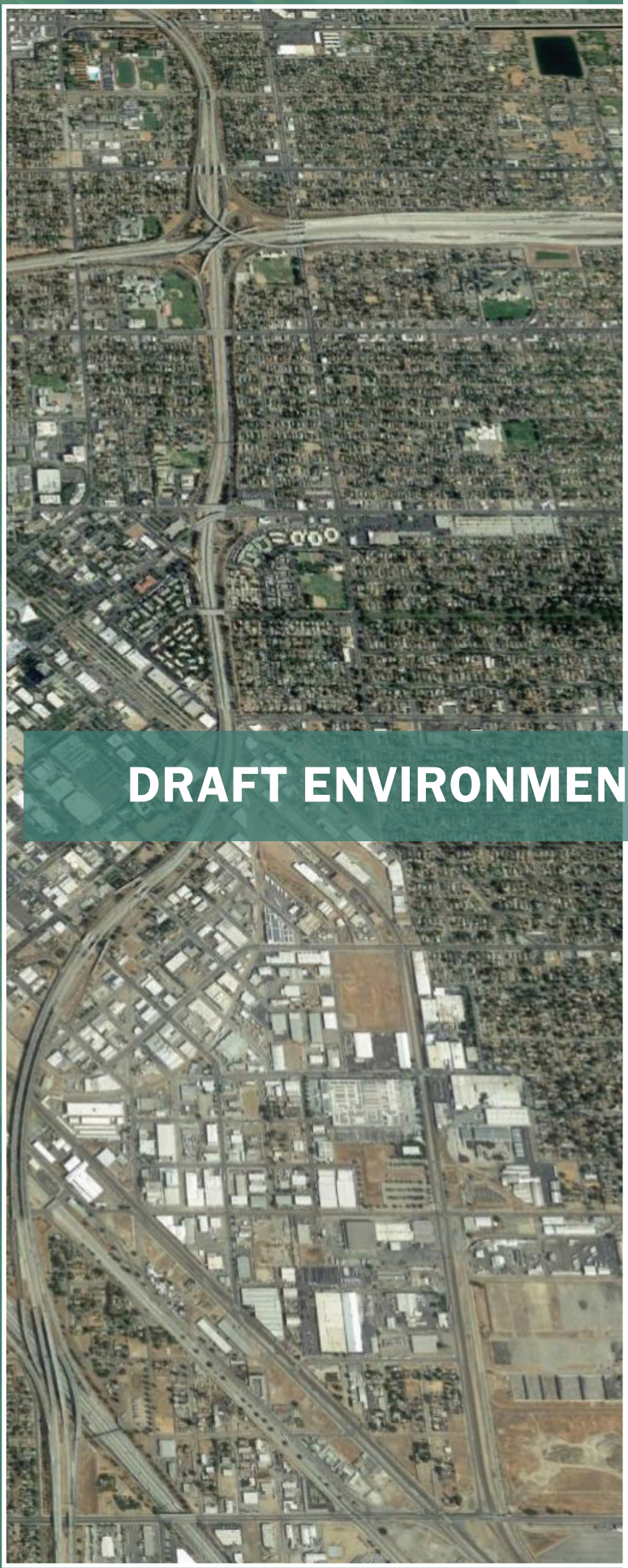
SCH# 2019070123



DRAFT ENVIRONMENTAL IMPACT REPORT

CITY OF FRESNO

For Evaluating the
Proposed Regulation and Permitting
of Commercial Cannabis Activities

Volume I: Chapters 1 through 10

April 2020

City of FRESNO

NOTICE OF AVAILABILITY
DRAFT ENVIRONMENTAL IMPACT REPORT

DATE: April 24, 2020

PROJECT TITLE: Evaluating the Proposed Regulation and Permitting of Commercial Cannabis Activities

LEAD AGENCY: City of Fresno

OVERVIEW: Notice is hereby given that the City of Fresno is seeking written comments on the Draft Environmental Impact Report (DEIR) (SCH# 2019070123) in accordance with the California Environmental Quality Act (CEQA). This notice has been prepared in accordance with CEQA Guidelines Section 15085 and 15087(c), which requires public notification of availability of a Draft EIR.

PROJECT LOCATION: The City of Fresno (City) is located in Fresno County and is situated in the central portion of the San Joaquin Valley, in the State of California. The City encompasses approximately 113 square miles. Fresno is the largest city in Fresno County and has a current estimated population of 536,683 residents. The topography of the City is relatively flat with little topographic variation. It occurs at an elevation of approximately 328 feet above mean sea level (AMSL). The surrounding land is relatively flat with a sharp rise towards the foothills of the Sierra Nevada Mountain Range to the east. State Route (SR) 99 runs northwest-southeast on the western edge of the City, connecting it with Sacramento and Bakersfield. SR-41 runs north-south through the heart of the City, connecting it with Yosemite National Park. SR-168 links the downtown to Clovis, and SR-180 runs east-west within the southern portion of the City.

The northern border of the City is largely defined by the San Joaquin River, which flows to the Sacramento-San Joaquin River Delta and San Francisco Bay. The eastern border of the City mostly abuts the city limits of the City of Clovis. The western border of the City traverses Highway 99 and passes through western rural residential and agricultural lands of the unincorporated county. The southern boundary extends as far south as Malaga Avenue.

The City center is within Township 13 South, Range 20 East, Mount Diablo Baseline and Meridian and the U.S. Geological Survey 7.5 Minute Fresno South Quadrangle. The latitude and longitude of the approximate center of the City site is 36.74077° N, -119.78562° E. The Universal Transverse Mercator (UTM) coordinates for the approximate center are Easting 252,462 meters and Northing 4,070,374 meters, in Zone 11S.

PROJECT DESCRIPTION: The City of Fresno is proposing an amendment to Sections 15-2739 and 15-2739.1 of the Fresno Municipal Code, Article 33 to Chapter 9 of the Fresno Municipal Code, and Article 21 to Chapter 12 of the Fresno Municipal Code, relating to adult use and medicinal cannabis retail business and commercial cannabis business. A detailed Project Description can be found in Chapter 3 of the DEIR.

SIGNIFICANT ENVIRONMENTAL EFFECTS: CEQA Guidelines Section 15087 (c)(4) requires that the Notice of Availability list the significant environmental effects anticipated as a result of the Project. The Draft EIR identified significant and unavoidable impacts in the following areas: **Air Quality** – NOx emissions during construction would result in temporary increases above the established

thresholds. **Greenhouse Gas Emissions** - the proposed Project's preliminary GHG analysis demonstrates that the Project will not meet a 29% reduction in GHG emissions from Business As Usual. Therefore, GHG emissions would be considered significant and unavoidable.

PUBLIC REVIEW PERIOD: April 24, 2020 through June 9, 2020. Due to closures of public facilities in response to COVID-19, the Draft EIR will be available for viewing through online links to the documents as well as additional viewing methods at City Hall.

ADDRESS WHERE COPY OF DRAFT EIR IS AVAILABLE FOR REVIEW: City of Fresno, 2600 Fresno Street, Fresno, CA. Please contact Israel Trejo, Supervising Planner, at (559) 621-8044 or israel.trejo@fresno.gov for information on obtaining a copy of the draft EIR.

WEBSITE WHERE DRAFT EIR CAN BE FOUND FOR REVIEW:
https://www.fresno.gov/darm/planning-development/plans-projects-under-review/#tab-08

Written comments concerning the Draft EIR are due by 5:00 p.m., June 9, 2020 and should be submitted to:
City of Fresno
Israel Trejo, Supervising Planner
2600 Fresno Street, Room 3043
Fresno, CA 93721

Or via email to israel.trejo@fresno.gov

PUBLIC REVIEW PROCESS: CEQA Guidelines Section 15087 describes the public review procedures for a Draft EIR. The Draft EIR will be subject to public review and comment for a period of at least 45 days. The City of Fresno requests that reviewers submit comments on the Draft EIR consistent with the provisions of CEQA Guidelines Section 15087.

According to Section 15202 of the CEQA Guidelines, CEQA does not require formal hearings at any stage of the environmental review process; however, it is typical to consider the EIR and its findings during public hearings required for the associated project. For additional information, please contact Israel Trejo at (559) 621-8044 or israel.trejo@fresno.gov.

Print Form

Appendix C

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #2019070123

Project Title: Evaluating the Proposed Regulation and Permitting of Commercial Cannabis Activities

Lead Agency: City of Fresno
Contact Person: Israel Trejo, Planner III
Mailing Address: 2600 Fresno Street, Room 3043
Phone: (559) 621-8044
City: Fresno Zip: 93721
County: Fresno

Project Location: County: Fresno City/Nearest Community: Fresno
Cross Streets: Citywide Zip Code: Citywide
Longitude/Latitude (degrees, minutes and seconds): 36 ° 740 ′ 77 ″ N / -119 ° 785 ′ 62 ″ W Total Acres:
Assessor's Parcel No.: Citywide Section: Twp.: Range: Base:
Within 2 Miles: State Hwy #: 99, 41, 168, 180 Waterways: San Joaquin River
Airports: Fresno Yosemite Intl, Sierra Sl Railways: Union Pacific Schools: Multiple; Citywide

Document Type:

CEQA: ☐ NOP ☒ Draft EIR NEPA: ☐ NOI Other: ☐ Joint Document
☐ Early Cons ☐ Supplement/Subsequent EIR ☐ EA ☐ Final Document
☐ Neg Dec (Prior SCH No.) ☐ Draft EIS ☐ Other:
☐ Mit Neg Dec Other: ☐ FONSI

Local Action Type:

☐ General Plan Update ☐ Specific Plan ☐ Rezone ☐ Annexation
☐ General Plan Amendment ☐ Master Plan ☐ Prezone ☐ Redevelopment
☐ General Plan Element ☐ Planned Unit Development ☐ Use Permit ☐ Coastal Permit
☐ Community Plan ☐ Site Plan ☐ Land Division (Subdivision, etc.) ☒ Other: Ordinance

Development Type:

☐ Residential: Units Acres
☐ Office: Sq.ft. Acres Employees ☐ Transportation: Type
☐ Commercial: Sq.ft. Acres Employees ☐ Mining: Mineral
☐ Industrial: Sq.ft. Acres Employees ☐ Power: Type MW
☐ Educational: ☐ Waste Treatment: Type MGD
☐ Recreational: ☐ Hazardous Waste: Type
☐ Water Facilities: Type MGD ☒ Other: Ordinance Amendment

Project Issues Discussed in Document:

☒ Aesthetic/Visual ☐ Fiscal ☒ Recreation/Parks ☒ Vegetation
☒ Agricultural Land ☒ Flood Plain/Flooding ☒ Schools/Universities ☒ Water Quality
☒ Air Quality ☒ Forest Land/Fire Hazard ☒ Septic Systems ☒ Water Supply/Groundwater
☒ Archeological/Historical ☒ Geologic/Seismic ☒ Sewer Capacity ☒ Wetland/Riparian
☒ Biological Resources ☒ Minerals ☒ Soil Erosion/Compaction/Grading ☒ Growth Inducement
☐ Coastal Zone ☒ Noise ☒ Solid Waste ☒ Land Use
☒ Drainage/Absorption ☒ Population/Housing Balance ☒ Toxic/Hazardous ☒ Cumulative Effects
☐ Economic/Jobs ☒ Public Services/Facilities ☒ Traffic/Circulation ☒ Other: Energy

Present Land Use/Zoning/General Plan Designation:

Citywide Ordinance Amendment

Project Description: *(please use a separate page if necessary)*

The City of Fresno is proposing an amendment to Sections 15-2739 and 15-2739.1 of the Fresno Municipal Code and amendment to Article 33 to Chapter 9 of the Fresno Municipal Code, relating to adult use and medicinal cannabis retail business and commercial cannabis business.

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Revised 2010

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "**X**".
If you have already sent your document to the agency please denote that with an "**S**".

X	Air Resources Board		Office of Historic Preservation
	Boating & Waterways, Department of		Office of Public School Construction
	California Emergency Management Agency	X	Parks & Recreation, Department of
X	California Highway Patrol		Pesticide Regulation, Department of
X	Caltrans District #6		Public Utilities Commission
	Caltrans Division of Aeronautics	X	Regional WQCB #5
	Caltrans Planning		Resources Agency
	Central Valley Flood Protection Board		Resources Recycling and Recovery, Department of
	Coachella Valley Mtns. Conservancy		S.F. Bay Conservation & Development Comm.
	Coastal Commission		San Gabriel & Lower L.A. Rivers & Mtns. Conservancy
	Colorado River Board		San Joaquin River Conservancy
X	Conservation, Department of		Santa Monica Mtns. Conservancy
X	Corrections, Department of		State Lands Commission
	Delta Protection Commission		SWRCB: Clean Water Grants
X	Education, Department of	X	SWRCB: Water Quality
	Energy Commission		SWRCB: Water Rights
X	Fish & Game Region #4		Tahoe Regional Planning Agency
X	Food & Agriculture, Department of	X	Toxic Substances Control, Department of
	Forestry and Fire Protection, Department of	X	Water Resources, Department of
	General Services, Department of		
X	Health Services, Department of		Other:
	Housing & Community Development		Other:
X	Native American Heritage Commission		

Local Public Review Period (to be filled in by lead agency)

Starting Date April 24, 2020 Ending Date June 9, 2020

Lead Agency (Complete if applicable):

Consulting Firm:
Address:
City/State/Zip:
Contact:
Phone:

Applicant:
Address:
City/State/Zip:
Phone:

Signature of Lead Agency Representative: **Date:** 4-24-20

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

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PUBLIC WORKS

PW/Traffic Planning

PW/Engineering

PW/Engineering

PW/Land Section

FIRE DEPT/FIRE PREV./TECH SVCS

PLANNING

Building and Safety Svcs

Long Range Planning

UTILITIES

DPU/Solid Waste Management

DPU/Utilities Planning and Engineering

DPU/Water Division

DPU Wastewater Mgmt

POLICE DEPARTMENT

Police Dept – Central Area Commander

Police Dept – Northeast Area Commander

Police Dept – Northwest Area Commander

Police Dept – Southeast Area Commander

Police Dept – Southwest Area Commander

FRESNO AIRPORTS

FRESNO AREA EXPRESS

SCHOOL DISTRICTS

Fresno Unified School District

Clovis Unified School District

Central Unified School District

West Fresno/Washington Union School Dist.

COUNCIL DISTRICTS

Councilmember – District 1

Councilmember – District 2

Councilmember – District 3

Councilmember – District 4

Councilmember – District 5

Councilmember – District 6

Councilmember – District 7

PARTNERING AGENCIES

San Joaquin Valley Air Pollution Control Dist.

Fresno Metropolitan Flood Control Dist.

Fresno Irrigation District

Fresno County Environmental Health

PG&E

ABC Office

DRAFT ENVIRONMENTAL IMPACT REPORT

PROPOSED REGULATION AND PERMITTING OF COMMERCIAL CANNABIS ACTIVITIES

Prepared for:

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April 2020

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Project #190215

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CHAPTER 1 - EXECUTIVE SUMMARY

1.1 - Introduction

This Draft Environmental Impact Report (EIR) has been prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts associated with the implementation of Text Amendment No. P19-02978 - Evaluating the Proposed Regulation and Permitting of Commercial Cannabis Activities (State Clearinghouse No. 2019070123). This Draft EIR has been prepared in compliance 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.

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 Text Amendment No. P19-02978 - Evaluating the Proposed Regulation and Permitting of Commercial Cannabis Activities (Project). In addition to identifying potential environmental effects, this Draft EIR also identifies methods by which these impacts can be mitigated, reduced, minimized, or avoided.

The study area for the analysis of project and cumulative impacts is the Fresno city limits, the portions of Fresno County located adjacent to the City, as well as portions of the City of Clovis and the County of Madera that may be impacted by the proposed Project. The applicable cumulative projections include growth projections from the Fresno General Plan, Fresno County General Plan, Madera County General Plan, and buildout projections within the City of Clovis General Plan.

