.g., new residential or non-residential development). For example, development of widened sidewalks, multi-purpose paths, and pedestrian refuge islands, would not result in increased water demand upon project completion. Nominal water usage would be required during construction of the identified improvements. However, no operational water usage would occur. Overall, the proposed program itself would not result in any water demand and thus, would not require or result in the relocation or construction of new or expanded water infrastructure. Impacts in this regard would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

UTL-3 The project would not result in a determination by the wastewater treatment provider, which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

Potential VMT-reducing improvements funded by the proposed program would primarily consist of individual transportation-related improvement projects, bus routes, and other improvements that do not involve land development. For example, potential improvements may include development of pedestrian safety enhancements, new bus routes, intermodal signage and Class IV bikeways. Such improvements would not generate wastewater. Thus, the program and associated physical improvements would not generate wastewater or require construction of new or expanded wastewater collection or treatment facilities. Impacts in this regard would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

UTL-4 The project would not 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.

Future transportation improvements accommodated by the proposed program would not generate solid waste through implementation of the proposed program. Construction activities may generate nominal amounts of construction waste from demolition, excavation, and/or grading activities and thus, would result in one-time construction-related solid waste. However, these activities would be nominal and short-term, and would not exceed the maximum daily throughput or remaining capacities of either the American Avenue Landfill or the Clovis Landfill. Thus, as proposed, the VMT Reduction Program itself would not result in an increase in the overall amount of solid waste generated by the City and impacts would be less than significant in this regard.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

UTL-5 The project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

As stated above, future transportation improvements accommodated by the proposed program would not generate solid waste upon project completion. Construction activities may generate nominal amounts of construction waste from demolition, excavation, and/or grading activities and thus, would result in one-time construction-related solid waste. However, these activities would be nominal and short-term, and would not exceed the maximum daily throughput or remaining capacities of either the American Avenue Landfill or the Clovis Landfill. Thus, as proposed, the VMT Reduction Program itself would not result in an increase in the overall amount of solid waste generated by in Fresno and impacts would be less than significant in this regard.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

4.17.3.3 Cumulative Impacts

UTL-6 The project, in combination with other projects, would not contribute to a significant cumulative impact related to utilities and service systems.

Water. Cumulative projects developed in accordance with General Plan buildout would increase demand for water and could adversely impact existing water supply and facilities. However, cumulative projects would be required to comply with existing regulations pertaining to water supply and conveyance. If applicable, cumulative projects may be required to prepare a Water Supply Assessment to estimate project-specific water demands and to determine whether the applicable water purveyor can accommodate the project's demands. Similar to the potential transportation improvements associated with the VMT Reduction Program, cumulative projects would also be required to undergo project-specific environmental review under CEQA and the City's discretionary review process. As concluded above, the proposed project would result in a less than significant impact in this regard and thus, would not cumulatively contribute towards potentially significant impacts in conjunction with related projects.

Wastewater. Future cumulative projects developed in accordance with the General Plan would be required to undergo project-specific environmental review under CEQA and the City's discretionary review process to determine potential effects to wastewater treatment facilities. Additionally, similar to future transportation improvements funded by the proposed program, cumulative projects would be required to comply with Federal and local regulations regarding wastewater treatment. As stated, future transportation improvement projects would result in less than significant impacts to wastewater services and infrastructure, and would be required to undergo separate environmental review and conform with established regulatory requirements. Thus, cumulative impacts in this regard would be less than significant.**Stormwater.**Future cumulative projects developed in

accordance with the General Plan would be required to undergo project-specific environmental review under CEQA and the City's discretionary review process to determine project-specific impacts to existing storm drainage facilities. Similar to future transportation improvements funded by the proposed program, cumulative projects would be required to comply with Federal, State, and local regulations and policies. As stated, future transportation improvement projects would result in less than significant impacts to storm drainage facilities, and would be required to undergo separate environmental review and conform with established regulatory requirements. Thus, cumulative impacts in this regard would be less than significant.

Solid Waste. Future cumulative development projects developed in accordance with the General Plan would be required to undergo project-specific environmental review under CEQA and the City's discretionary review process to determine project-specific impacts related to solid waste generation. Similar to future transportation improvements funded by the proposed program, cumulative projects would be required to comply with existing regulations and policies, including AB 939 and AB 341 (related to diverting solid waste from landfills), AB 1826 (related to recycling organic matter), CALGreen Section 5.408, Construction Waste Reduction, Disposal, and Recycling (related to recycling construction and demolition waste). As stated, all future transportation improvements funded by the proposed program would be required to undergo separate environmental review under CEQA and comply with existing regulations regarding solid waste. Thus, cumulative impacts in this regard would be less than significant.

Electric Power, Natural Gas and Telecommunications. Future cumulative projects developed in accordance with the General Plan would be required to undergo project-specific environmental review under CEQA and the City's discretionary review process to determine project-specific impacts to existing dry utilities. Similar to future transportation improvements funded by the proposed program, cumulative developments may increase demand for electricity, natural gas, and telecommunication services. However, cumulative projects would be required to undergo environmental review under CEQA to determine project-level impacts to dry utilities and to identify any required mitigation. Additionally, cumulative developments would be required to pay connection fees to service providers receive electricity, natural gas, and telecommunication services, respectively.