1.2 - Project Summary

1.2.1 - PROJECT LOCATION

The project is located in the incorporated City of Fresno, California. The northern border of the City is largely defined by the San Joaquin River, which flows to the Sacramento-San Joaquin River Delta and San Francisco Bay. The eastern border of the City mostly abuts the city limits of the City of Clovis. The western border of the City traverses State Route (SR)-99 and passes through western rural residential and agricultural lands of the unincorporated County. The southern boundary extends as far south as East Malaga Avenue.

1.2.2 - PROJECT DESCRIPTION

The City of Fresno is proposing an amendment to Sections 15-2739 and 15-2739.1 of the Fresno Municipal Code, Article 33 to Chapter 9 of the Fresno Municipal Code, and Article 21 to Chapter 12 of the Fresno Municipal Code, relating to adult use and medicinal cannabis retail business and commercial cannabis business.

1.3 - Lead Agency, Responsible Agency 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 carrying out or disapproving the project.

The responsible agencies are State and local public agencies other than the lead agency that have authority to carry out or approve a project or that are required to approve a portion of a project for which the lead agency is preparing or has prepared an EIR or Negative Declaration. A complete list of agencies who may have authority as a responsible or trustee agency are listed in Chapter 2.0 – Introduction.

1.4 - Summary of Project Objectives

The Project has the following objectives:

- Regulate commercial cannabis cultivation, manufacturing, distribution, testing and retail sales of cannabis products within the City in a manner consistent with State law, and allow the orderly development and oversight of commercial cannabis cultivation and manufacturing businesses;

- Develop a program that encourages cannabis cultivators, manufacturers, distributors and retail sellers to operate legally and secure necessary permits and licenses to operate in full compliance with City regulations, maximizing the proportion of activities within the City and minimizing unlicensed activities;

- Provide efficiency and clarity in the commercial cannabis cultivation, manufacturing, distribution, testing and retail sales licensing/permit processes, regulations, and standards to facilitate participation and use by applicants;

- Prevent impacts of cannabis cultivation, manufacturing, distribution, and retail sales sites on children and sensitive populations;

- Encourage the commercial cultivation, manufacturing, distribution, testing and retail sales of high-quality local cannabis products that meet the demand for Fresno area cannabis and cannabis products, including the needs of medical patients and their caregivers, as well as adult personal use as authorized under Proposition 64;

- Develop a legal, local cannabis industry to improve the City's tax base in balance with other objectives;

- Ensure compatibility of cultivation, manufacturing, distribution, testing and retail sales sites with surrounding land uses, especially residential neighborhoods, educational facilities, and agriculture operations;

- Minimize adverse effects of commercial cultivation, manufacturing, distribution, testing and retail sales on the natural environment, natural resources and wildlife, as well as effects on water supply and water quality;

- Regulate sites and premises used for commercial cultivation, manufacturing, distribution, testing and retail sales to avoid the risks of criminal activity, degradation of the visual setting and neighborhood character, obnoxious odors, hazardous materials, and fire hazards;

- Ensure cannabis is cultivated, manufactured, distributed, tested and sold in a manner that supports public health and safety;

- Ensure adequate law enforcement and fire protection response to cultivation, manufacturing, distribution, testing and retail sales; and

- Promote energy and resource efficiency in cannabis cultivation, manufacturing, distribution, testing and retail sales of cannabis products.

1.5 - Scope of the Environmental Impact Report

The scope of this EIR is based on the Project description outlined in Chapter 2, *Project Description* and the Notice of Preparation (NOP) (Appendix A), focusing review on environmental resources that could result in potentially significant impacts on environmental resources. Chapter 4, *Environmental Impact Analysis* identifies 20 resources related to the Project, which were determined to be subject to potentially significant impacts in the NOP scoping process, and these are addressed in the following sections:

- 4.1 – Aesthetics
- 4.2 – Agriculture and Forest Resources
- 4.3 – Air Quality
- 4.4 – Biological Resources
- 4.5 – 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
- 4.16 – Recreation
- 4.17 – Transportation and Traffic

- 4.18 – Tribal Cultural Resources
- 4.19 – Utilities and Services Systems
- 4.20 – Wildfire

Sections 4.1 through 4.20 provide detailed discussions of the environmental setting, regulatory setting, methodology for impact assessment for the resource, impacts associated with the Project, and mitigation measures designed to reduce significant impacts where required and when feasible. Cumulative impacts also are discussed.

This EIR examines potential direct and cumulative impacts of the proposed Project. These impacts were determined through a rigorous process mandated by CEQA in which existing conditions are compared and contrasted with conditions that would exist once the Project is implemented. The significance of each identified impact was determined using either CEQA thresholds informed by local thresholds of significance. The following categories are used for classifying impacts.

- **Significant and Unavoidable:** Significant impacts that cannot be feasibly mitigated or avoided. No measures could be taken to avoid or reduce these adverse effects to achieve insignificant or negligible levels. Even after application of feasible mitigation measures, the residual impact would be significant. If the project is approved with significant and unavoidable impacts, decision-makers are required to adopt a Statement of Overriding Considerations pursuant to CEQA Section 15093 explaining why benefits of the project outweigh the potential damage caused by these significant unavoidable impacts.

- **Less than Significant with Mitigation:** Such impacts can be reduced to a less-than significant-level with feasible mitigation, which can include incorporating changes to the project. If the proposed project is approved with significant but mitigable impacts, decision-makers are required to make findings pursuant to CEQA Section 15091, stating that impacts have been mitigated to the maximum extent feasible and the residual impact would not be significant.

- **Less than Significant:** These adverse but less-than-significant impacts do not require mitigation, nor do they require findings be made.

- **No Impact:** Such impacts are considered to not exist with the implementation of the proposed project or have been found to do not apply to the proposed Project.

1.6 - Notice of Preparation

The contents of this EIR were established based on the findings in the Notice of Preparation (NOP) and attached materials, as well as public and agency input during the scoping period. The City issued a NOP on July 5, 2019 to request comments on the scope of the EIR. The NOP was published online at https://www.fresno.gov/darm/planning-development/plans-projects-under-review/. The NOP was circulated to relevant agencies, community organizations, and interested

individuals in the City. A public scoping workshop was held on July 16, 2019; a 30-day public comments period closed August 5, 2019 (CEQA Guidelines §15082). A copy of the NOP and comments received during the NOP review period are included in Appendix A.

1.7 - 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). 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 California Office of Planning and Research/State Clearinghouse and was also published in the Fresno Bee newspaper to comply with Section 15087 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, will be available for review at the following location:

City of Fresno
2600 Fresno Street
Fresno, CA 93721
Monday through Friday: 8:00 a.m. to 5:00 p.m.
Saturday and Sunday: Closed
By Appointment. Please contact Israel Trejo, Supervising Planner
Phone: (559) 621-8044
Email: Israel.Trejo@fresno.gov

In addition, the Draft EIR, including the appendices, will be available for review at the following City of Fresno website:

https://www.fresno.gov/darm/planning-development/plans-projects-under-review/#tab-08

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

Attn: Israel Trejo, Supervising Planner
City of Fresno, Planning and Development Department
2600 Fresno Street, Room 3043
Fresno, CA 93721
Phone: (559) 621-8044
Email: Israel.Trejo@fresno.gov

1.8 - Environmental Impacts

Section 15128 of the California Environmental Quality Act (CEQA) Guidelines requires that an Environmental Impact Report (EIR) contain a statement briefly indicating the reasons that various, possible, new significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR. The County has engaged the public to participate in the scoping of the environmental document.

The contents of this Draft EIR were established based on the NOP prepared in accordance with the CEQA Guidelines, as well as public and agency input that were received during the scoping process. The comments to the NOP are found in Appendix A of this document. Based on the findings of the NOP and the results of scoping, a determination was made that this EIR must contain a comprehensive analysis of all environmental issues identified in Appendix G of the CEQA Guidelines.

1.8.1 - Impacts Not Further Considered in This EIR

As discussed in Appendix A, the Project was determined to have impacts with regard to each of the impact thresholds. Therefore, all environmental issues as they are presented in Appendix G of the CEQA Guidelines are analyzed further in this EIR.

1.8.2 - Impacts of the Proposed Project

No Potential for Impacts to Occur

Potential environmental effects of the Project and mitigation measures are discussed in detail in Chapter 4 of this EIR. After full analysis, the following effects were determined to have no potential for impacts to occur:

Agriculture and Forest Resources

- Impact 4.2-2: Conflict with Existing Zoning for Agricultural Use or a Williamson Act Contract

- Impact 4.2-3: Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), or timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Productions (as defined in Government Code Section 51104(g))

- Impact 4.2-4: Result in the Loss of Forest Land or Conversion of Forest Land to Non-Forest Use

Biological Resources

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

- Impact 4.4-3: Have a Substantial Adverse Effect on State or Federally Protected Wetlands (Including, but Not Limited to, Marsh, Vernal Pool, Coastal, etc.) Through Direct Removal, Filling, Hydrological Interruption, or Other Means

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

Recreation

- Impact 4.16-1: Result in Increased Use of Existing Neighborhood and Regional Parks or Other Recreational Facilities Such that Substantial Physical Deterioration Would Occur or be Accelerated

- Impact 4.16-2: Include Recreational Facilities or Require Construction or Expansion of Recreational Facilities That Might Have an Adverse Physical Effect on the Environment

Potential for Less than Significant Impacts

Aesthetics

- Impact 4.1-1: Have a substantial adverse effect on a scenic vista

- Impact 4.1-2: Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway

- Impact 4.1-3: 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

- Impact 4.1-4: Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area

Air Quality

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

Biological Resources

- Impact 4.4-4: Interfere Substantially with the Movement of any Native Resident or Migratory Fish or Wildlife Species or with Established Native Resident or Migratory Wildlife Corridors, or Impede the Use of Native Wildlife Nursery Sites

Geology and Soils

- Impact 4.7-1: Directly or Indirectly Cause Potential Substantial Adverse Effects, Including the Risk of Loss, Injury, or Death Involving the Rupture of a Known Earthquake Fault
- Impact 4.7-2: Directly or Indirectly Cause Potential Substantial Adverse Effects, Including the Risk of Loss, Injury, or Death Involving Strong Seismic Ground Shaking
- Impact 4.7-3: Directly or Indirectly Cause Potential Substantial Adverse Effects, Including the Risk of Loss, Injury, or Death Involving Seismic-related Ground Failure, Including Liquefaction
- Impact 4.7-4: Directly or Indirectly Cause Potentially Substantial Adverse Effects, Including the Risk of Loss, Injury, or Death Involving Landslides
- Impact 4.7-5: Result in Substantial Soil Erosion or Loss of Topsoil
- Impact 4.7-6: 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 Offsite Landslide, Lateral Spreading, Subsidence, Liquefaction, or Collapse
- Impact 4.7-7: Be Located on Expansive Soil, as Defined in Table 18-1-B of the Uniform Building Code (1994), Creating Substantial Direct or Indirect Risks to Life or Property
- Impact 4.7-8: 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

Hazards and Hazardous Materials

- Impact 4.9-5: For A Project Located Within an Airport Land Use Plan or, Where Such a Plan Has Not Been Adopted, Within Two Miles of a Public Airport or Public Use Airport, Would the Project Result in a Safety Hazard or Excessive Noise for People Residing or Working in the Project Area
- Impact 4.9-6: Impair Implementation of, or Physically Interfere with, an Adopted Emergency Response Plan or Emergency Evacuation Plan

- Impact 4.9-7: Expose People or Structures, Either Directly or Indirectly, to a Significant Risk of Loss, Injury, or Death Involving Wildland Fires

Hydrology and Water Quality

- Impact 4.10-3(i): Substantially Alter the Existing Drainage Pattern of the Site or Area, Including Through the Alteration of the Course of a Stream or River, or Through the Addition of Impervious Surfaces, in a Manner Which Would: Result in Substantial Erosion or Siltation On- or Off-Site

- Impact 4.10-3(ii): Substantially Alter the Existing Drainage Pattern of the Site or Area, Including the Alteration of the Course of a Stream or River or Through the Addition of Impervious Surfaces, or Substantially Increase the Rate or Amount of Surface Runoff in a Manner Which Would Result in Flooding On- Or Off-Site

- Impact 4.10-4: In Flood Hazard, Tsunami, or Seiche Zones, Risk Release of Pollutants Due to Project Inundation

- Impact 4.10-5: Conflict with or Obstruct Implementation of a Water Quality Control Plan or Sustainable Groundwater Management Plan

Land Use and Planning

- Impact 4.11-1: Physically Divide an Established Community

- Impact 4.11-2: Cause a Significant Environmental Impact Due to a Conflict with Any Land Use Plan, Policy, or Regulation Adopted for the Purpose of Avoiding or Mitigating an Environmental Effect

Mineral Resources

- Impact 4.12-1: Result in the Loss of Availability of a Known Mineral Resource that Would be of Value to the Region and the Residents of the State

- Impact 4.12-2: Result in the Loss of Availability of a Locally Important Mineral Resource Recovery Site Delineated on a Local General Plan, Specific Plan, or Other Land Use Plan

Noise

- Impact 4.13-2: Generation of Excessive Groundborne Vibration or Groundborne Noise Levels

- Impact 4.13-3: For a Project Located Within the Vicinity of a Private Airstrip or an Airport Land Use Plan or, Where Such a Plan has Not Been Adopted, Within Two Miles of a Public

Airport or Public Use Airport, Would the Project Expose People Residing or Working in the Project Area to Excessive Noise Levels

Population and Housing

- Impact 4.14-1: Induce Substantial Unplanned Population Growth in an Area, Either Directly or Indirectly

- Impact 4.14-2: Displace Substantial Number of Existing People or Housing Necessitating the Construction of Replacement Housing Elsewhere

Public Services

- Impact 4.15-2: Result in Substantial Adverse Physical Impacts Associated with the Provision of New or Physically Altered Governmental Facilities, Need for New or Physically Altered Governmental Facilities, the Construction of Which Could Cause Significant Environmental Impacts in order to Maintain Acceptable Service Ratios, Response Times, or Other Performance Objectives for Police Protection Services

- Impact 4.15-3: Result in Substantial Adverse Physical Impacts Associated with the Provision of New or Physically Altered Governmental Facilities, Need for New or Physically Altered Governmental Facilities, the Construction of Which Could Cause Significant Environmental Impacts in Order to Maintain Acceptable Service Ratios, Response Times, or Other Performance Objectives for School Services

- Impact 4.15-4: Result in Substantial Adverse Physical Impacts Associated with the Provision of New or Physically Altered Governmental Facilities, Need for New or Physically Altered Governmental Facilities, the Construction of Which Could Cause Significant Environmental Impacts in order to Maintain Acceptable Service Ratios, Response Times, or Other Performance Objectives for Park Services

Utilities and Service Systems

- Impact 4.19-2: Have Sufficient Water Supplies Available to Serve the Project from Existing Entitlements and Resources, or Would New or are New or Expanded Entitlements Needed

Wildfire

- Impact 4.20-1: Substantially Impair an Adopted Emergency Response Plan or Emergency Evacuation Plan

- Impact 4.20-2: Due to Slope, Prevailing Winds, and Other Factors, Exacerbate Wildfire Risks, and Thereby Expose Project Occupants to, Pollutant Concentrations from a Wildfire or the Uncontrolled Spread of a Wildfire

Potential for Less than Significant Impacts to Occur with Incorporation of Mitigation Measures

Potential environmental effects of the Project and mitigation measures are discussed in detail in Chapter 4 of this EIR. After full analysis, the following effects were determined to be less than significant with the incorporation of mitigation measures.