As stated, all future transportation improvements funded by the proposed program would be required to undergo separate environmental review under CEQA and comply with existing regulations regarding electricity. Thus, cumulative impacts in this regard would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

WILDFIRE

This section provides a discussion of the existing environmental setting of potential wildfire areas in Fresno and in the surrounding area, and evaluates the potential impacts that could result from implementation of the proposed Fresno VMT Reduction Program.

4.18.1 Existing Environmental Setting

The study area for project impacts regarding wildfire is the Planning Area because potential development under the proposed project is limited to areas within the Planning Area. The Planning Area established by the City includes all areas within the City's current city limits, including the Fresno-Clovis Regional Wastewater Reclamation Facility (RWRF), the areas within the current Sphere of Influence (SOI), and an area north of the most northeasterly portion of the city (referred to as the North Area). The Planning Area is located within the Central Valley, and is relatively flat. The majority of the Planning Area occurs as developed properties or agricultural lands. Similar uses surround the Planning Area within the city of Clovis to the east, and mostly agricultural properties to the north, west, and south. The Sierra Nevada foothills to the north and east of the Planning Area and the city of Clovis provide the nearest areas where large expanses of undeveloped properties occur. Because of the topography and the distance between the developed portions of the Planning Area and undeveloped areas, the primary fire hazard concern within the Planning Area consists of the potential for structure fires in developed areas.

According to the California Department of Forestry and Fire Protection's (CAL FIRE) Fire and Resource Assessment Program, the Planning Area does not contain any lands within the State Responsibility Area (SRA) or lands classified as Very High Fire Hazard Severity Zone (VHFHSZ) within the Local Responsibility Area (LRA). Some areas along the San Joaquin River Bluff area at the northern boundary of the Planning Area are prone to wildfires due to relatively steep terrain and vegetation; CAL FIRE classifies these areas as Moderate Fire Hazard Severity Zone within the LRA.

4.18.2 Regulatory Setting

4.18.2.1 Federal Policies and Regulations

No federal policies or regulations pertaining to wildfire are applicable to the proposed project.

4.18.2.2 State Policies and Regulations

California Department of Forestry and Fire Protection. The California Department of Forestry and Fire Protection (CAL FIRE) publishes maps that predict the threat of fire for each county within the State. Local Responsibility Areas and State or Federal Responsibility Areas are classified as either very high fire hazard severity zones (VHFHSZ) or non-VHFHSZ based on factors including fuel availability, topography, fire history, and climate. The 2012 Strategic Fire Plan for California was generated by CAL FIRE to provide guidelines and objectives in order to account for associated fire impacts.

California Fire Code. Section 10-50100 of the City's Municipal Code adopts the California Fire Code by reference. The California Fire Code 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: 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 Building Code. Section 11-101 of the City's Municipal Code adopts the California Building Code (CBC) by reference. The California Code of Regulations (CCR), Title 24, Part 2, of the CBC, provides California Building Code minimum standards for building design in the state. Local codes are permitted to be more restrictive than Title 24, but not less restrictive. The procedures and limitations for the design of structures are based on site characteristics, occupancy type, configuration, structural system height, and seismic zoning. Construction activities are subject to occupational safety standards for excavation, shoring, and trenching and specified in California Occupational Safety and Health Administration (Cal/OSHA) regulations (CCR, Title 8).

California Health and Safety Code §13000 et seq. and California Building Code (CBC). State fire regulations are set forth in §13000 et seq. of the California Health and Safety Code, which is divided into "Fires and Fire Protection" and "Buildings Used by the Public." The regulations provide for the enforcement of the CBC and mandate the abatement of fire hazards.

Executive Order N-05-19. On January 9, 2019, Governor Gavin Newsom announced an Executive Order (EO) that requires CAL FIRE and other State agencies to compile policy and regulatory recommendations concerning wildfire mitigation, emphasizing environmental sustainability and public health. The EO requires the incorporation of socioeconomic analysis when conducting risk management of wildfires and mandates that agencies identify geographic areas with populations that are more vulnerable to the impacts of wildfires.

4.18.2.3 Local Policies and Regulations

City of Fresno General Plan. The General Plan is a set of policies and programs that form a blueprint for the physical development of the city. The following General Plan policies related to wildfire are applicable to the proposed project:

> **Policy NS-6-a: County Multi-Jurisdiction Hazard Mitigation Plan.** Adopt and implement the Fresno County Multi-Jurisdiction Hazard Mitigation Plan and City of Fresno Local Hazard Mitigation Plan Annex.
>
> **Policy NS-6-e: Critical Use Facilities.** Ensure critical use facilities (e.g., City Hall, police and fire stations, schools, hospitals, public assembly facilities, transportation services) and other structures that are important to protecting health and safety in the community remain operational during an emergency.
>
> - Site and design these facilities to minimize their exposure and susceptibility to flooding, seismic and geological effects, fire, and explosions.
>
> - Work with the owners and operators of critical use facilities to ensure they can provide alternate sources of electricity, water, and sewerage in the event that regular utilities are interrupted in a disaster.

Policy NS-6-f: Emergency Vehicle Access. Require adequate access for emergency vehicles in all new development, including adequate widths, turning radii, hard standing areas, and vertical clearance.

Policy PU-2-e: Service Standards. Strive to achieve a community wide risk management plan that include the following service level objectives 90 percent of the time:

- *First Unit on Scene* – First fire unit arriving with minimum of three firefighters within 5 minutes and 20 seconds from the time the unit was alerted to the emergency incident.

- *Effective Response Force* – Provide sufficient number of firefighters on the scene of an emergency within 9 minutes and 20 seconds from the time of unit alert to arrival. The effective response force is measured as 15 firefighters for low risk fire incidents and 21 firefighters for high risk fire incidents and is the number of personnel necessary to complete specific tasks required to contain and control fire minimizing loss of life and property.

Policy PU-3-d: Review All Development Applications. Continue Fire Department review of development applications, provide comments and recommend conditions of approval that will ensure adequate on-site and off-site fire protection systems and features are provided.

City of Fresno Emergency Operation Plan. The California Emergency Services Act requires cities to prepare and maintain an emergency plan for emergencies that are natural or caused by man. The City's adopted Emergency Operations Plan (EOP) plans for emergencies including natural hazards. The EOP does not designate any evacuation routes within the Planning Area.

County of Fresno Multi-Jurisdictional Local Hazard Mitigation Plan. The purpose of a Local Hazard Mitigation Plan is to reduce or eliminate long-term risk to human life and property resulting from hazards. A local hazard mitigation plan recognizes risks before they occur, as well as identifies resources, information, and strategies for emergency response. Fresno County, with participation from 17 jurisdictions, is the lead agency on the Multi-Jurisdictional Local Hazard Mitigation Plan (MHMP). In 2018, the Fresno County Board of Supervisors adopted the MHMP, which includes a portion listing information most relevant to the City in the areas of health, infrastructure, housing, government, environment, and land use.

4.18.3 Impacts and Mitigation Measures

The following section presents a discussion of the impacts related to wildfire that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds to determine if an impact is significant. The latter part of this section presents the impacts associated with implementation of the proposed project and the recommended mitigation measures, if required. Mitigation measures are recommended, as appropriate, for significant impacts to eliminate or reduce them to a less-than-significant level. Cumulative impacts are also addressed.

4.18.3.1 Significance Criteria

The thresholds for impacts related to utilities and service systems used in this analysis are consistent with Appendix G of the State CEQA Guidelines. Development of the proposed project would result in a significant impact related to wildfire if it would:

a. Substantially impair an adopted emergency response plan or emergency evacuation plan.

b. 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.

c. 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.

d. 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.

4.18.3.2 Project Impacts

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

WF-1 The proposed project would not impair an adopted emergency response plan or emergency evacuation plan.

The proposed project consists of the adoption of a VMT Reduction Program which aims to establish mitigation for future projects that exceed the City's VMT thresholds in the form of a mitigation bank. The program would identify, quantify, and prioritize applicable mitigation measures and relevant VMT-reducing projects within Fresno to be funded by the proposed mitigation bank.

The California Emergency Services Act (Government Code Section 8550-8668) requires cities to prepare and maintain an Emergency Plan for natural, manmade, or war-caused emergencies that result in conditions of disaster or extreme peril to life. While the City does have an adopted Emergency Operations Plan (EOP), the EOP does not designate specific evacuation routes.

The proposed project would not result in any physical improvements or change the distribution or intensity of the land uses within the Planning Area. As such, the proposed project would not impact any existing roadways in Fresno that could be used as evacuation routes.

The adoption of the proposed VMT Reduction Program would support future multi-modal or transportation improvements in accordance with the program. These future VMT-reducing projects identified by the VMT Reduction Program would be required to conduct project-specific environmental analyses to assess potential impacts to evacuation in Fresno. However, although construction of these future improvements could result in temporary effects to circulation in

Planning Area, VMT-reducing improvements associated with the project would improve vehicle circulation within the Planning Area once built.

Therefore, the proposed project would not impair implementation of an adopted emergency response plan or emergency evacuation plan, and the impact would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

WF-2 The proposed project would not, 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.

According to CAL FIRE's Fire and Resource Assessment Program, the Planning Area does not contain any lands within Fresno County's State Responsibility Area (SRA) or lands classified as VHFHSZ within the City's Local Responsibility Area (LRA). Some small areas along the San Joaquin River Bluff area in northern Fresno are classified as Moderate Fire Hazard Severity Zones within the LRA.[1]

The proposed project consists of the adoption of a VMT Reduction Program which aims to establish mitigation for future projects that exceed the City's VMT thresholds in the form of a mitigation bank. The proposed project would not result in physical improvements or changes in the distribution or intensity of the land uses within the Planning Area. Additionally, the Planning Area does not contain any lands within the SRA or lands classified as VHFHSZ within the LRA. As such, the proposed project would not exacerbate wildfire risks or expose people to wildfires.