Agriculture and Forest Resources

- Impact 4.2-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as Shown on the Maps Prepared Pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to Non-Agricultural Use

- Impact 4.2-5: Involve Other Changes in the Existing Environment which, Because of Their Location or Nature, Could Result in Conversion of Farmland to Non-Agricultural Use or Conversion of Forest Land to Non-Forest Use

Air Quality

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

Biological Resources

- Impact 4.4-1: Have a Substantial Adverse Effect, Either Directly or through Habitat Modifications, on any Species Identified as a Candidate, Sensitive, or Special Status Species in Local or Regional Plans, Policies, or Regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service

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

Cultural Resources

- Impact 4.5-1: Cause a Substantial Adverse Change in the Significance of a Historical Resource Pursuant to Section 15064.5

- Impact 4.5-2: Cause a Substantial Adverse Change in the Significant of an Archaeological Resource Pursuant to Section 15064.5

- Impact 4.5-3: Disturb any Human Remains, including those Interred Outside of Dedicated Cemeteries

Energy

- Impact 4.6-1: Result in Potentially Significant Environmental Impact Due to Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources, During Project Construction or Operation

- Impact 4.6-2: Conflict with or Obstruct a State or Local Plan for Renewable Energy or Energy Efficiency

Geology and Soils

- Impact 4.7-9: Directly or Indirectly Destroy a Unique Paleontological Resource or Site or Unique Geologic Feature

Greenhouse Gas Emissions

- Impact 4.8-2: Conflict with Any Applicable Plan, Policy or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases

Hazards and Hazardous Materials

- Impact 4.9-1: Create a Significant Hazard to the Public or the Environment Through the Routine Transport, Use, or Disposal of Hazardous Materials

- Impact 4.9-2: Create a Significant Hazard to the Public or the Environment Through Reasonably Foreseeable Upset and Accident Conditions Involving the Release of Hazardous Materials into the Environment

- Impact 4.9-3: Emit Hazardous Emissions or Handle Hazardous or Acutely Hazardous Materials, Substances, or Waste Within One-Quarter Mile of an Existing or Proposed School

- Impact 4.9-4: Create a Hazard to Public or the Environment as a Result of Being Located on a Site that is Included on a List of Hazardous Material Sites Compiled Pursuant to Government Code Section 65962.5

Hydrology and Water Quality

- Impact 4.10-1: Violate Any Water Quality Standards or Waste Discharge Requirements or Otherwise Substantially Degrade Surface or Groundwater Quality

- Impact 4.10-2: Substantially Decrease Groundwater Supplies or Interfere Substantially with Groundwater Recharge Such That the Project May Impede Sustainable Groundwater Management of the Basin

- Impact 4.10-3(iii): Substantially Alter the Existing Drainage Pattern of the Site or Area, Including Through the Alteration of the Course of a Stream or River or Through the Addition of Impervious Surfaces, in a Manner Which Would Create or Contribute Runoff Water Which Would Exceed the Capacity of Existing or Planned Stormwater Drainage Systems or Provide Substantially Additional Sources of Polluted Runoff

- Impact 4.10-3(iv): Substantially Alter the Existing Drainage Pattern of the Site or Area, Including Through the Alteration of the Course of a Stream or River or Through the Addition of Impervious Surfaces, in a Manner Which Would Impede or Redirect Flood Flows

Noise

- Impact 4.13-1: Generation of a Substantial Temporary or Permanent Increase in Ambient Noise Levels in the Vicinity of the Project in Excess of Standards Established in the Local General Plan or Noise Ordinance or Applicable Standards of Other Agencies

Public Services

- Impact 4.15-1: Result in Substantial Adverse Physical Impacts Associated with the Provision of New or Physically Altered Governmental Facilities, Need for New or Physically Altered Governmental Facilities, the Construction of Which Could Cause Significant Environmental Impacts in order to Maintain Acceptable Service Ratios, Response Times, or Other Performance Objectives for Fire Protection

- Impact 4.15-5: Result in Substantial Adverse Physical Impacts Associated with the Provision of New or Physically Altered Governmental Facilities, Need for New or Physically Altered Governmental Facilities, the Construction of Which Could Cause Significant Environmental Impacts in order to Maintain Acceptable Service Ratios, Response Times, or Other Performance Objectives for Other Public Facilities

Transportation

- Impact 4.17-1: Conflict with a Program, Plan, Ordinance, or Policy Addressing the Circulation System, Including Transit, Roadway, Bicycle and Pedestrian Facilities

- Impact 4.17-2: Conflict or be Inconsistent with CEQA Guidelines 15064.3, Subdivision (b)

- Impact 4.17-3: Substantially Increase Hazards Due to a Geometric Design Feature or Incompatible Uses

- Impact 4.17-4: Result in Inadequate Emergency Access

Tribal Cultural Resources

- Impact 4.18-1: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource, Defined in Public Resources Code Section 21074 as Either a Site, Feature, Place, Cultural Landscape that is Geographically Defined in Terms of the Size and Scope of the Landscape, Sacred Place, or Object with Cultural Value to a California Native American Tribe, and that is Listed or Eligible for Listing in the California Register of Historical Resources, or in a Local Register of Historical Resources as Defined in Public Resources Code Section 5020.1(k)

- Impact 4.18-2: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource, Defined in Public Resources Code Section 21074 as Either a Site, Feature, Place, Cultural Landscape that is Geographically Defined in Terms of the Size and Scope of the Landscape, Sacred Place, or Object with Cultural Value to a California Native American Tribe, and that is a Resource Determined by the Lead Agency, in its Discretion and Supported by Substantial Evidence, to be Significant Pursuant to Criteria Set Forth in Subdivision (c) of Public Resources Code Section 5024.1. In Applying the Criteria Set Forth in Subdivision (c) of Public Resource Code Section 5024.1

Utilities and Service Systems

- Impact 4.19-1: Require or Result in the Relocation or Construction of New or Expanded Water, Wastewater Treatment or Storm Water Drainage, Electric Power, Natural Gas, or Telecommunications Facilities, the Construction or Relocation of Which Could Cause Significant Environmental Effects

- Impact 4.19-3: Result in a Determination by the Wastewater Treatment Provider Which Serves or May Serve the Project That It Has Adequate Capacity to Serve the Project's Projected Demand in Addition to the Provider's Existing Commitments

- Impact 4.19-4: Generate Solid Waste in Excess of State or Local Standards, or in Excess of the Capacity of Local Infrastructure, or Otherwise Impair the Attainment of Solid Waste Reduction Goals

- Impact 4.19-5: Comply with Federal, State, and Local Management and Reduction Statutes and Regulations Related to Solid Waste

Wildfire

- Impact 4.20-3: Require the Installation or Maintenance of Associated Infrastructure (Such as Roads, Fuel Breaks, Emergency Water Sources, Power Lines or Other Utilities) that may Exacerbate Fire Risk or that may Result in Temporary or Ongoing Impacts to the Environment

Unavoidable Significant Adverse Impacts

Section 15126.2(b) of the CEQA Guidelines requires that the EIR describe any significant impacts, including those that can be mitigated but not reduced to less-than-significant levels. Potential environmental effects of the Project and proposed mitigation measures are discussed in detail in Chapter 4 of this EIR. The following environmental impacts were determined to be significant and unavoidable impacts (refer to Table 1-1, *Summary of Significant Impacts of the Project*).

Table 1-1
Summary of Significant Impacts of the Project

Resources	Project Impacts	Cumulative Impacts
Air Quality Impact 4.3-1	NOx emissions during construction would result in temporary increases above the established thresholds. NOx emissions during project operation would exceed SJVAPCD thresholds. Since the project would conflict with the applicable air quality plans by generating criteria pollutants, temporary (construction) and permanent (operation) impacts are considered **significant and unavoidable.**	Although implementation of mitigation measures 4.3-1 through 4.3-4 are expected to reduce emissions, exact construction and operational mitigation is on an individual project basis and is unknown at this time. It would be speculative to conclude emissions could be reduced to below the threshold for the total buildout of the Project. For these reasons, the proposed Project would have a **significant and unavoidable** cumulatively considerable contribution to conflicting with implementation of an applicable air quality plan.
Air Quality Impact 4.3-2	NOx emissions during construction would result in temporary increases above the established thresholds. NOx emissions during project operation would exceed SJVAPCD thresholds. Since the project would generate criteria pollutants for which the project region is under non-attainment, temporary (construction) and permanent (operation) impacts are considered **significant and unavoidable.**	Although implementation of mitigation measures 4.3-1 through 4.3-4 are expected to reduce emissions, exact construction and operational mitigation is on an individual project basis and is unknown at this time. It would be speculative to conclude emissions could be reduced to below the threshold for the total buildout of the Project. For these reasons, the proposed Project would have a **significant and unavoidable** cumulatively considerable

Resources	Project Impacts	Cumulative Impacts
		contribution to increasing criteria pollutants for which the region is in nonattainment.
Greenhouse Gas Emissions Impact 4.8-1	Although implementation of these mitigation measures are expected to reduce emissions that can impact greenhouse gases, the proposed Project's preliminary GHG analysis demonstrates that the Project will not meet a 29 percent reduction in GHG emissions from BAU. Therefore, GHG emissions would be considered **significant and unavoidable**.	Although many other agencies with the necessary jurisdiction are currently taking action to reduce GHG emissions, the City cannot assure that these measures would ultimately be implemented or sufficient to address climate change. Therefore, GHG emissions would be considered **cumulatively significant and unavoidable**.

Significant Cumulative Impacts

According to Section 15355 of the CEQA Guidelines, the term *cumulative impac*ts "refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Individual effects that may contribute to a cumulative impact may be from a single project or a number of separate projects. Individually, the impacts of a project may be relatively minor, but when considered along with impacts of other closely related or nearby projects, including newly proposed projects, the effects could be cumulatively considerable.

This EIR has considered the potential cumulative effects of the proposed project. Impacts for the following issue areas have been found to be cumulatively considerable:

- Air Quality;
- Greenhouse Gas Emissions

Each of these significant cumulative impacts is discussed in the applicable section of Chapter 4, *Environmental Analysis*, of this EIR.

1.9 - Summary of Project Alternatives

Below is a summary of the alternatives to the proposed Project, that have been considered but rejected as well as those alternatives that have been considered and evaluated in Chapter 6 - *Alternatives to the Proposed Project.*

1.9.1 - ALTERNATIVES CONSIDERED AND REJECTED

There were five project alternatives that were considered and rejected. The *Complete Ban of Cannabis Businesses Alternative* would not fulfill the Project's objectives, which, in part, are to accommodate the needs of medically-ill persons in need and provide access to cannabis for medicinal purposes as recommended by their health care provider(s), as well as provide access to adult use cannabis, while imposing sensible regulations on the use of land to protect the City's residents, neighborhoods, and businesses from disproportionately negative impacts. The positive economic opportunity presented by the regulation of cannabis businesses would not be realized under this alternative, and illegal cannabis operations would continue to provide sources for the cannabis market.

The *Allow Outdoor Cultivation Alternative* would amend the existing regulations and proposed ordinance to allow for outdoor cultivation. This alternative would achieve the Project objectives of implementing regulations for the medical and adult use of cannabis; however, this would also increase the Project's water usage and odor generation, as well as jeopardize the availability of agricultural lands that could be used for a wide variety of crops.

The *Cannabis Businesses Located in One or More Cannabis Hubs Alternative* would establish locations throughout the City to serve as cannabis business hubs. This alternative would achieve the Project objectives of implementing regulations for the medical and adult use of cannabis; however, the concentration of cannabis businesses would create additional traffic in these areas. Additionally, public services (including police and fire services) of the area would be unduly burdened compared to those of surrounding districts.

The *No Project/Implementation of Cannabis Regulatory Ordinance Alternative* would prevent the Project's purpose, which is to regulate the cultivation, processing, manufacturing, testing, sale, delivery, distribution, and transportation of cannabis, cannabis products, medicinal cannabis, and medicinal cannabis products in a responsible manner to protect the health, safety, and welfare of the residents of the City and to enforce rules and regulations consistent with State law.

None of the alternatives considered but rejected would fulfill the Project's purpose or objectives and therefore were rejected.

1.9.2 - ALTERNATIVES CONSIDERED AND EVALUATED

- *No Project Alternative*. Under this alternative, the City would remain unchanged and there would be no sites eligible for commercial cannabis businesses. None of the vacant sites would be improved, and none of the vacant buildings would be occupied. Additionally, an estimated 120 illegal cannabis operations currently exist within the City of Fresno and the current regulatory framework cannot be implemented without the proposed Project.

- *Alternative B – Reduced Project Alternative - Medicinal Only*. This alternative would reduce the number of businesses allowed as it would only serve residents who have medical reasons for use of cannabis projects.

- *Alternative C – Reduced Project Alternative – No Retail*. This alternative would eliminate the process of permitting retail cannabis businesses in the City, but maintain the permitting of testing, cultivation, distribution, and manufacture of cannabis products.

- *Alternative D– Reduced Project Alternative – Retail Only*. This alternative would eliminate the permitting process for cultivation, distribution, manufacturing, and testing facilities.

1.10 - Environmentally Superior Alternative

CEQA requires that the City identify an Environmentally Superior Alternative. If the No Project Alternative is the Environmentally Superior Alternative, the City must identify an Environmentally Superior Alternative among the other alternatives considered in the EIR (CEQA Guidelines, Section 15126.6). This alternatives analysis includes three other project alternatives – the Medicinal Only Alternative No. 1, No Retail Alternative No. 2, and Retail Only Alternative No. 3. Based on the evaluation of the three alternatives, the Retail Only Alternative No. 3 would reduce most of the environmental impacts while fulfilling the objectives of the proposed Project and is therefore the Environmentally Superior Alternative. Table 1-2 shows the comparison of alternatives.

Table 1-2
Comparison of Alternatives

Environmental Resource	Project	Alternative A	Alternative B	Alternative C	Alternative D
Air Quality: Conflict or obstruct implementation of air quality plan	Significant / Unavoidable	Fewer	Similar	Similar	Similar
Air Quality: Cumulative net increase of nonattainment pollutants	Significant / Unavoidable	Fewer	Similar	Similar	Similar
Air Quality: Cumulative effects	Significant / Unavoidable	Fewer	Similar	Similar	Similar
Greenhouse Gas Emissions: Generate GHG emissions	Significant / Unavoidable	Fewer	Similar	Fewer	Fewer
Greenhouse Gas Emission: Cumulative effects	Significant / Unavoidable	Fewer	Similar	Similar	Similar
Meet Project Objectives?	Yes	No	Some	Some	Some
Reduce Any Significant and Unavoidable Impacts to No Impact or Less than Significant?	—	Yes, most impacts	No	No	Yes, Unnecessary use of electrical energy

1.11 - Growth Inducement

The City of Fresno General Plan recognizes that certain forms of growth are beneficial, both economically and socially. Section 15126.2(d) of the CEQA Guidelines provides the following guidance on growth-inducing impacts: a project is identified as growth inducing if it "could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment."

Growth inducement can be a result of new development that requires an increase in dwelling units or an increase in employment, removes barriers to development, or provides resources that lead to secondary growth. The Project would add new cannabis related business uses throughout the City, but no residential uses are included in the proposed project. Growth inducement is discussed in detail in Section 4.14, *Population and Housing*, of this EIR.

With respect to residential land uses, the Project does not include the addition of any residentially designated uses nor does it include typical elements that would directly or indirectly affect population or housing (i.e. extension of roads or other infrastructure). The Project would accordingly not directly result in population growth of the City.

With respect to employment during construction, the proposed Project would add approximately 2,114 new jobs, which accounts for a 0.05 percent increase in the number of jobs in the Fresno MSA. The jobs created by these industries will primarily employ persons living within the City. It is anticipated that the majority of the jobs will be filled by existing City or County residents; some employees would come from the region and commute, while a small number would relocate to the City. This small number of new residents is anticipated by the General Plan.

Therefore, this Project would not result in a large increase in employment. In addition, the Project is situated in urbanized areas within the City of Fresno where substantial employment and housing opportunities currently exist. The Project would accordingly accommodate planned growth, and not induce unplanned growth.

With respect to removing barriers to development, such as through providing access to previously undeveloped areas, the Project is not anticipated to result in significant growth inducement. The Project does not include the construction of infrastructure that could provide for future residential development, it does not remove barriers to off-site development.

Although the project accommodates planned economic growth at suitable locations, as discussed further in Section 4.14, *Population and Housing*, the net increase in population on the Project site would be less than significant.

1.12 - Irreversible Impacts

Section 15126.2(c) of the CEQA Guidelines defines an irreversible impact as an impact that uses nonrenewable resources during the initial and continued phases of the project. Irreversible impacts can also result from damage caused by environmental accidents associated with the

project. Irretrievable commitments of resources should be evaluated to ensure that such consumption is justified. Buildout of the project would commit nonrenewable resources during project construction and ongoing utility services during project operations. During project operations, oil, gas, and other nonrenewable resources would be consumed. Therefore, an irreversible commitment of nonrenewable resources would occur as a result of long-term project operations. However, assuming that those commitments occur in accordance with the adopted goals, policies, and implementation measures of the City of Fresno General Plan, as a matter of public policy, those commitments have been determined to be acceptable. The City of Fresno General Plan ensures that any irreversible environmental changes associated with those commitments will be minimized.

1.13 - Areas of Controversy

Areas of controversy were identified through written agency and public comments received during the scoping period. Public comments received during scoping are provided in Appendix A and summarized in Section 2.4 of Chapter 2, *Introduction*. In summary, the following issues were identified during scoping and are addressed in the appropriate sections of Chapter 4, *Environmental Analysis*:

- Transportation
  - Connectivity and accessibility to existing Class II bike lanes
- Cultural and Tribal
  - Consultation with NAHC
- Biological Resources
  - Biological resources surveys
- Air Quality
  - Evaluation of construction emissions for each project
- Cumulative
  - Evaluate local and cumulative impacts of cannabis activities

1.14 - Issues to be Resolved

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR contain issues to be resolved, which includes the choices among alternatives and whether or how to mitigate significant impacts. The major issues to be resolved regarding the project include decisions by the lead agency as to whether or not:

- The Draft EIR adequately describes the environmental impacts of the Project;
- The recommended mitigation measures should be adopted or modified; or,
- Additional mitigation measures need to be applied.

1.15 - Executive Summary Matrix

Table 1-3 below summarizes the impacts, mitigation measures, and resulting level of significance after mitigation for the relevant environmental issue areas evaluated for the proposed project. Table 1-3 is intended to provide an overview; narrative discussions for the issue areas are included in the corresponding sections of this Draft EIR.

Table 1-3
Comparison of Alternatives

Impacts	Mitigation Measures	Level of Significance
Section 4.1 Aesthetics		
4.1-1: Have a Substantial Adverse Effect on a Scenic Vista?	No mitigation is required.	Less than significant
4.1-2: Substantially Damage Scenic Resources, Including, but Not Limited to, Trees, Rock Outcroppings, and Historic Buildings within a State Scenic Highway?	No mitigation is required.	Less than significant
4.1-3: Substantially Degrade the Existing Visual Character or Quality of Public Views of the Site and Its Surroundings or Conflict with Applicable Zoning and Other Regulations Governing Scenic Quality?	No mitigation is required.	Less than significant
4.1-4: Create a New Source of Substantial Light or Glare Which Would Adversely Affect Day or Nighttime Views in the Area?	No mitigation is required.	Less than significant
Result in cumulative aesthetics impacts?	No mitigation is required.	Less than significant

Impacts	Mitigation Measures	Level of Significance
Section 4.2 Agriculture and Forest Resources		
4.2-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as Shown on the Maps Prepared Pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to Non-Agricultural Use?	**MM 4.2-1**: Prior to construction of any approved site plan, if the site has already been subject to mitigation to compensate for the loss of agricultural land, evidence of compliance shall be submitted to the City of Fresno. Once verified, no further action is necessary. For all other properties, the project applicant shall provide written evidence of completion of one or more of the following measures to mitigate the loss of Prime Farmland, Farmland of Statewide Importance, and/or Unique Farmland, at a ratio of 1:1 for net acreage before conservation, based on the most current mapping data from the Department of Conservation. New acreage is to be calculated by excluding existing roads and areas already developed with structures. A plot plan shall be submitted substantiating the net acreage calculation along with written evidence of compliance. 1. Funding and purchase of agricultural conservation easements (will be managed and maintained by an appropriate entity); 2. Purchase of credits from an established agricultural farmland mitigation bank; 3. Participation in any agricultural land mitigation program adopted by the City of Fresno that provides equal or more effective mitigation than the measures listed above. Mitigation lands shall meet the definition of Prime Farmland, Farmland of Statewide Importance, and/or Unique Farmland, and be of similar agricultural quality or higher, as informed by definitions established by the California Department of Conservation Completion of the selected measure or, with the City of Fresno Planning and Development Department approval, a	Less than significant with mitigation

Impacts	Mitigation Measures	Level of Significance
	combination of measures can occur on qualifying land within the San Joaquin Valley (San Joaquin, Stanislaus, Merced, Fresno, Madera, Kings, Tulare, or Kern County) or outside the San Joaquin Valley with written evidence that the same or equivalent crops can be produced on the mitigation land. Any application for a conditional use permit shall include the above evidence and mitigation details and shall provide a plot plan substantiating the net acreage calculation along with written evidence of compliance.	
4.2-2: Conflict with Existing Agricultural Zoning or Williamson Act Contracts?	No mitigation is required.	
4.2-3: Conflict with Existing Zoning for, or Cause Rezoning of, Forest Land (as Defined in Public Resources Code Section 12220(g)), or Timberland (as Defined by Public Resources Code Section 4526), or Timberland Zoned Timberland Productions (as Defined in Government Code Section 51104(g))?	No mitigation is required.	No impact
4.2-4: Result in the Loss of Forest Land or Conversion of Forest Land to Non-Forest Use	No mitigation is required.	No impact
4.2-5: Involve Other Changes in the Existing Environment which, Because of Their Location or Nature, Could Result in	Implement Mitigation Measure MM 4.2-1.	Less than significant with mitigation

Impacts	Mitigation Measures	Level of Significance
Conversion of Farmland to Non-Agricultural Use or Conversion of Forest Land to Non-Forest Use?		
Result in cumulative agriculture and forest resources impacts?	Implement Mitigation Measure MM 4.2-1.	Less than significant with mitigation

Impacts	Mitigation Measures	Level of Significance
Section 4.3 Air Quality		
4.3-1: Conflict with or Obstruct Implementation of an Applicable Air Quality Plan?	**MM 4.3-1**: Prior to issuance of a grading or building permit or conditional use permit, individual project applicants shall submit written documentation of project compliance with applicable State and federal air pollution control laws and regulations. The project applicant shall also comply with applicable rules and regulations of the San Joaquin Valley Air Pollution Control District during construction and during operations of cannabis facilities. **MM 4.3-2**: Prior to any ground disturbing activities, the Project applicant shall submit a Fugitive Dust Control Plan to the San Joaquin Valley Air Pollution Control District for review and approval, per the District's Regulation VIII to reduce construction-related emissions of particulate matter that is 10 microns or less and 2.5 microns or less in diameter (PM_{10} and $PM_{2.5}$). The requirements of Regulation VIII include: 1. Visible Dust Emissions (VDE) may not exceed 20 percent opacity during periods when soil is being disturbed by equipment or by wind at any time. Visible Dust Emissions opacity of 20 percent means dust that would obstruct an observer's view of an object by 20 percent. District inspectors are State certified to evaluate visible emissions. Dust control may be achieved by applying water before/during earthwork and onto unpaved traffic areas, phasing work to limit dust, and setting up wind fences to limit wind-blown dust. 2. Soil Stabilization is required at regulated construction sites after normal working hours and on weekends and holidays. This requirement also applies to inactive construction areas such as phased projects where disturbed land is left unattended. Applying water to form a visible crust on the soil and restricting vehicle access are often	Significant and unavoidable

Impacts	Mitigation Measures	Level of Significance
	effective for short-term stabilization of disturbed surface areas. Long-term methods including applying dust suppressants and establishing vegetative cover. 3. Carryout and Trackout occur when materials from emptied or loaded vehicles fall onto a paved surface or shoulder of a public road or when materials adhere to vehicle tires and are deposited onto a paved surface or shoulder of a public road. Should either occur, the material must be cleaned up at least daily, and immediately if it extends more than 50 feet from the exit point onto a paved road. The appropriate clean-up methods require the complete removal and cleanup of mud and dirt from the paved surface and shoulder. Using a blower device or dry sweeping with any mechanical device other than a PM_{10}-efficient street sweeper is a violation. Larger construction sites, or sites with a high amount of traffic on one or more days, must prevent carryout and trackout from occurring by installing gravel pads, grizzlies, wheel washers, paved interior roads, or a combination thereof at each exit point from the site. In many cases, cleaning up trackout with water is also prohibited as it may lead to plugged storm drains. Prevention is the best method. 4. Unpaved Access and Haul Roads, as well as unpaved vehicle and equipment traffic areas at construction sites must have dust control. Speed limit signs limiting vehicle speed to 15 mph or less at construction sites must be posted every 500 feet on uncontrolled and unpaved roads.	

Impacts	Mitigation Measures	Level of Significance
	MM 4.3-3: The project applicant of any conditional use permit, for a cannabis related business (retail only), shall submit written documentation stating that all mobile deliveries will be provided via hybrid or electric vehicles. **MM: 4.3-4**: The project applicant of any conditional use permit, for a cannabis related business, shall include a site plan indicating the number of electric vehicles charging stations included in the parking area. The number of electric vehicle parking stations shall be at a ratio of no less than 1 charging station per 20 required parking spaces.	
4.3-2: Result in a Cumulatively Considerable Net Increase of any Criteria Pollutant for Which the Project Region is Nonattainment Under an Applicable Federal or State Ambient Air Quality Standard?	Implement Mitigation Measures MM 4.3-1 through MM 4.3-4.	Significant and unavoidable
4.3-3: Expose Sensitive Receptors to Substantial Pollutant Concentrations?	No mitigation is required.	Less than significant
4.3-4: Result in Other Emissions (Such as Those Leading to Odors) Adversely Affecting a Substantial Number of People?	**MM 4.3-5**: As part of the Conditional Use Permit Application, all commercial cannabis related businesses shall submit an Odor Management and Control Plan (OMCP), to be approved by the Fresno Planning and Development Department. The OMCP shall demonstrate compliance with the Article 33 of Chapter 9 of the Fresno Municipal Code (Section 9-3309 j) by providing details related to the type and use of best available odor control technology and devices. The OMCP shall also include exhaust air filtration systems with odor control that prevents internal odors and pollen from being emitted externally, and an air system that creates negative air pressure between the premises' interior and exterior.	Less than significant with mitigation

Impacts	Mitigation Measures	Level of Significance
Result in significant cumulative impacts to air quality?	Implement Mitigation Measures MM 4.3-1 through MM 4.3-5.	Significant and unavoidable

Impacts	Mitigation Measures	Level of Significance
Section 4.4 Biological Resources		
4.4-1: Have a Substantial Adverse Effect, Either Directly or Through Habitat Modifications, on any Species Identified as a Candidate, Sensitive, or Special-Status Species in Local or Regional Plans, Policies, or Regulations, or by the CDFW and Wildlife USFWS?	**MM 4.4-1**: Prior to commencement of operations of any cultivation facility, the Project applicant shall submit to the City of Fresno Planning and Development Department written documentation of a waiver from the California State Water Control Board Cannabis Cultivation General Order. **MM 4.4-2**: For any undeveloped parcel, within 14 days and no more than 30 days prior to the start of construction activities in any specific area, a pre-construction clearance survey shall be conducted by a qualified biologist knowledgeable in the identification of these species. The surveys shall cover the Project site plus a 500-foot buffer, where feasible. Pedestrian surveys achieving 100 percent visual coverage shall be conducted. Multiple surveys may be needed, which would be phased with construction of the Project. If no evidence of these species is detected, no further action is required. A copy of a Preconstruction Clearance Survey Report shall be submitted to The City of Fresno Planning and Development Department. Buffer zones shall be considered Environmentally Sensitive Areas (ESAs) and no ground disturbing activities shall be allowed within a buffer area. The United States Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) shall be contacted upon the discovery within 500 feet of any SJKF individuals, natal or pupping dens is found during construction activities. CDFW staff shall be contacted at (559) 243-4014 and R4CESA@wildlifeca.gov. Potential kit fox dens may be excavated provided that the following conditions are satisfied: (1) the den has been monitored for at least five consecutive days and is deemed unoccupied by a qualified biologist; (2) the excavation is conducted by or under the direct supervision of a qualified biologist. Den	Less than significant with mitigation

Impacts	Mitigation Measures	Level of Significance
	monitoring and excavation should be conducted in accordance with the Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance (U.S. Fish and Wildlife, 2011). San Joaquin Kit Fox • Potential Den – 50 feet • Atypical Den – 50 feet (includes pipes and other man-made structures) • Known Den – 100 Feet • Natal/Pupping Den – 500 feet Badger • Potential Den – None • Natal/Pupping Den – 100 feet Burrowing Owl (active burrows) • April 1 – October 15 – 500 feet • October 16 – March 31 – 100 feet If a den or burrow is located on the Project and there is no clear indication of use, and it has not been previously identified as being used by special-status species, the den/burrow may be monitored by a qualified biologist for a minimum of five consecutive nights using trail cameras and tracking medium. If after five nights there is no evidence of use by special-status species, the den/burrow may be fully excavated to the terminus of every tunnel and then backfilled, all under the direct supervision of a qualified biologist. If during the five nights of monitoring there is evidence of use by a special-status species, the den/burrow must be avoided unless removal is authorized by the USFWS and/or CDFW (based on species protection status).	

Impacts	Mitigation Measures	Level of Significance
	MM 4.4-3: For any undeveloped parcel, the following avoidance and minimization measures shall be implemented during all construction phases of the Project to reduce the potential for impact from the Project. They are modified from the *U.S. Fish and Wildlife Service Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (U.S. Fish and Wildlife, 2011) and apply to all three species. 1. Project-related vehicles shall observe a daytime speed limit of 20-mph throughout the site in all Project areas, except on County roads and State and federal highways. Construction speed limits shall be limited to 10-mph for any work performed between dusk and 10:00 p.m. 2. Off-road traffic outside of designated Project areas shall be prohibited. 3. To prevent inadvertent entrapment of kit foxes or other animals during construction of the Project, all excavated, steep-walled holes or trenches more than two feet deep shall be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. 4. Before holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox or other special-status species is discovered, the USFWS and the CDFW, as appropriate, shall be contacted before proceeding with the work.	

Impacts	Mitigation Measures	Level of Significance
	5. In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the USFWS/CDFW shall be contacted for guidance. 6. All construction pipes, culverts, or similar structures with a diameter of four inches or greater that are stored at a construction site for one or more overnight periods shall be thoroughly inspected for kit foxes and burrowing owls before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox or burrowing owl is discovered inside a pipe, that section of pipe shall not be moved until the USFWS has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox or owl has escaped. 7. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from a construction or Project site. 8. No pets, such as dogs or cats, shall be permitted on the Project site. 9. Use of anti-coagulant rodenticides and herbicides in Project areas shall be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation, as well as additional Project-related restrictions deemed necessary by the USFWS and CDFW. If rodent control must be	

Impacts	Mitigation Measures	Level of Significance
	conducted, zinc phosphide shall be used because of the proven lower risk to kit foxes. 10. A representative shall be appointed by the Project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox, burrowing owl or badger or who finds a dead, injured or entrapped kit fox, burrowing owl or badger. 11. Any Project personnel who are responsible for inadvertently killing or injuring one of these species shall immediately report the incident to their representative. This representative shall contact the CDFW/USFWS immediately in the case of a dead, injured or entrapped kit fox. 12. The Sacramento U.S. Fish and Wildlife Office and CDFW shall be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during Project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The USFWS contact is the Chief of the Division of Endangered Species, at the addresses and telephone numbers below. The CDFW contact can be reached at (559) 243-4014 and R4CESA@wildlifeca.gov. 13. New sightings of all special-status species shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the individual was observed shall also be provided to the USFWS.	