However, the adoption of the proposed VMT Reduction Program would support future multi-modal or transportation improvements in accordance with the program. These future VMT-reducing projects identified by the VMT Reduction Program would be required to conduct project-specific environmental analyses to assess potential impacts related to wildfires at the time they are proposed. Future projects would also be required to comply with all of the City's requirements for fire safety, including compliance with the Fresno Fire Department's project application review process and the City's General Plan Policies PU-3-a, Policy PU-3-b, Policy PU-3-d, Policy PU-3-e, Policy PU-3-f and Policy PU-3-g, as applicable. With compliance with the City's fire safety policies, potential impacts would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

WF-3 The proposed project would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other

[1] 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 June 2025).

utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.

See impacts WF-1 and WF-2, above. The proposed project does not require the installation or maintenance of associated infrastructure (including roads, fuel breaks, emergency water sources, power lines, or other utilities) that would exacerbate fire risk or that would result in impacts to the environment. Additionally, the Planning Area does not contain any lands within the SRA or lands classified as VHFHSZ within the LRA.

Future projects identified by the proposed VMT Reduction Program would be required to prepare project-specific environmental analyses to assess potential fire risk and environmental impacts related to installation or maintenance of infrastructure. As such, project impacts would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

WF-4 The proposed project would not 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.

See impact WF-1, WF-2, and WF-3, above. According to CAL FIRE's Fire and Resource Assessment Program, the Planning Area does not contain any lands within the SRA or lands classified as VHFHSZ within the LRA. Additionally, the proposed project would not result in physical improvements or changes in the distribution or intensity of the land uses within the Planning Area. As such, the proposed project would not expose people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes.

However, the adoption of the proposed VMT Reduction Program would support future multi-modal or transportation improvements in accordance with the program. These future VMT-reducing projects identified by the VMT Reduction Program would be required to conduct project-specific environmental analyses to assess potential impacts related to wildfires at the time they are proposed. Further, future projects would also be required to comply with all of the City's requirements for fire safety, including compliance with the Fresno Fire Department's project application review process and the City's General Plan Policies PU-3-a, Policy PU-3-b, Policy PU-3-d, Policy PU-3-e, Policy PU-3-f and Policy PU-3-g, as applicable.

Therefore, project 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 less than significant. No mitigation would be required.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

4.18.3.3 Cumulative Impacts

The study area for the analysis of cumulative wildfire impacts is the Planning Area as established by the City's General Plan and the portions of Fresno county located outside the Planning Area as well as portions of the city of Clovis and Madera County that are near the Planning Area and could contribute to wildfire risks.

According to CAL FIRE's Fire and Resource Assessment Program, the Planning Area does not contain any lands within the SRA or lands classified as VHFHSZ within the LRA. The County of Fresno SRA lands closest to the Planning Area that are classified as VHFHSZ are located approximately 20 miles to the northeast near Pine Flat Lake; the County of Fresno LRA lands closest to the Planning Area that are classified as VHFHSZ are located approximately 30 miles to the south near the city of Huron. The County of Madera SRA lands closest to the Planning Area that are classified as VHFHSZ are located approximately 25 miles north near the community of Coarsegold; the County of Madera LRA does not contain any land classified as VHFHSZ. The city of Clovis, which is entirely in the LRA, does not contain any land classified as VHFHSZ.

Since the Planning Area and surrounding areas do not contain any lands classified as VHFHSZ, and because no potentially significant impacts related to wildfires have been identified, cumulative impacts would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

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5.0 CEQA-REQUIRED ASSESSMENT CONCLUSIONS

As required by CEQA, this chapter discusses the following types of impacts that could result from implementation of the proposed project: growth-inducing impacts; significant irreversible changes; effects found not to be significant; and significant unavoidable effects.

5.1 GROWTH INDUCEMENT

This section summarizes the proposed project's potential growth-inducing impacts on the surrounding community. A project is considered growth-inducing if it would directly or indirectly foster substantial economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. 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 only sparsely developed or are underdeveloped. Typically, development projects on sites that are designated for development and surrounded by existing suburban uses are not considered adversely growth-inducing because growth in areas that already have development and infrastructure available to serve new development are generally considered environmentally beneficial.

Section 15126.2(e) of the CEQA Guidelines requires that an EIR evaluate the growth inducing impacts of a proposed action:

> Discuss the way in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects that would remove obstacles to population growth (a major expansion of a wastewater treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also, discuss the characteristic of some projects, which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

There are two types of growth inducing impacts: direct and indirect. To assess the potential for growth inducing impacts, the project characteristics that may encourage and facilitate activities that may individually or cumulatively affect the environment must be evaluated. Growth-inducing impacts can occur when the development of a project imposes new burdens on a community by directly inducing population growth, or by leading to the construction of additional developments in the same area of the proposed project. Also included in this category are projects that would remove physical obstacles to population growth (such as a new road into an undeveloped area or a wastewater treatment plant with excess capacity that could allow additional new development in the service area). Construction of these types of infrastructure projects cannot be considered isolated from the development they facilitate and serve. Projects that physically remove obstacles to

growth or projects that indirectly induce growth are those that may provide a catalyst for future unrelated development in the area (such as a new residential community that requires additional commercial uses to support residents).

Based on the information provided in CEQA Section 15126.2(e) quoted above, two specific issues must be addressed when determining the growth-inducing impacts of a project:

- **Elimination of Obstacles to Population Growth.** The extent to which additional infrastructure capacity (such as extension of roads, sewer, water infrastructure etc.) or change in regulatory structure (such as a change in policies) will allow additional development; and

- **Economic Growth.** The extent to which a proposed project could result in increased activity in the local economy or the regional economy.