Impacts	Mitigation Measures	Level of Significance
	14. Any Project-related information required by the USFWS or questions concerning the above conditions, or their implementation may be directed in writing to the U.S. Fish and Wildlife Service at: Endangered Species Division, 2800 Cottage Way, Suite W 2605, Sacramento, California 95825-1846, phone (916) 414-6620 or (916) 414-6600 **MM 4.4-4**: For any undeveloped parcel, if construction activities must occur during the nesting season (February 15 to August 31), pre-activity nesting bird surveys shall be conducted within seven days prior to the start of construction at the construction site plus a 250-foot buffer for songbirds and a 500-foot buffer for raptors (other than Swainson's hawk). The surveys shall be phased with construction of the Project and shall include all vegetation and existing structures. If no active nests are found, no further action is required; however, note that nests may become active at any time throughout the summer, including when construction activities are occurring. If active nests are found during the survey or at any time during construction of the Project, an avoidance buffer ranging from 50 feet to 350 feet may be required, as determined by a qualified biologist. The avoidance buffer will remain in place until the biologist has determined that the young are no longer reliant on the nest. Work may occur within the avoidance buffer under the approval and guidance of the biologist. The biologist shall have the ability to stop construction if nesting adults show sign of distress. **MM 4.4-5:** For any undeveloped parcel, the Project applicant shall implement the following measures prior to and during construction:	

Impacts	Mitigation Measures	Level of Significance
	1. If construction activities are conducted completely outside of the California horned lark breeding season (August 1 through February 28), then preconstruction surveys are not required. 2. For construction activities conducted during the California horned lark breeding season (March 1 through July 31), the applicant shall retain a qualified biologist to conduct preconstruction surveys and identify active nests on and within 300 feet of the project site to avoid, minimize, and mitigate potential impacts on California horned lark nesting within the project site. The surveys shall be conducted no more than 30 days before the beginning of construction. If no nests are found, no further mitigation will be required. 3. If active California horned lark nests are found within the nest survey area, the construction contractor shall avoid impacts on such nests by establishing a no-disturbance buffer around active nest sites identified during preconstruction surveys. The appropriate buffer size shall be determined by a qualified biologist in consultation with CDFW, based on the nature of the project activity, the extent of existing disturbance in the area, visibility of the disturbance from the nest site, and other relevant circumstances. 4. No construction activity shall occur within the buffer area of a particular nest until a qualified biologist, in consultation with CDFW, confirms that the chicks have fledged or the nesting cycle has otherwise completed. Monitoring of the nest by a qualified biologist during construction activities shall be required if the activity has the potential to adversely affect the nest. If construction activities cause the nesting bird to vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest, then the no-disturbance	

Impacts	Mitigation Measures	Level of Significance
	buffer shall be increased until the agitated behavior ceases. The exclusionary buffer will remain in place until the chicks have fledged or as otherwise determined by a qualified biologist. **MM 4.4-6:** For any undeveloped parcel, if an active Swainson's hawk nest is discovered at any time within a half-mile of active construction, the Project applicant shall implement the following measures prior to and during construction: 1. If construction activities are conducted outside of the breeding season (September 1 through February 28), then preconstruction surveys are not required. 2. For construction activities conducted during the breeding season (March 1 through August 31), the applicant shall retain a qualified biologist to conduct preconstruction surveys and identify active nests on and within 0.5 mile of the project site to avoid, minimize, and mitigate potential impacts on Swainson's hawk nesting adjacent to the project site. The surveys shall be conducted no more than 30 days before the beginning of construction. If no nests are found, no further mitigation will be required. 3. If active Swainson's hawk nests are found within the nest survey area, the construction contractor shall avoid impacts on such nests by establishing appropriate buffers around active nest sites identified during preconstruction raptor surveys. No project activity shall commence within the buffer areas until a qualified biologist has determined, in coordination with CDFW, that the young have fledged, the nest is no longer active, or reducing the buffer would not result in nest abandonment. CDFW guidelines recommend implementation of	

Impacts	Mitigation Measures	Level of Significance
	0.5-mile-wide buffers for Swainson's hawk nests, but the size of the buffer may be decreased if a qualified biologist and the applicant, in consultation with CDFW, determine that such an adjustment would not be likely to adversely affect the nest. 4. No construction activity shall occur within the buffer area of a particular nest until a qualified biologist, in consultation with CDFW, confirms that the chicks have fledged or the nesting cycle has otherwise completed. Monitoring of the nest by a qualified biologist during construction activities shall be required if the activity has the potential to adversely affect the nest. If construction activities cause the nesting bird to vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest, then the no-disturbance buffer shall be increased until the agitated behavior ceases. The exclusionary buffer will remain in place until the chicks have fledged or as otherwise determined by a qualified biologist. **MM 4.4-7**: Prior to construction activities on any undeveloped parcel, a qualified biologist shall conduct a pre-construction survey with special attention to trees and manmade structures. The survey shall be conducted within 14 days prior to the construction activities. If no suitable trees or manmade structures that can support bats is detected, no further action is required. If bats are detected, then acoustical sampling shall be conducted to determine species. If pallid bats, western mastiff bats, or hoary bats are identified to be roosting in the trees or structures, work will not commence until: 1. Bats have been passively excluded from the tree or structure by progressively boarding up any entrances at night while bats are	

Impacts	Mitigation Measures	Level of Significance
	foraging away from the tree or structure. Relocation of bats may not be performed during the breeding season (March 1 to September 15). 2. Permanent, elevated bat houses have been installed outside of, but near the construction area, preferably in designated open space areas. Placement and height will be determined by a qualified biologist, but the height of bat house will be at least 15 feet. Bat houses will be multi-chambered. The number of bat houses required will be dependent upon the size and number of colonies present, but at least one bat house will be installed for each pair of bats (if occurring individually) or each colony of bats found. 3. If a tree or structure containing a roost for pallid, western mastiff, or hoary bats will be removed or may lead to roost abandonment during construction, a qualified biologist will design and determine an appropriate location for an alternate roost structure. **MM 4.4-8:** Prior to construction activities on any undeveloped parcel, all personnel shall attend a Worker Environmental Awareness Training (WEAT). The WEAT shall be developed and conducted by a qualified biologist. 1. The program shall include information on the life history of all of the special-status species determined herein to have potential to occur onsite, including migratory birds and raptors. 2. The program shall discuss each species' legal protection, status, the definition of "take" under the Endangered Species Act, measures the Project operator must implement to protect the species, reporting requirements, specific measures that each worker shall employ to	

Impacts	Mitigation Measures	Level of Significance
	avoid take of wildlife species, and penalties for violation of the State and Federal ESAs. 3. The program shall provide information on how and where to bring injured wildlife for treatment in the case any animals are injured on the Project site, and how to document wildlife mortalities and injuries. 4. An attendance form signed by each worker indicating that environmental training has been completed will be kept on record. A copy of the sign-in sheet shall be submitted to The City of Fresno Planning and Development Department.	
4.4-2: Have a Substantial Adverse Effect on Any Riparian Habitat or Other Sensitive Natural Community Identified in Local or Regional Plans, Policies, Regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	No mitigation is required.	
4.4-3: Have a Substantial Adverse Effect on State or Federally Protected Wetlands (Including, but Not Limited to, Marsh, Vernal Pool, Coastal, etc.) Through Direct Removal, Filling, Hydrological Interruption, or Other Means?	No mitigation is required.	No impact
4.4-4: Interfere Substantially with the Movement of any Native	No mitigation is required.	No impact

Impacts	Mitigation Measures	Level of Significance
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?		
4.4-5: Conflict with Any Local Policies or Ordinances Protecting Biological Resources, Such as a Tree Preservation Policy or Ordinance?	**MM 4.4-9**: Prior to removal of trees, Project proponents shall consult with the City of Fresno to determine if a tree removal permit is required, and if required shall comply with Fresno Municipal Code, Chapter 13, Article 3.	Less than significant with mitigation
4.4-6: Conflict with Provisions of an Adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other Approved Local, Regional, or State Habitat Conservation Plan?	No mitigation is required.	No impact
Result in significant cumulative impacts to biological resources?	Implement Mitigation Measures MM 4.4-1 through MM 4.4-6.	Less than significant with mitigation

Impacts	Mitigation Measures	Level of Significance
Section 4.5 Cultural Resources		
4.5-1: Cause a Substantial Adverse Change in the Significance of a Historical Resource Pursuant to Section 15064.5?	**MM 4.5-1**: If previously unknown historical resources are encountered before or during grading activities, construction shall stop in the immediate vicinity of the find and a qualified historical resources specialist shall be consulted to determine whether the resource requires further study. The qualified historical resources specialist 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 in accordance with Section 15064.5 of the CEQA Guidelines. If the resources are determined to be unique historical resources as defined under Section 15064.5 of the CEQA Guidelines, measures shall be identified by the qualified historical resources specialist and recommended to the City. Appropriate 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 City approves the measures to protect these resources. Any historical artifacts recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study.	Less than significant with mitigation
4.5-2: Cause a Substantial Adverse Change in the Significant of an Archaeological Resource Pursuant to Section 15064.5?	**MM 4.5-2**: If a Cannabis License application is submitted on a parcel of land that has not previously been graded, a field survey and literature search for prehistoric archaeological resources shall be conducted by a qualified historical resources specialist. The following procedures shall be followed: 1. If prehistoric resources are not found during either the field survey or literature search, excavation and/or construction activities can	Less than significant with mitigation

Impacts	Mitigation Measures	Level of Significance
	commence. In the event that buried prehistoric archaeological resources are discovered during excavation and/or construction activities, construction shall stop in the immediate vicinity of the find and a qualified archaeologist shall be consulted to determine whether the resource requires further study. The qualified archaeologist shall make recommendations to the developer and 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 in accordance with Section 15064.5 of the CEQA Guidelines. If the resources are determined to be unique prehistoric archaeological resources as defined under Section 15064.5 of the CEQA Guidelines, mitigation measures shall be identified by the monitor and required to the developer and City. Appropriate 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 prehistoric archaeological artifacts recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study. 2. If prehistoric resources are found during the field survey or literature review, the resources shall be inventoried using appropriate State record forms and submit the forms to the Southern San Joaquin Valley Information Center. The resources shall be evaluated for significance. If the resources are found to be significant, measures shall be identified by the qualified archaeologist. Appropriate mitigation measures for significant resources could include avoidance or capping,	

Impacts	Mitigation Measures	Level of Significance
	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 an archaeological monitor. The monitoring period shall be determined by the qualified archaeologist. 3. If additional prehistoric archaeological resources are found during excavation and/or construction activities, the procedure identified above for the discovery of unknown resources shall be followed.	
4.5-3: Disturb any Human Remains, including those Interred outside of Dedicated Cemeteries?	**MM 4.5-3**: In the event that human remains are unearthed during excavation and grading activities of any future development project, all activity shall cease immediately. Pursuant to Health and Safety Code (HSC) Section 7050.5, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code (PRC) Section 5097.98(a). If the remains are determined to be of Native American descent, the Coroner shall within 24 hours notify the Native American Heritage Commission (NAHC). The NAHC shall then contact the most likely descendent of the deceased Native American, who shall then serve as the consultant on how to proceed with the remains. Pursuant to PRC Section 5097.98(b), upon the discovery of Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains.	Less than significant with mitigation

Impacts	Mitigation Measures	Level of Significance
Result in cumulative impacts to cultural resources?	Implement Mitigation Measures MM 4.5-1 through MM 4.5-3.	Less than significant with mitigation

Impacts	Mitigation Measures	Level of Significance
Section 4.6 Energy		
4.6-1: Result in Potentially Significant Environmental Impact Due to Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources, During Project Construction or Operation?	**MM 4.6-1**: Beginning in 2022, within 15 days of submitting an application for renewal of a cultivation license to the Bureau of Cannabis Control , the project proponent of any conditional use permit, for a cannabis related business (cultivation only), shall provide written documentation to the City of Fresno of compliance with State requirements of CCR Title 3, Div. 8, Chapter 1, Section 8203 (g). Written documentation shall include the following information: 1. Total electricity supplied by local utility provider, name of local utility provider, and greenhouse gas emission intensity per kilowatt hour reported by the utility provider under Section 398.4(c) of the Public Utilities Code for the most recent calendar year available at time of submission; 2. Total electricity supplied by a zero net energy renewable source, as set forth in Section 398.4(h)(5) of the Public Utilities Code, that is not part of a net metering or other utility benefit; 3. Total electricity supplied from other unspecified sources, as defined in 398.2(e) of the Public Utilities Code, and other on-site sources of generation not reported to the local utility provider (e.g., generators, fuel cells) and the greenhouse gas emission intensity from these sources; 4. Average weighted greenhouse gas emission intensity considering all electricity use in subsections (1), (2), and (3). **MM 4.6-2**: Beginning on January 1, 2023, the project proponent of any conditional use permit, for a cannabis related business (cultivation only), shall	Less than significant with mitigation

Impacts	Mitigation Measures	Level of Significance
	provide written documentation to the City of Fresno of compliance with State requirements of CCR Title 3, Div. 8, Chapter 1, Section 8305 (Renewable Energy Requirements). As evidence of meeting the standard, licensees shall comply with the following: 1. If a licensee's average weighted greenhouse gas emission intensity as provided in Section 8203(g)(4) is greater than the local utility provider's greenhouse gas emission intensity, the licensee shall provide evidence of carbon offsets from any of the following sources to cover the excess in carbon emissions from the previous annual licensed period: a. Voluntary greenhouse gas offset credits purchased from any of the following recognized and reputable voluntary carbon registries: • American Carbon Registry; • Climate Action Reserve; (C) Verified Carbon Standard. b. Offsets purchased from any other source are subject to verification and approval by the Department. 2. New licensees, without a record of weighted greenhouse gas emissions intensity from the previous calendar year, shall report the average weighted greenhouse gas emissions intensity, as provided in Section 8203(g)(4), used during their licensed period at the time of license renewal. If a licensee's average weighted greenhouse gas emissions intensity is greater than the local utility provider's greenhouse gas emissions intensity for the most recent calendar year, the licensee shall provide evidence of carbon offsets or allowances to	

Impacts	Mitigation Measures	Level of Significance
	cover the excess in carbon emissions from any of the sources provided in subsection (a).	
4.6-2: Conflict with or Obstruct a State or Local Plan for Renewable Energy or Energy Efficiency?	Implement Mitigation Measures MM 4.6-1 through MM 4.6-2.	Less than significant with mitigation
Result in cumulative impacts to energy resources?	Implement Mitigation Measures MM 4.6-1 through MM 4.6-2.	Less than significant with mitigation

Impacts	Mitigation Measures	Level of Significance
Section 4.7 Geology and Soils		
4.7-1: Directly or Indirectly Cause Potential Substantial Adverse Effects, Including the Risk of Loss, Injury, or Death Involving the Rupture of a Known Earthquake Fault?	No mitigation is required.	Less than significant
4.7-2: Directly or Indirectly Cause Potential Substantial Adverse Effects, Including the Risk of Loss, Injury, or Death Involving Strong Seismic Ground Shaking?	No mitigation is required.	Less than significant
4.7-3: Directly or Indirectly Cause Potential Substantial Adverse Effects, Including the Risk of Loss, Injury, or Death Involving Seismic-related Ground Failure, Including Liquefaction?	No mitigation is required.	Less than significant
4.7-4: Directly or Indirectly Cause Potential Substantial Adverse Effects, Including the Risk of Loss, Injury, or Death Involving Landslides?	No mitigation is required.	Less than significant
4.7-5: Result in Substantial Soil Erosion or Loss of Topsoil?	No mitigation is required.	Less than significant
4.7-6: Be Located on a Geologic Unit or Soil That Is Unstable, or That Would Become Unstable as a Result of the Project, and	No mitigation is required.	Less than significant