Each of the growth-inducing impacts above are discussed in more detail below.

5.1.1 Elimination of Obstacles to Population Growth

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 (such as 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 therefore, the area would then 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.

Given the nature of future transportation improvements funded by the VMT Reduction Program, such improvements would not significantly increase demands for public services (i.e., fire and police protection, schools, parks and recreational facilities, and libraries) or utility and service systems (i.e., water, wastewater, stormwater, and solid waste). Overall, the proposed project would not establish an essential public service that could remove an impediment to growth.

The VMT-reducing projects that would be implemented under the proposed project would involve additional bicycle lanes, sidewalks, and multi-purpose paths, which would increase multimodal access to areas within Fresno previously accessible to only vehicles (to a large extent). Specifically, transportation improvements implemented outside of areas with low VMT would provide new multimodal access to less urbanized areas.

While the proposed program streamlines Senate Bill (SB) 743 compliance for development projects within the City's Planning Area, the proposed program establishes a mitigation fee for development projects that exceed the City's VMT thresholds under CEQA. As a result, implementation of the VMT Reduction Program could remove a barrier to development within the City's Planning Area. As such, implementation of the proposed project would remove an existing impediment to growth through

the provision of new access to an area and establishment of a mitigation mechanism for future development projects.

5.1.2 Promotion of 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 which 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.

The potential transportation improvements that could be implemented by funding from the proposed VMT Reduction Program would not directly result in economic growth within Fresno. However, the proposed project could indirectly result in economic growth. As previously discussed, the proposed program streamlines SB 743 compliance for development projects within the City's Planning Area that exceed the City's VMT thresholds under CEQA. Future development projects triggering potentially significant VMT impacts would be able to pay an impact fee to reduce such impacts to less-than-significant levels, thereby facilitating and expediting the project entitlement process. As such, the proposed VMT Reduction Program could encourage economic growth and land use development within the City's Planning Area by streamlining the SB 743 compliance process for future developers.

5.2 SIGNIFICANT IRREVERSIBLE CHANGES

As mandated by the CEQA Guidelines, an EIR must address any significant irreversible environmental change that would result from project implementation. According to Section 15126.2(d) of the CEQA Guidelines, such a change would occur if one of the following scenarios is involved:

- The project would involve a large commitment of nonrenewable resources;
- Irreversible damage would result from environmental accidents associated with the project; or
- The proposed consumption of resources is not justified (e.g., the project would result in the wasteful use of energy).

The environmental effects of the proposed project are thoroughly discussed in Section 4.0, Evaluation of Environmental Impacts, and summarized in the Executive Summary.

Future transportation improvements implemented as single projects or as part of larger development projects would consume limited, slowly renewable, and nonrenewable resources. This consumption would occur during each individual project's construction phase and would continue throughout its operational lifetime. Future development would require a commitment of resources including building materials; fuel and operational materials/resources; and transportation of goods and people to and from individual project sites. Construction would require the consumption of resources that are not renewable, or which may renew so slowly as to be considered non-renewable. These resources include, but are not limited to, lumber and other forest products;

aggregate materials used in concrete and asphalt; metals; and water. Fossil fuels such as gasoline and oil would also be consumed in the use of construction vehicles and equipment.

Transportation improvements accommodated through the proposed project would consume resources similar to those currently consumed within Fresno (e.g., energy resources such as electricity and natural gas, petroleum-based fuels required for vehicle trips, fossil fuels, and water). Fossil fuels would represent the primary energy source associated with construction activities, and the existing, finite supplies of these natural resources would be incrementally reduced. As stated, given the nature of the transportation improvements and the overall reduction of VMT through increases in multimodal transportation, operational activities requiring the substantial consumption of natural resources are not anticipated. While some pedestrian improvements, such as pedestrian crosswalk traffic signals or lighting, would require electricity for operations, the electricity use would be minimal. Nonetheless, the proposed project's energy requirements under both construction and operations represent a long-term commitment of essentially non-renewable resources.

Future construction activities associated with future transportation improvements could release hazardous materials into the environment through reasonably foreseeable upset and accident conditions; refer to Section 5.9, Hazards and Hazardous Materials. All potential demolition, grading, and excavation activities would be subject to the established regulatory framework to ensure that hazardous materials are not released into the environment. Compliance with the established regulatory framework would protect against a significant and irreversible environmental change resulting from the accidental release of hazardous materials.

As a result, implementation of the proposed VMT Reduction Program would result in the irretrievable commitment of limited, slowly renewable, and nonrenewable resources, which would limit the availability of these resource quantities for future generations or for other uses. It is noted that the continued use of such resources would be on a relatively small scale in a regional context. Although irreversible environmental changes would result from project implementation, such changes would not be considered significant given the limited scope and scale of the various VMT-reducing improvements that could be funded by the proposed VMT Reduction Program.

5.3 SIGNIFICANT UNAVOIDABLE IMPACTS

The environmental effects of the proposed project, along with recommended mitigation measures, are discussed in detail in Section 4.0, Evaluation of Environmental Impacts, and summarized in the Executive Summary. The following environmental issues were determined to result in less-than-significant impacts, or can be reduced to less-than-significant levels with the incorporation of mitigation measures:

- Aesthetics
- Air Quality (mitigation required)
- Agricultural Resources
- Biological Resources (mitigation required)
- Cultural Resources and Tribal Cultural Resources (mitigation required)
- Energy
- Geology and Soils (mitigation required)

- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise (mitigation required)
- Mineral Resources
- Population and Housing
- Public Services and Recreation
- Utilities and Service Systems
- Wildfire

Section 15126.2(c) of the CEQA Guidelines requires that an EIR describe any significant impacts, including those that can be mitigated but not reduced to less than significant levels, as a result of implementation of the project. The following environmental issues were determined to result in potential significant and unavoidable impacts:

- Transportation – potentially result in significant VMT impacts given the speculative timing of implementation of the proposed project, as well as lack of data regarding effectiveness of VMT reduction measures.

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6.0 ALTERNATIVES TO THE PROPOSED PROJECT

6.1 INTRODUCTION

Section 15126.6(a) of the *California Environmental Quality Act (CEQA) Statue & Guidelines (State CEQA Guidelines)*, Section 15126.6) requires that an Environmental Impact Report (EIR) include a discussion of a reasonable range of project alternatives that would "feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any significant effects of the project, and evaluate the comparative merits of the alternatives." CEQA does not require an EIR to consider every conceivable alternative to a project, but rather it must consider a range of feasible alternatives that would assist decision-makers and the public in evaluating the comparative merits of alternatives to a proposed project. Therefore, this chapter identifies potential alternatives to the proposed VMT Reduction Program (the proposed project) and evaluates them as required by CEQA.

Key provisions of the *State CEQA Guidelines* on alternatives (Section 15126.6[b] through [f]) are summarized below to explain the foundation and legal requirements for the alternatives analysis in the EIR:

- The discussion of alternatives shall focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the Project Objectives or would be more costly (15126.6[b]).

- The specific alternative of "no project" shall also be evaluated along with its impact (15126.6[e][1]). The "no project" analysis shall discuss the existing conditions at the time the Notice of Preparation is published and at the time the environmental analysis is commenced, as well as 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. If the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives (15126.6[e][2]).

- The range of alternatives required in an EIR is governed by the "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project. The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision-making. Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site (or the site is already owned by the proponent) (15126.6[f]).

- For alternative locations, only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR (15126.6[f][2][A]).

- If the lead agency concludes that no feasible alternative locations exist, it must disclose the reasons for this conclusion and should include the reasons in the EIR. For example, in some cases there may be no feasible alternative locations for a geothermal plant or mining project, which must be in close proximity to natural resources at a given location (15126.6[f][2][B]).

- An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative (15126.6[f][3]).

6.2 SELECTION OF ALTERNATIVES

Pursuant to CEQA Guidelines Section 15126.6(a), an EIR shall describe a range of reasonable alternatives to the project which would feasibly attain most of the basic objectives of the project and would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. Only those impacts found significant and unavoidable are relevant in making the final determination of whether an alternative is environmentally superior or inferior to the proposed project. As detailed in Section 4.1 through Section 4.18 of this EIR, upon compliance with existing regulations and mitigation measures, implementation of the VMT Reduction Program would not result in any significant and unavoidable impacts with the exception of transportation impacts related to VMT, as analyzed in Section 4.16, Transportation.

6.2.1 Alternatives Considered but Rejected

In accordance with CEQA Guidelines Section 15126.6(c), an EIR should identify any alternatives that were considered for analysis but rejected as infeasible and briefly explain the reasons for their rejection. According to CEQA Guidelines, among the factors that may be used to eliminate alternatives from detailed consideration are the alternative's failures to meet most of the basic project objectives, the alternative's infeasibility, or the alternative's inability to avoid significant environmental impacts.

- **VMT-Efficient Land Use Plan Alternative.** The VMT-Efficient Land Use Plan Alternative involves updating the existing General Plan Land Use Map to redesignate areas within Fresno predominantly designated as residential areas to employment-based land uses (e.g., mixed-use, commercial, office/professional, and industrial). The intent of updating the Land Use Map to accommodate more employment-based land uses is to attract new job-generating developments within Fresno and thereby reduce Citywide VMT.

- **Additional VMT-Reducing Projects Alternative.** This alternative involves enhancing and expanding the City's list of VMT-reducing projects to be funded by the VMT Reduction Program. The intent of this alternative is to fund more TDM strategies and VMT-reducing projects than currently identified, and thereby further reduce Citywide VMT compared to the proposed project. This would require the City to prepare new planning documents that identify other TDM strategies and projects relevant and feasible to the existing and planned development patterns throughout Fresno. While this alternative could theoretically reduce Citywide VMT more than

the VMT Reduction Program as currently proposed, this alternative would still result in significant and unavoidable VMT impacts due to the fact that only non-exempt projects would be required to pay the mitigation fee and only for the VMT-generated above the established threshold (i.e., there would be insufficient funding to construct the additional VMT-reducing improvements identified under this alternative).