Impacts	Mitigation Measures	Level of Significance
Potentially Result in On- or Off-site Landslide, Lateral Spreading, Subsidence, Liquefaction, or Collapse?		
4.7-7: Be Located on Expansive Soil, as Defined in Table 18-1-B of the Uniform Building Code (1994), Creating Substantial Direct or Indirect Risks to Life or Property?	No mitigation is required.	Less than significant
4.7-8: 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?	No mitigation is required.	Less than significant
4.7-9: Directly or Indirectly Destroy a Unique Paleontological Resource or Site or Unique Geologic Feature?	**MM 4.7-1:** The project applicant of a conditional use permit for any commercial cannabis related business proposed on land not previously disturbed or located within an existing building, shall submit a site-specific PRA. The PRA shall include Project-specific records searches of the UCMP and Paleobiology databases, as well as, searches at regional repositories such as the Natural History Museum of Los Angeles County. If the Project-specific PRA indicates high potential for encountering significant paleontological resources, a Project-specific Paleontological Resource Impact Mitigation Program (PRIMP) shall be prepared prior to issuance of grading permits. The PRIMP shall be prepared by a professional paleontologist who meets or exceeds the SVP (2010) qualification standards for Project Paleontologist/Principal Investigator. The PRIMP shall specify the steps to be	Less than significant with mitigation

Impacts	Mitigation Measures	Level of Significance
	taken to mitigate impacts to paleontological resources. For instance, Worker's Environmental Awareness Program (WEAP) training shall be prepared prior to the start of Project-related earth-moving activities and presented in person to all field personnel to describe the types of fossils that may be found and the procedures to follow if any are encountered. The PRIMP shall also specify whether construction monitoring is required, and, if so, the frequency of required monitoring (i.e., full-time, spot-checks, etc.); provide details about fossil collection, analysis, and preparation for permanent curation at an approved repository; and describe the different reporting standards to be used—monitoring with negative findings versus monitoring resulting in fossil discoveries.	
Result in cumulative impacts to geology and soils?	Implement Mitigation Measure MM 4.7-1.	Less than significant with mitigation

Impacts	Mitigation Measures	Level of Significance
Section 4.8 Greenhouse Gases		
4.8-1: Generate Greenhouse Gas Emissions, Either Directly or Indirectly, That May Have a Significant Impact on the Environment?	Implement Mitigation Measures MM 4.3-1 through MM 4.3-4, MM 4.6-1 and MM 4.6-2. **MM 4.8-1:** The Project applicant shall be required to comply with all applicable State and San Joaquin Valley Air Pollution Control District (SJVAPCD) Rules and Regulations related to greenhouse gas emissions. **MM 4.8-2:** Prior to the approval of a site plan, issuance of a grading or building permit, or as on site plans for applications for a conditional use permit, the Project applicant shall provide details to the Fresno City Planning and Development Department that the following menu of greenhouse gas emissions reduction measures are being implemented in conformance with the Commercial Cannabis Ordinance. Building design standards shall be made conditions of approval of any commercial/industrial site plan. 1. Designate at least two locations with adequate pedestrian, bicycle, and parking facilities for off-site transit connection service. 2. Prohibit use of chlorofluorocarbon refrigerants in commercial buildings. 3. Ensure recycling of construction debris and waste through administration by an on-site recycling coordinator and presence of recycling/separation area. 4. Implement a water wise program that includes all feasible measures to reduce indoor water use and associated energy use (e.g., for interior fixtures, require tankless water heaters and low-flow plumbing and fixtures).	Significant and unavoidable

Impacts	Mitigation Measures	Level of Significance
4.8-2: Conflict with Any Applicable Plan, Policy or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases?	Implement Mitigation Measures MM 4.3-1 through MM 4.3-4, MM 4.6-1, MM 4.6-2, MM 4.8-1 and MM 4.8-2.	Less than significant with mitigation
Result in significant cumulative impacts to greenhouse gases?	Implement Mitigation Measures MM 4.3-1 through MM 4.3-4, MM 4.6-1, MM 4.6-2, MM 4.8-1 and MM 4.8-2.	Significant and unavoidable

Impacts	Mitigation Measures	Level of Significance
Section 4.9 Hazards		
4.9-1: Create a Significant Hazard to the Public or the Environment Through the Routine Transport, Use, or Disposal of Hazardous Materials?	**MM 4.9-1:** As part of the Conditional Use Permit Application, all commercial cannabis related businesses which may utilize hazardous materials, shall include a Hazardous Materials Business Plan (HMBP) and a Waste Management Plan (WMP), approved by the Fresno County Environmental Health Department. The HMBP shall include, at a minimum, floor plans of the facility and business conducted at the site; an inventory of hazardous materials that are handled or stored onsite; and an Emergency Response and Training Plan. The WMP shall include a list of all byproducts associated with cannabis manufacturing, and a plan for proper disposal, at an approved facility. **MM 4.9-2:** For cannabis processing operations with systems that use solvents that are potentially flammable or toxic, the project applicant shall provide written verification to the Fresno County Environmental Health Department and the City of Fresno Planning and Development Department that the cannabis operations meet the following requirements: 1. Use a closed-loop system that will prevent off-gassing; 2. Use solvents that are recognized as safe pursuant to the Federal Food, Drug and Cosmetic Act; 3. Have a licensed engineer certify that the system was commercially manufactured, is safe for its intended use, and was built to codes of recognized and generally accepted good engineering practices, including, but not limited to, the American Society of Mechanical Engineers, the American National Standards Institute, Underwriters Laboratories, the American Society for Testing and Materials, or	Less than significant with mitigation

Impacts	Mitigation Measures	Level of Significance
	Occupational Safety and Health Administration Nationally Recognized Testing Laboratories; 4. Have a certification document that includes the unit's serial number and is signed by a professional engineer; 5. Receive and maintain approval from local fire officials for the closed-loop system, other equipment, the extraction operation and the facility; and 6. Adhere to federal, State and local fire protection standards. **MM 4.9-3:** Volatile Manufacturing Employee Training Plan. Cannabis activities dealing in volatile manufacturing shall develop a Volatile Manufacturing Employee Training Plan (Training Plan) and submit to the City as part of the permitting and licensing process. Volatile manufacturing means to compound, blend, extract, infuse, or otherwise make or prepare a cannabis product with the use of volatile solvents or substances including but not limited to, butane and ethanol. The Training Plan shall detail how the licensed volatile manufacturing operators will train their employees on the proper use of equipment and on the proper hazard response protocols in the event of equipment failure, per established OSHA standards. The Training Plan shall include a log, identifying trained employees and the date upon which training was completed.	
4.9-2: Create a Significant Hazard to the Public or the Environment Through reasonably Foreseeable Upset and Accident Conditions Involving the Release of	**MM 4.9-4**: In the event of planned renovation or demolition of any structures on the proposed site, prior to the issuance of demolition permits, asbestos and lead based paint (LBP) surveys shall be conducted in order to determine the presence or absence of asbestos-containing materials (ACM) and/or LBP. Removal of friable ACM, and non-friable ACMs that have the potential to become friable, during demolition and/or renovation shall conform to the	Less than significant with mitigation

Impacts	Mitigation Measures	Level of Significance
Hazardous Materials into the Environment?	standards set forth by the National Emissions Standards for Hazardous Air Pollutants (NESHAPs). The San Joaquin Valley Air Pollution Control District (SJVAPCD) is the responsible agency on the local level to enforce the National Emission Standards for Hazardous Air Pollutants (NESHAPs) and shall be notified by the property owners and/or developers of properties (or their designee(s)) prior to any demolition and/or renovation activities. If asbestos-containing materials are left in place, an Operations and Maintenance Program (O&M Program) shall be developed for the management of asbestos containing materials. **MM 4.9-5**: All cannabis license applications which may utilize hazardous materials, shall include a Fire Hazard Plan (FHP), approved by the Fresno Fire Department. The FHP shall include, at a minimum, floor plans of the facility and business conducted at the site; an inventory of hazardous materials that are handled or stored onsite; and an Emergency Response and Training Plan.	
4.9-3: Emit Hazardous Emissions or Handle Hazardous or Acutely Hazardous Materials, Substances, or Waste Within One-quarter Mile of an Existing or Proposed School?	Implement Mitigation Measures MM 4.9-1 through MM 4.9-5.	Less than significant with mitigation
4.9-4: Be Located on a Site Which is Included on a List of Hazardous Materials Sites Compiled Pursuant to Government Code Section 65962.5 and, as a Result, would it Create a Significant	**MM 4.9-6**: All cannabis license applications submitted to the City of Fresno shall include proof that the proposed site is not located on the Cortese List, pursuant to Government Code Section 65962.5. Any site found to be located on the list shall be remediated consistent to California State regulations, and written documentation shall be submitted to the City of Fresno, prior to final occupancy of the site. If the property is listed the applicant shall submit a	Less than significant with mitigation

Impacts	Mitigation Measures	Level of Significance
Hazard to the Public or the Environment?	Phase I ASTM report that determines the current state of the hazardous materials, and any management restrictions on the use of the site. The report and any recommendations shall be reviewed by Fresno County Environmental Health Department and the City of Fresno to determine if a Phase II ASTM is warranted. Appropriate subsurface testing and recommended remediation, with regulatory agency oversight, shall be undertaken if considered warranted by Fresno County Environmental Health Department and the City of Fresno. Potential remediation options could include excavation and offsite disposal of contaminated soil, in-place treatment, and/or the installation of protective barriers.	
4.9-5: For a Project Located Within an Airport Land Use Plan or, Where Such a Plan Has Not Been Adopted, Within Two Miles of a Public Airport or Public Use Airport, Would the Project Result in a Safety Hazard or Excessive Noise for People Residing or Working in the Project Area?	No mitigation is required.	Less than significant
4.9-6: Impair Implementation of or Physically Interfere with an Adopted Emergency Response Plan or Emergency Evacuation Plan?	No mitigation is required.	Less than significant
4.9-7: Expose people or structures, either directly or indirectly, to a significant risk of	No mitigation is required.	Less than significant

Impacts	Mitigation Measures	Level of Significance
loss, injury or death involving wildland fires?		
Result in significant cumulative impacts to hazards?	Implement Mitigation Measures MM 4.9-1 through MM 4.9-5, and MM 4.10-1.	Less than significant with mitigation

Impacts	Mitigation Measures	Level of Significance
Section 4.10 Hydrology and Water Quality		
4.10-1: Violate Any Water Quality Standards or Waste Discharge Requirements or Otherwise Substantially Degrade Surface or Groundwater Quality?	Implement MM 4.9-1 through MM 4.9-3. **MM 4.10-1:** Concurrent with submittal of a conditional use permit for any cultivation facility, the applicant shall submit to the City Planning and Development Department a Wastewater Control Plan (WCP). The WCP shall include best management practices for capture and treatment of runoff (including recycling systems for capture and reuse of produced water, disclosure of pesticides to be used, and amounts of individual contaminate concentrates that will be disposed of through public wastewater treatment facilities. If contaminate concentrations exceed wastewater standards, pretreatment of wastewater will be required, prior to disposal. The plan shall also outline the materials to be used to create impermeable flooring surfaces and containment directly beneath all cultivation areas and associated walkways.	Less than significant with mitigation
4.10-2: Substantially Decrease Groundwater Supplies or Interfere Substantially with Groundwater Recharge Such That the Project May Impede Sustainable Groundwater Management of the Basin ?	Implement Mitigation Measure MM 4.10-1.	Less than significant with mitigation
4.10-3(i): 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	No mitigation is required.	Less than significant

Impacts	Mitigation Measures	Level of Significance
in Substantial Erosion or Siltation On- or Off-Site?		
4.10-3(ii): Substantially Alter the Existing Drainage Pattern of the Site or Area, Including the Alteration of the Course of a Stream or River or Through the Addition of Impervious Surfaces, or Substantially Increase the Rate or Amount of Surface Runoff in a Manner Which Would Result in Flooding On- Or Off-Site?	No mitigation is required.	Less than significant
4.10-3(iii): Substantially Alter the Existing Drainage Pattern of the Site or Area, Including Through the Alteration of the Course of a Stream or River or Through the Addition of Impervious Surfaces, in a Manner Which Would Create or Contribute Runoff Water Which Would Exceed the Capacity of Existing or Planned Stormwater Drainage Systems or Provide Substantially Additional Sources of Polluted Runoff?	Implement Mitigation Measure MM 4.10-1.	Less than significant with mitigation
Impact 4.10-3(iv): Substantially Alter the Existing Drainage Pattern of the Site or Area, Including Through the Alteration	Implement Mitigation Measure MM 4.10-1.	Less than significant with mitigation

Impacts	Mitigation Measures	Level of Significance
of the Course of a Stream or River or Through the Addition of Impervious Surfaces, in a Manner Which Would Impede or Redirect Flood Flows?		
4.10-4: In Flood Hazard, Tsunami, or Seiche Zones, Risk Release of Pollutants Due to Project Inundation?	No mitigation is required.	Less than significant
4.10-5: Conflict with or Obstruct Implementation of a Water Quality Control Plan or Sustainable Groundwater Management Plan?	No mitigation is required.	Less than significant
Result in significant cumulative impacts to hydrology and water quality?	Implement MM 4.9-1 through MM 4.9-3, and MM 4.10-1.	Less than significant with mitigation

Impacts	Mitigation Measures	Level of Significance
Section 4.11 Land Use and Planning		
4.11-1: Physically Divide an Established Community?	No mitigation is required.	Less than significant
4.11-2: Cause a Significant Environmental Impact Due to a Conflict with Any Land Use Plan, Policy, or Regulation Adopted for the Purpose of Avoiding or Mitigating an Environmental Effect?	No mitigation is required.	Less than significant
Result in significant cumulative impacts to land use and planning?	No mitigation is required.	Less than significant

Impacts	Mitigation Measures	Level of Significance
Section 4.12 Mineral Resources		
4.12-1: Result in the Loss of Availability of a Known Mineral Resource that Would be of Value to the Region and the Residents of the State?	No mitigation is required.	Less than significant
4.12-2: Result in the Loss of Availability of a Locally Important Mineral Resource Recovery Site Delineated on a Local General Plan, Specific Plan, or Other Land Use Plan?	No mitigation is required.	Less than significant
Result in significant cumulative impacts to mineral resources?	No mitigation is required.	Less than significant

Impacts	Mitigation Measures	Level of Significance
Section 4.13 Noise		
4.13-1: Generation of a Substantial Temporary or Permanent Increase in Ambient Noise Levels in the Vicinity of the Project in Excess of Standards Established in the Local General Plan or Noise Ordinance or Applicable Standards of Other Agencies?	**MM 4.13-1:** The following mitigation measures shall be implemented during construction of Cannabis related facilities: 1. Per the City of Fresno Municipal Code, construction activities should not occur outside the hours of 7:00 a.m. to 10:00 p.m., Monday through Saturday. Construction activities should not occur during any hours on Sunday. If construction is permitted outside of these hours, all sensitive receptors within 1,000 feet from any property boundary containing a residence, school, daycare or youth center shall be notified at least one week prior; 2. All construction equipment shall be properly maintained and muffled to minimize noise generation at the source; 3. Noise-producing equipment shall not be operating, running, or idling while not in immediate use by a construction contractor; 4. All noise-producing construction equipment shall be located and operated, to the extent possible, at the greatest possible distance from any noise-sensitive land uses; and 5. Signs shall be posted at the construction site displaying hours of construction activities and a contact phone number. **MM 4.13-2:** As part of the application submittal for a conditional use permit for all new commercial cannabis businesses, located in the Cannabis Innovation Zone and within 1,000 feet from any property boundary containing a residence, school, daycare or youth center, the applicant shall submit a site-specific acoustical analysis to ensure operational noise compliance with	Less than significant with mitigation

Impacts	Mitigation Measures	Level of Significance
	applicable City of Fresno noise level standards. The following mitigation measures shall be implemented to ensure operational noise compliance with applicable City of Fresno noise level standards, in areas within the Cannabis Innovation Zone, if Cannabis-related activities are to be located within 1,000 feet of a sensitive receptor: 1. All ground- and roof-amounted HVAC equipment HVAC equipment located within 300 feet of a sensitive receptor shall be properly screened to provide acoustic shielding of associated noise levels. This may include the implementation of roof parapets, solid screening walls or the placement of the unit as such to block line-of-sight of sensitive receptors. 2. Daytime (7:00 a.m. to 10:00 p.m.) loading dock activities shall not occur within 350 feet of a sensitive receptor and Nighttime (10:00 p.m. to 7:00 a.m.) loading dock activities shall not occur within 1,000 feet of a sensitive receptor, without the preparation of a site-specific acoustical analysis. 3. Daytime (7:00 a.m. to 10:00 p.m.) generator activities shall not occur within 200 feet of a sensitive receptor and Nighttime (10:00 p.m. to 7:00 a.m.) generator activities shall not occur within 600 feet of a sensitive receptor, without the preparation of a site-specific acoustical analysis. Daytime (7:00 a.m. to 10:00 p.m.) on-site truck movements shall not occur within 100 feet of a sensitive receptor and Nighttime (10:00 p.m. to 7:00 a.m.) onsite truck movements shall not occur within 325 feet of a sensitive receptor, without the preparation of a site-specific acoustical analysis.	

Impacts	Mitigation Measures	Level of Significance
4.13-2: Generation of Excessive Groundborne Vibration or Groundborne Noise Levels?	No mitigation is required.	Less than significant
4.13-3: For a Project Located Within the Vicinity of a Private Airstrip or an Airport Land Use Plan or, Where Such a Plan has Not Been Adopted, Within Two Miles of a Public Airport or Public Use Airport, Would the Project Expose People Residing or Working in the Project Area to Excessive Noise Levels?	No mitigation is required.	Less than significant
Result in significant cumulative impacts to noise?	Implement Mitigation Measures MM 4.13-1 and MM 4.13-2.	Less than significant with mitigation

Impacts	Mitigation Measures	Level of Significance
Section 4.14 Population and Housing		
4.14-1: Induce Substantial Unplanned Population Growth in an Area, Either Directly or Indirectly?	No mitigation is required.	Less than significant
4.14-2: Displace Substantial Number of Existing People or Housing Necessitating the Construction of Replacement Housing Elsewhere?	No mitigation is required.	Less than significant
Result in significant cumulative impacts to population and housing?	No mitigation is required.	Less than significant

Impacts	Mitigation Measures	Level of Significance
Section 4.15 Public Services		
4.15-1: Result in Substantial Adverse Physical Impacts Associated with the Provision of New or Physically Altered Governmental Facilities, Need for New or Physically Altered Governmental Facilities, the Construction of Which Could Cause Significant Environmental Impacts in order to Maintain Acceptable Service Ratios, Response Times, or Other Performance Objectives for Fire Protection?	Implement Mitigation Measures MM 4.9-1 through MM 4.9-3.	Less than significant with mitigation
4.15-2: Result in Substantial Adverse Physical Impacts Associated with the Provision of New or Physically Altered Governmental Facilities, Need for New or Physically Altered Governmental Facilities, the Construction of Which Could Cause Significant Environmental Impacts in order to Maintain Acceptable Service Ratios, Response Times, or Other Performance Objectives for Police Protection Services?	No mitigation is required.	Less than significant

Impacts	Mitigation Measures	Level of Significance
4.15-3: Result in Substantial Adverse Physical Impacts Associated with the Provision of New or Physically Altered Governmental Facilities, Need for New or Physically Altered Governmental Facilities, the Construction of Which Could Cause Significant Environmental Impacts in order to Maintain Acceptable Service Ratios, Response Times, or Other Performance Objectives for School Services?	No mitigation is required.	Less than significant
4.15-4: Result in Substantial Adverse Physical Impacts Associated with the Provision of New or Physically Altered Governmental Facilities, Need for New or Physically Altered Governmental Facilities, the Construction of Which Could Cause Significant Environmental Impacts in order to Maintain Acceptable Service Ratios, Response Times, or Other Performance Objectives for Park Services?	No mitigation is required.	Less than significant

Impacts	Mitigation Measures	Level of Significance
4.15-5: Result in Substantial Adverse Physical Impacts Associated with the Provision of New or Physically Altered Governmental Facilities, Need for New or Physically Altered Governmental Facilities, the Construction of Which Could Cause Significant Environmental Impacts in order to Maintain Acceptable Service Ratios, Response Times, or Other Performance Objectives for Other Public Facilities?	Implement Mitigation Measure MM 4.10-1.	Less than significant with mitigation
Result in significant cumulative impacts to public services?	Implement Mitigation Measure MM 4.9-1 through MM 4.9-3, and MM 4.10-1.	Less than significant with mitigation

Impacts	Mitigation Measures	Level of Significance
Section 4.16 Recreation		
4.16-1: Increase Use of Existing Neighborhood and Regional Parks or Other Recreational Facilities Such That Substantial Physical Deterioration Would Occur or Be Accelerated?	No mitigation is required.	No impact
4.16-2: Include Recreational Facilities or Require Construction or Expansion of Recreational Facilities That Might Have an Adverse Physical Effect on the Environment?	No mitigation is required.	No impact
Result in significant cumulative impacts to recreation?	No mitigation is required.	Less than significant

Impacts	Mitigation Measures	Level of Significance
Section 4.17 Traffic		
4.17-1: Conflict with a Program, Plan, Ordinance, or Policy Addressing the Circulation System, Including Transit, Roadway, Bicycle and Pedestrian Facilities?	**MM 4.17-1:** As part of the application submittal for a conditional use permit for new commercial cannabis businesses, the applicant shall submit a focused traffic analysis once the following applicable criteria has been exceeded: 1. The total number of commercial cannabis businesses in the Cannabis Innovation Zone has exceeded 282,000 square feet; 2. The total number of commercial cannabis businesses within TIZ III has exceeded 140,000 square feet; 3. The total number of commercial cannabis businesses within TIZ I, II, and IV has exceeded 282,000 square feet. The focused traffic study shall be approved by the City of Fresno and shall be submitted and approved by the California Department of Transportation. **MM 4.17-2:** As part of the application submittal for a conditional use permit for new cannabis retail businesses, the applicant shall submit a focused traffic analysis once the following applicable criteria has been exceeded: 1. The total number of cannabis retail businesses within TIZ III has exceeded 4,500 square feet; 2. The total number of cannabis retail businesses within TIZ I, II, and IV has exceeded 9,000 square feet. The focused traffic study shall be approved by the City of Fresno and shall be submitted and approved by the California Department of Transportation.	Less than significant with mitigation

Impacts	Mitigation Measures	Level of Significance
4.17-2: Conflict or be Inconsistent with CEQA Guidelines 15064.3, Subdivision (b)?	**MM 4.17-3:** As part of the application submittal for a conditional use permit for any cannabis related businesses submitted after adoption of VMT regulations by the City of Fresno, the applicant shall comply with all requirements and measures associated with the adopted rules. For any cannabis related business CUP submitted prior to adoption of VMT regulations, adherence to mitigation measures in Impact 4.17-1 shall be required.	Less than significant with mitigation
4.17-3: Substantially Increase Hazards Due to a Geometric Design Feature or Incompatible Uses?	Implement Mitigation Measures MM 4.17-1 through 4.17-3.	Less than significant with mitigation
4.17-4: Result in Inadequate Emergency Access?	Implement Mitigation Measures MM 4.17-1 through 4.17-3.	Less than significant with mitigation
Result in significant cumulative impacts to traffic?	Implement Mitigation Measures MM 4.17-1 through 4.17-3.	Less than significant with mitigation

Impacts	Mitigation Measures	Level of Significance
Section 4.18 Tribal Cultural Resources		
4.18-1: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource, Defined in Public Resources Code Section 21074 as Either a Site, Feature, Place, Cultural Landscape that is Geographically Defined in Terms of the Size and Scope of the Landscape, Sacred Place, or Object with Cultural Value to a California Native American Tribe, and that is Listed or Eligible for Listing in the California Register of Historical Resources, or in a Local Register of Historical Resources as Defined in Public Resources Code Section 5020.1(k)	Implement Mitigation Measures MM 4.5-1 through MM 4.5-3.	Less than significant with mitigation
4.18-2: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource, Defined in Public Resources Code Section 21074 as Either a Site, Feature, Place, Cultural Landscape that is Geographically Defined in Terms of the Size and Scope of the	Implement Mitigation Measures MM 4.5-1 through MM 4.5-3.	Less than significant with mitigation

Impacts	Mitigation Measures	Level of Significance
Landscape, Sacred Place, or Object with Cultural Value to a California Native American Tribe, and that is a Resource Determined by the Lead Agency, in its Discretion and Supported by Substantial Evidence, to be Significant Pursuant to Criteria Set Forth in Subdivision (c) of Public Resources Code Section 5024.1?		
Result in significant cumulative impacts to tribal cultural resources?	Implement Mitigation Measures MM 4.5-1 through MM 4.5-3.	Less than significant with mitigation

Impacts	Mitigation Measures	Level of Significance
Section 4.19 Utilities and Service Systems		
4.19-1: Require or Result in the Relocation or Construction of New or Expanded Water, Wastewater Treatment or Storm Water Drainage, Electric Power, Natural Gas, or Telecommunications Facilities, the Construction or Relocation of Which Could Cause Significant Environmental Effects?	Implement Mitigation Measure MM 4.6-1, and MM 4.6-2 and MM 4.10-1. **MM 4.19-1**: For all cannabis cultivation businesses, prior to issuance of building permits, certification of water service connection must be submitted to the City of Fresno. Water service connections must be certified by a licensed engineer or architect and include proper documentation for the estimated water usage of the proposed business and the recommended water service connection.	Less than significant with mitigation
4.19-2: Have Sufficient Water Supplies Available to Serve the Project from Existing Entitlements and Resources, or Would New or are New or Expanded Entitlements Needed?	No mitigation is required.	Less than significant
4.19-3: Result in a Determination by the Wastewater Treatment Provider Which Serves or May Serve the Project That It Has Adequate Capacity to Serve the Project's Projected Demand in Addition to the Provider's Existing Commitments?	Implement Mitigation Measure MM 4.10-1.	Less than significant with mitigation
4.19-4: Generate Solid Waste in Excess of State or Local Standards, or in Excess of the Capacity of Local Infrastructure,	**MM 4.19-2:** During construction of future commercial cannabis facilities, the Project applicant shall not store construction waste onsite for longer than the duration of the construction activity or transport any waste to any unpermitted facilities. The Project applicant shall also reduce construction	Less than significant with mitigation

Impacts	Mitigation Measures	Level of Significance
or Otherwise Impair the Attainment of Solid Waste Reduction Goals?	waste transported to landfills by ensuring construction and demolition waste is hauled to one of the six City-approved construction and demolition disposal facilities listed above. **MM 4.19-3:** In order to reduce the amount of waste generated from cannabis-related operations being taken to the landfill, the following shall be incorporated into the CUP conditions of approval for each Project: Businesses generating four cubic yards or more of commercial solid waste per week are required to recycle and take one, or any combination, of the following actions: 1. Subscribe to source separated recycling service with a regional franchise hauler authorized to provide service for the area in which the business is located; 2. Subscribe to a mixed solid waste recycling service with a regional franchise hauler authorized to provide service for the areas in which the business is located; 3. Self-recycle and certify compliance with Ordinance No. 2003-100; 4. Undertake a combination of such measures, or such alternate measures as may be approved by the City to reduce the amount of waste from the commercial sector being taken to a landfill. **MM 4.19-4:** Prior to issuance of grading or building permits, the Project applicant shall construct, adequate, segregated, onsite screened storage for collection of commercial solid waste and source separated recyclable materials if constructing new facilities or if existing facilities do not provide	

Impacts	Mitigation Measures	Level of Significance
	such areas. The area shall be designed to be architecturally compatible with the development and shall not prevent security of the recyclables. Driveways and/or travel aisles shall provide, at a minimum, unobstructed access for collection vehicles and personnel. A sign clearly identifying all recycling/solid waste collection and loading areas and the materials accepted shall be posted adjacent to all points of direct access to the area.	
4.19-5: Comply with Federal, State, and Local Management and Reduction Statutes and Regulations Related to Solid Waste?	Implement Mitigation Measures MM 4.19-2 through 4.19-4.	Less than significant with mitigation
Result in significant cumulative impacts to utilities and service systems?	Implement Mitigation Measures MM 4.6-1, MM 4.6-2, MM 4.10-1, MM 4.19-1 through MM 4.19-4.	Less than significant with mitigation

Impacts	Mitigation Measures	Level of Significance
Section 4.20 Wildfire		
4.20-1: Substantially Impair an Adopted Emergency Response Plan or Emergency Evacuation Plan?	No mitigation is required.	Less than significant
4.20-2: Due to Slope, Prevailing Winds, and Other Factors, Exacerbate Wildfire Risks, and Thereby Expose Project Occupants to, Pollutant Concentrations from a Wildfire or the Uncontrolled Spread of a Wildfire?	No mitigation is required.	Less than significant
4.20-3: Require the Installation or Maintenance of Associated Infrastructure (Such as Roads, Fuel Breaks, Emergency Water Sources, Power Lines or Other Utilities) that may Exacerbate Fire Risk or that may Result in Temporary or Ongoing Impacts to the Environment?	No mitigation is required.	Less than significant
4.20-4: Expose People or Structures to Significant Risks, Including Downslope or Downstream Flooding or Landslides, as a Result of Runoff, Post-fire Slope Instability, or Drainage Changes?	Implement Mitigation Measure MM 4.10-1.	Less than significant with mitigation

Impacts	Mitigation Measures	Level of Significance
Result in significant impacts to wildfire?	Implement Mitigation Measure MM 4.10-1.	Less than significant with mitigation

CHAPTER 2 - INTRODUCTION

2.1 - Overview

The City of Fresno (City) will be the Lead Agency pursuant to the requirements of the California Environmental Quality Act (CEQA) and will be responsible for preparing an Environmental Impact Report (EIR) pursuant to CEQA (Public Resources Code (PRC) Section 21000 et seq.) and the CEQA Guidelines. In accordance with Section 15082 of the CEQA Guidelines, the City published a Notice of Preparation (NOP). This EIR will be used by the City to both evaluate the potential environmental impacts that could result from implementation of the Project and develop changes in the proposed Project and/or adopt mitigation measures which would address those impacts.

This EIR has been prepared pursuant to the following relevant State statutes and guidelines:

- CEQA (Public Resources Code, Section 21000 et seq.);
- CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3, Section 15000 et seq.); and

The overall purposes of the CEQA process are to:

- Identify the significant effects to the environment of a project, identify alternatives, and to indicate the manner in which those significant effects can be avoided or mitigated;
- Provide for full disclosure of the project's environmental effects to the public, the agency decision-makers who will approve or deny the project, and responsible and trustee agencies charged with managing resources (e.g., wildlife, air quality) that may be affected by the project; and
- Provide a forum for public participation in the decision-making process with respect to environmental effects.

2.2 - Purpose of This Environmental Impact Report

An EIR is a public informational document used in the planning and decision-making process. This project-level EIR will analyze the environmental impacts of the Project. The City of Fresno Planning Commission and Board of Supervisors will consider the information in the EIR, including the public comments and staff response to those comments, during the public hearing process. As a legislative action, the final decision is made by the Board of Supervisors, who may approve, conditionally approve, or deny the Project. The purpose of an EIR is to identify:

- The significant potential impacts of the Project on the environment and indicate the manner in which those significant impacts can be avoided or mitigated;
- Any unavoidable adverse impacts that cannot be mitigated; and

- Reasonable and feasible alternatives to the Project that would eliminate any significant adverse environmental impacts or reduce the impacts to a less-than-significant level.

An EIR also discloses growth-inducing impacts; impacts found not to be significant; and significant cumulative impacts of the project when taken into consideration with past, present, and reasonably anticipated future projects.

CEQA requires an EIR that reflects the independent judgment of the lead agency regarding the impacts, the level of significance of the impacts both before and after mitigation, and mitigation measures proposed to reduce the impacts. A Draft EIR is circulated to responsible agencies, trustee agencies with resources affected by the project, and interested agencies and individuals. The purposes of public and agency review of a Draft EIR include sharing expertise, disclosing agency analyses, checking for accuracy, detecting omissions, discovering public concerns, and soliciting mitigation measures and alternatives capable of avoiding or reducing the significant effects of the project, while still attaining most of the basic objectives of the project.