6.3 PROPOSED PROJECT

6.3.1 Project Characteristics

The proposed VMT Reduction Program aims to establish mitigation for future projects that exceed the City's VMT thresholds in the form of a mitigation bank and an Urban Design Calculator (UDC) which could be applied individually or in combination. The mitigation bank would be used to fund VMT-reducing projects throughout Fresno and the UDC would recommend potential VMT reductions for development projects through incorporation of various design elements.

The fee program would identify, quantify, and prioritize applicable mitigation measures, and relevant VMT-reducing projects within Fresno to be funded by the proposed mitigation bank. These projects, which may include active transportation improvements, multi-modal transportation programs, and improved street connectivity, including bicycle, pedestrian and transit facilities, would be subject to future CEQA analysis on a project-by-project basis as they are proposed and as the extent of impacts become known through the design process.

The proposed mitigation fee would be determined through the development of a Nexus Study, which would include technical details on the estimation of various cost components for the proposed mitigation measures for the project and their efficacy on VMT reductions. The Nexus Study would provide justification and nexus between anticipated VMT growth and proposed mitigation measures, costs, and fees.

Additionally, the proposed project would include updating the City's existing UDC for use by individual projects. Projects that would have a significant VMT impact can reduce the project's impact by applying VMT-reducing project design features at the project site. The extent of VMT reduction could be calculated using the UDC as a first step of the VMT Reduction Program prior to participating in the VMT mitigation bank. After applying VMT reductions using UDC, the remaining excess VMT from the project would be used to calculate the project's contribution into the mitigation bank.

6.3.2 Project Objectives

An EIR must only discuss in detail an alternative that is capable of feasibly attaining most of the basic objectives associated with the action, while at the same time avoiding or substantially lessening any of the significant effects associated with the proposed project. Below are the project objectives, as provided in Section 3.4, Project Objectives.

- Streamline the Senate Bill (SB) 743 compliance process for development projects by providing feasible mitigation options to reduce potentially significant VMT impacts.
- Identify funding for future TDM strategies and VMT-reducing projects within Fresno to help reduce Citywide total VMT.
- Contribute towards making Fresno a pedestrian-, bicycle-, and transit-oriented community with active, healthy, and livable spaces.

6.3.3 Significant Unavoidable Impacts of the Proposed Project

As described further in Chapter 1.0, Executive Summary, the proposed project would result in either no impacts or less-than-significant impacts related to aesthetics, agriculture and forestry resources, air quality, energy, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, population and housing, public services and recreation, utilities and service systems, and wildfire.

As described in Chapter 4.0, Evaluation of Environmental Impacts, the proposed project would result in less-than-significant impacts after implementation of mitigation related to biological resources, cultural resources and tribal resources, geology and soils, and noise. The proposed project would result in a significant unavoidable impact related to transportation.

For the purpose of this analysis, it is assumed that all mitigation measures for implementation of the proposed VMT Reduction Program would apply to the project alternatives and similar reductions in impacts would be achieved through such mitigation. Therefore, the following discussion focuses on the ability of the alternatives to reduce project impacts and the potential impacts of the project alternatives related to these issues.

6.4 ALTERNATIVE 1: NO PROJECT ALTERNATIVE

6.4.1 Description

Under the No Project Alternative, the proposed VMT Reduction Program would not be adopted. VMT-reducing transportation improvements currently identified in existing City planning documents as planned but unfunded would continue to be unfunded under this alternative. The identified improvements would not be funded and implemented, and the City would be required to separately identify funding from another source. Additionally, given that the proposed VMT Reduction Program would not be adopted, a mitigation mechanism would not be established to assist future development with reducing potentially significant VMT impacts under CEQA. Similar to existing conditions, future developments that trigger significant VMT impacts under CEQA would be required to prepare Environmental Impact Reports and adopt statements of overriding consideration pursuant to CEQA Guidelines Section 15093.

6.4.2 Environmental Analysis

The No Project Alternative would result in the proposed VMT-reducing projects not receiving funding through the mitigation fee. The VMT-reducing projects identified in the proposed VMT Reduction Program would still be constructed once funding is secured for each project. Similar to

the proposed project, the VMT-reducing projects would still be constructed and the potential impacts related to construction of individual projects may occur.

When compared to the proposed project, this alternative would result in similar environmental impacts because the VMT-reducing projects would still be constructed, just on a far more uncertain timeline. Accordingly, this alternative would result in potentially-significant impacts to biological resources, cultural resources and tribal cultural resources, geology and soils, and noise that would be reduced to less-than-significant levels with implementation of project-specific mitigation measures. With respect to impacts related to VMT, this alternative is far more speculative than the proposed VMT Reduction Program because it would not provide funding to VMT-reducing projects and VMT impacts would be similar, but greater when compared to the proposed VMT Reduction Program.

6.4.3 Overview of Potential Impact/Comparison to Proposed Project

Under the No Project Alternative, the proposed VMT Reduction Program would not fund transportation improvements that could reduce VMT impacts in Fresno. The proposed project would assist in providing funding for future projects that would occur when funding becomes available. The proposed project would not directly result in physical impacts. Similarly, the No Project Alternative would not result in any direct physical impacts. Overall, impacts resulting from the No Project Alternative would be similar to the proposed project, as the significant unavoidable impact related to transportation would continue to occur.

6.4.4 Project Objectives

This alternative would not establish a fee to mitigate VMT impacts in Fresno. By not implementing any of the components included in the proposed VMT Reduction Program, this alternative would not streamline SB 743 compliance for future projects, would not identify funding for TDM strategies and VMT-reducing projects, and would not contribute towards making Fresno a pedestrian-, bicycle-, and transit-oriented community. As a result, this alternative would not achieve any of the project objectives.

6.5 ALTERNATIVE 2: ALL APPLICABLE FEE ALTERNATIVE

6.5.1 Description

All Applicable Fee Alternative would require all future development in Fresno to pay into the proposed VMT Reduction Program. Unlike the proposed project, this alternative would require development projects to pay into the proposed VMT Reduction Program even if the development projects are located in low VMT areas, or areas that would not result in VMT impacts. As a result, this alternative would require all future development projects that generate VMT responsible for addressing Citywide VMT. This alternative would increase funds collected for VMT-reducing projects and would allow for implementation of more VMT-reducing projects and TDM measures than the proposed project.

6.5.2 Environmental Analysis

When compared to the proposed project, this alternative would result in similar environmental impacts because this alternative would implement the proposed VMT Reduction Program. Accordingly, this alternative would result in potentially-significant impacts to biological resources, cultural resources and tribal cultural resources, geology and soils, and noise that would be reduced to less-than-significant levels with implementation of project-specific mitigation measures. Additionally, this alternative would be not incentivize infill development because it would not exempt projects located in low VMT zones from mitigation fees. As a result, this alternative would be inconsistent with the General Plan goal of encouraging infill development.

Similarly, this alternative would result in a significant and unavoidable impact related to transportation with respect to VMT. Because this alternative would result in payment of mitigation fees to address VMT impacts, it is unknown when potential VMT impacts would be reduced because of the uncertainty of the timing. In addition, it is unknown whether the VMT-reducing improvements included under the proposed VMT Reduction Program would be effective.

6.5.3 Overview of Potential Impact/Comparison to Proposed Project

Similar to the proposed project, this alternative would fund VMT-reducing projects in Fresno. However, because this alternative would require contributions from development projects that would not be required to pay mitigation fees under the proposed project, this alternative could result in funding more VMT-reducing improvement projects. As a result, more VMT-reducing projects could be built in a shorter duration. Although the effectiveness of this alternative would be speculative, this alternative would not directly result in physical impacts. Overall, impacts resulting from the All Applicable Fee Alternative would be similar to the proposed project, as the significant unavoidable impact related to transportation would continue to occur.

6.5.4 Project Objectives

This alternative would implement the proposed VMT Reduction Program, but would result in additional funding for VMT-reducing projects. Because this alternative would result in more funding from more development projects, the VMT-reducing improvements identified by the VMT Reduction Program would continue to be funded, and all of the project objectives would be met.

6.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires the identification of an Environmentally Superior Alternative. *State CEQA Guidelines* Section 15126.6(e)(2) states that if the No Project Alternative is the Environmentally Superior Alternative, then the EIR shall also identify an Environmentally Superior Alternative among the other alternatives. Table 6-1 provides, in summary format, a comparison of the level of impacts for each alternative to the proposed project.

The All Applicable Fee Alternative has the least impact on the environment because this alternative would implement the proposed VMT Reduction Project, but would collect additional fees. In addition, the All Applicable Fee Alternative would meet all of the objectives to the same degree as the proposed VMT Reduction Program.

Table 6-1: Comparison of the Environmental Impacts of the Proposed Project and the Project Alternatives

Environmental Topic	Proposed Project Level of Impact After Mitigation	Alternative 1: No Project Alternative	Alternative 2: All Applicable Fee Alternative
Aesthetics	Less Than Significant	Similar	Similar
Agriculture and Forestry Resources	Less Than Significant	Similar	Similar
Air Quality	Less Than Significant	Similar	Similar
Biological Resources	Less Than Significant	Similar	Similar
Cultural Resources and Tribal Cultural Resources	Less Than Significant	Similar	Similar
Energy	Less Than Significant	Similar	Similar
Geology and Soils	Less Than Significant	Similar	Similar
Greenhouse Gas Emissions	Less Than Significant	Similar	Similar
Hazards and Hazardous Materials	Less Than Significant	Similar	Similar
Hydrology and Water Quality	Less Than Significant	Similar	Similar
Land Use and Planning	Less Than Significant	Similar	Similar +
Mineral Resources	Less Than Significant	Similar	Similar
Noise	Less Than Significant	Similar	Similar
Population and Housing	Less Than Significant	Similar	Similar
Public Services and Recreation	Less Than Significant	Similar	Similar
Transportation	Significant and Unavoidable	Similar+	Similar
Utilities and Service Systems	Less Than Significant	Similar	Similar
Wildfire	Less Than Significant	Similar	Similar
Attainment of Project Objectives	*Meets all of the Project Objectives*	*Meets none of the Project Objectives*	*Meets all of the Project Objectives*

Source: LSA (June 2025).
Similar + = Similar, although incrementally greater impacts as compared to the proposed project
VMT = vehicle miles traveled

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