Reviewers of a Draft EIR are requested to focus on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the project might be avoided or mitigated. Comments are most helpful when they suggest additional specific alternatives or mitigation measures that would provide better ways to avoid or mitigate significant environmental effects.

2.2.1 - ISSUES TO BE RESOLVED

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR contain issues to be resolved, which includes the choices among alternatives and whether or how to mitigate significant impacts. The major issues to be resolved regarding the project include decisions by the lead agency as to whether or not:

- The Draft EIR adequately describes the environmental impacts of the project,
- The recommended mitigation measures should be adopted or modified, or
- Additional mitigation measures need to be applied.

2.3 - Terminology

To assist reviewers in understanding this EIR, the following terms are defined:

- *Project* means the whole of an action that has the potential for resulting in a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment.

- *Environment* means the physical conditions that exist in the area and which will be affected by a proposed project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. The area involved is where significant direct or indirect impacts would occur as a result of the project. The environment includes both natural and manmade (artificial) conditions.

- *Impacts* analyzed under CEQA must be related to a physical change. Impacts are:
    - Direct or primary impacts that would be caused by a proposed project and would occur at the same time and place; or
    - Indirect or secondary impacts that would be caused by a proposed project and would be later in time or farther removed in distance but would still be reasonably foreseeable. Indirect or secondary impacts may include growth-inducing impacts and other effects related to induced changes in the pattern of land use; population density or growth rate; and related effects on air and water and other natural systems, including ecosystems.
    - The California Supreme Court recently ruled that the environment's impact on a project fall outside the scope of CEQA except to the extent that impacts from a project exacerbate such impacts. This EIR includes the environment's impacts on a project for informational purposes, and to address the exacerbation component of the Court's decision.
- *Significant impact on the environment* means a substantial, or potentially substantial, adverse change in any of the physical conditions in the area affected by a proposed project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. An economic or social change by itself is not considered a significant impact on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.
- *Mitigation* consists of measures that avoid or substantially reduce a proposed project's significant environmental impacts by:
    - Avoiding the impact altogether by not taking a certain action or parts of an action;
    - Minimizing impacts by limiting the degree or magnitude of the action and its implementation;
    - Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
    - Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; or
    - Compensating for the impact by replacing or providing substitute resources or environments.
- *Cumulative impacts* are two or more individual impacts that, when considered together, are considerable or that compound or increase other environmental impacts. The following statements also apply when considering cumulative impacts:

- The individual impacts may be changes resulting from a single project or separate projects; and

- The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over time.

This EIR uses a variety of terms to describe the level of significance of adverse impacts. These terms are defined as follows:

- *Less than significant*. An impact that is adverse but that does not exceed the defined thresholds of significance. Less-than-significant impacts do not require mitigation.

- *Significant*. An impact that exceeds the defined thresholds of significance and would or could cause a substantial adverse change in the environment. Mitigation measures are recommended to eliminate the impact or reduce it to a less-than-significant level.

- *Significant and unavoidable*. An impact that exceeds the defined thresholds of significance and cannot be eliminated or reduced to a less-than-significant level through the implementation of mitigation measures.

2.4 - Decision-Making Process

CEQA requires lead agencies to solicit and consider input from other interested agencies, citizen groups, and individual members of the public. CEQA also requires a project to be monitored after it has been permitted to ensure that mitigation measures are carried out.

CEQA requires the lead agency to provide the public with a full disclosure of the expected environmental consequences of a proposed project and with an opportunity to provide comments. In accordance with CEQA, the following is the process for public participation in the decision-making process:

- **Notice of Preparation**. The City of Fresno prepared and circulated a Notice of Preparation (NOP) to responsible, trustee, and local agencies for review and comment on July 5, 2019. The NOP and responses to the NOP are included in Appendix A of this EIR. In conjunction with this public notice, a scoping meeting was held on July 16, 2019 at Fresno City Council Chambers, located in City Hall, 2nd Floor, 2600 Fresno Street, Fresno, California 93721.

- **Draft EIR Preparation**. A Draft EIR is prepared, incorporating public and agency responses to the NOP and scoping process. The Draft EIR is circulated for review and comment to appropriate agencies and additional individuals and interest groups who have requested to be notified of EIR projects. Per Section 15105 of the CEQA Guidelines, the City of Fresno will provide for a 45-day public review period on the Draft EIR. The City will subsequently respond to each comment on the Draft EIR received in writing through a Response to

Comments chapter in the Final EIR. The Response to Comments will be provided to each agency or person who provided written comments on the EIR a minimum of 10 business days before the scheduled City Council hearing on the Final EIR.

- **Preparation and Certification of Final EIR**. The City of Fresno will consider the Final EIR and the Project, acting in an advisory capacity to the City Council. Upon receipt of the Planning Commission's recommendation, the City Council will also consider the Final EIR, all public comments and take final action on the Project. At least one public hearing will be held by both the Planning Commission and City Council to consider the Final EIR, take public testimony, and then approve, conditionally approve, or deny the Project.

2.4.1 - NOTICE OF PREPARATION (NOP)

Pursuant to Section 15082 of the CEQA Guidelines, as amended, the City of Fresno Resource and Department circulated a NOP to the State Clearinghouse, public agencies, special districts, and members of the public for a public review period beginning July 5, 2019 and ending August 5, 2019. The purpose of the NOP is to formally convey that the City, as the Lead Agency, solicited input regarding the scope and proposed content of the EIR. The NOP and all comment letters are provided in Appendix A of this EIR.

2.4.2 - SCOPING MEETING

Pursuant to Section 15206 of the CEQA Guidelines, the lead agency is required to conduct at least one scoping meeting for all projects of statewide, regional, or area-wide significance. The scoping meeting is for jurisdictional agencies and interested persons or groups to provide comments regarding, but not limited to, the range of actions, alternatives, mitigation measures, and environmental effects to be analyzed. The City of Fresno hosted a scoping meeting at 5:30 p.m. on July 16, 2019, at the Fresno City Council Chambers located in City Hall, 2nd Floor, 2600 Fresno Street, Fresno, California 93721.

NOP and Scoping Meeting Results

One comment letter was submitted during the scoping process. Two individuals presented oral comments during the June 16, 2019 scoping meeting. Specific concerns raised in written and oral comments received during the NOP public review period are discussed below. The NOP and all comments received are included in Appendix A, along with the Summary of Proceedings from the scoping meeting.

NOP Written Comments

The City received seven letters with substantive comments in response to the NOP. The comments are summarized in Table 2-1, *Summary of Written Comments on Notice of Preparation/Initial Study*.

Table 2-1
Summary of Written Comments on Notice of Preparation

Commenter	Summary of Comment
Federal Agencies	No federal agencies submitted comments in response to the INOP.
State Agencies	
California State Clearinghouse and Planning Unit (letter dated July 5, 2019)	Notifies reviewing agencies of their ability to review and provide comments on the NOP within 30 days of its receipt from the Lead Agency.
California Department of Transportation (Caltrans) District 6 (July 19, 2019)	Recommends that the Traffic Impact Study (TIS) identify impacts to State facilities and impact mitigation measures such as increasing connectivity and accessibility to bicycle facilities, particularly the existing Class II lanes. Also requests to collaborate with the City in defining the scope of the TIS.
California Native American Heritage Commission (July 23, 2019)	Recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of the Project and recommends conducting cultural resources report.
California Department of Fish and Wildlife (CDFW) (August 5, 2019)	Recommends conducting a biological resources survey to identify potential for California Tiger Salamander, Swainson's Hawk, Burrowing owl, American Badger, and nesting birds. Also requests Lake or Streambed Alteration notification if necessary.
San Joaquin Valley Air Pollution Control District (SJVAPCD) (August 13, 2019)	Recommends evaluation of construction emissions of each subsequent cannabis projects separately from operation emissions. Recommends usage of CalEEMod to determine construction and operation emissions of each cannabis project.
California Department of Food and Agriculture (CDFA) (August 28, 2019)	Requests that the EIR evaluate the local and cumulative impacts of cannabis activities at an appropriate regionally focused level for specific impact sections. Also recommends that policies should be equally as restrictive as those established by the State. Finally, requests site-specific environmental documentation for each project in order to prevent extensive delays in issuance of state cultivation licenses.
Local Agencies	No local agencies submitted comments in response to the NOP.
Members of the Public	
Daniel Garcez (July 18, 2019)	Requests a lunch meeting with Mr. Trejo to discuss the acreage cap on cannabis cultivation within the City and potential future opportunities to assist in the facilitation of accurate analysis of potential cannabis activities.

IS/NOP Oral Comments

The County received two oral comments in response to the NOP at the scoping meeting. The comments are summarized in Table 2-2, *Summary of Oral Comments on Notice of Preparation*.

Table 2-2
Summary of Oral Comments on Notice of Preparation

Commenter	Summary of Comment
Federal Agencies	No federal agencies commented in response to the NOP during the scoping meeting.
State Agencies	No local agencies commented in response to the NOP during the scoping meeting.
Local Agencies	No local agencies commented in response to the NOP during the scoping meeting.
Interested Parties	
Wes Clark	Expressed concern regarding when the cannabis retail locations would be permitted to open.
Kacey Austin	Inquired about the possibility of issuing cannabis entitlements during EIR preparation and review process.

2.5 - Availability of the Draft EIR

This Draft EIR is being distributed directly to agencies, organizations, and interested groups and persons for comment during a 45-day formal review period in accordance with Section 15087 of the CEQA Guidelines. This Draft EIR and the full administrative record for the project, including all studies, is available for review during normal business hours Monday through Friday at the City of Fresno Planning and Development Department, located at:

City of Fresno Planning and Development Department
2600 Fresno Street, Room 3065
Fresno, CA 93721 Phone: (559) 621-8044

2.6 - Format and Content

This Draft EIR addresses the potential environmental effects of the Project and was prepared following input from the public and the responsible and affected agencies, through the EIR scoping process, as discussed previously. The contents of this Draft EIR were established based on the findings in the NOP and public and agency input. Based on the findings of the NOP, a determination was made that an EIR was required to address potentially significant environmental effects on the following resources:

- Aesthetics
- Agriculture and Forest Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Entergy

- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire

2.6.1 - REQUIRED EIR CONTENT AND ORGANIZATION

The content and organization of this Draft EIR are designed to meet the requirements of CEQA, the CEQA Guidelines, and the Kern County CEQA Implementation Document, as well as to present issues, analysis, mitigation, and other information in a logical and understandable way. This Draft EIR is organized into the following sections:

- Chapter 1, *"Executive Summary,"* provides a Project description and a summary of the environmental impacts and mitigation measures.

- Chapter 2, *"Introduction,"* provides CEQA compliance information, an overview of the decision-making process, organization of the EIR, and a responsible and trustee agency list.

- Chapter 3, *"Project Description,"* provides a description of the location, characteristics, objectives, and the relationship of the Project to other plans and policies.

- Chapter 4, *"Environmental Setting, Impacts, and Mitigation Measures,"* contains a detailed environmental analysis of the existing conditions, project impacts, mitigation measures, and unavoidable adverse impacts.

- Chapter 5, *"Consequences of Project Implementation (Mandatory CEQA Sections),"* presents an analysis of the Project's cumulative and growth-inducing impacts and other CEQA requirements, including significant and unavoidable impacts and irreversible commitment of resources.

- Chapter 6, *"Alternatives,"* describes a reasonable range of alternatives to the Project that could reduce the significant environmental effects that cannot be avoided.

- Chapter 7, *"Responses to Comments,"* is reserved for responses to comments on this Draft EIR.

- Chapter 8, *"Organizations and Persons Consulted,"* lists the organizations and persons contacted during preparation of this Draft EIR.

- Chapter 9, *"Preparers,"* identifies persons involved in the preparation of the Draft EIR.

- Chapter 10, *"Bibliography,"* identifies reference sources for the Draft EIR.

- *"Appendices"* provide information and technical studies that support the environmental analysis contained within the Draft EIR.

- The analysis of each environmental category in Chapter 4 is organized as follows:

- *"Introduction"* provides a brief overview on the purpose of the section being analyzed with regard to the Project.

- *"Environmental Setting"* describes the physical conditions that exist at this time and that may influence or affect the topic being analyzed.

- *"Regulatory Setting"* provides State and federal laws, the City of Fresno General Plan (GP) goals, policies, and implementation measures that apply to the topic being analyzed.

- *"Impacts and Mitigation Measures"* discusses the impacts of the Project in each category, including direct, indirect, and cumulative impacts, presents the determination of the level of significance, and provides a discussion of feasible mitigation measures to reduce any impacts.

2.7 - Responsible and Trustee Agencies

Projects or actions undertaken by the Lead Agency, in this case the City of Fresno Planning and Development Department, may require subsequent oversight, approvals, or permits from other public agencies in order to be implemented. Other such agencies are referred to as *"responsible agencies"* and *"trustee agencies."* Pursuant to Sections 15381 and 15386 of the CEQA Guidelines, as amended, responsible agencies and trustee agencies are defined as follows:

- A *"responsible agency"* is a public agency that proposes to carry out or approve a project, for which a lead agency is preparing or has prepared an EIR or Negative Declaration. For the purposes of CEQA, the term *"responsible agency"* includes all public agencies other than the lead agency that have discretionary approval power over the project (Section 15381).

- A *"trustee agency"* is a State agency having jurisdiction by law over natural resources affected by a project that are held in trust for the people of the State of California (Section 15386).

The various public, private, and political agencies and jurisdictions with a particular interest in the Project include, but are not limited to, the following:

2.7.1 - LOCAL AGENCIES

- Pacific Gas and Electric (PG&E)
- San Joaquin Valley Air Pollution Control District (SJVAPCD)
- Southern California Edison Company (SCE)
- Southern California Gas Company (SCG)
- Fresno Irrigation District

2.7.2 - STATE AGENCIES

- California Air Resources Board (CARB)
- California Department of Transportation (Caltrans)
- California Department of Fish and Wildlife (CDFW)
- California Integrated Waste Management Board
- Department of Water Resources
- Governor's Office of Planning and Research
- Office of Historic Preservation
- Regional Water Quality Control Board (RWQCB), Central Valley Region
- California Department of Consumer Affairs, Bureau of Medical Cannabis Control
- California Department of Food and Agriculture
- California Department of Pesticide Regulation
- Board of Equalization
- Franchise Tax Board
- California Department of Justice
- California Department of Public Health
- California Environmental Protection Agency

2.7.3 - FEDERAL AGENCIES

- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service (USFWS)

2.8 - Incorporation by Reference

In accordance with Section 15150 of the CEQA Guidelines to reduce the size of the report, the following documents are hereby incorporated by reference into this Draft EIR and are available for public review at the City of Fresno Planning and Development Department. A brief synopsis of the scope and content of these documents is provided below.

2.8.1 - CITY OF FRESNO GENERAL PLAN

The Project site lies within the boundaries of the City of Fresno General Plan. The City of Fresno General Plan is a policy document with planned land use maps and related information that are designed to give long-range guidance to City officials making decisions affecting the growth and resources of the City's jurisdiction. This document, adopted on December 18, 2014, and last amended on December 13, 2018, helps to ensure that day-to-day decisions conform to the long-range program designed to protect and further the public interest as related to the City's growth and development and mitigate environmental impacts. The City of Fresno General Plan also serves as a guide to the private sector of the economy in relating its development initiatives to the public plans, objectives, and policies of the City.

2.8.2 - CITY OF FRESNO GENERAL PLAN UPDATE MASTER EIR

This Draft Environmental Impact Report (EIR) has been prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts associated with the proposed project. This Draft EIR has been prepared in compliance 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.

This Draft EIR assesses the level of development within the City of Fresno Project area based on reasonable assumptions for development activity anticipated to occur through buildout of the 2035 General Plan. The study area for the analysis of project and cumulative impacts is the City of Fresno Project area and the portions of Fresno County located outside of the Project area as well as portions of the City of Clovis and the County of Madera that have project implications within the Project area. The applicable cumulative projections include growth projections from the Fresno County General Plan, Madera County General Plan, and buildout projections within the City of Clovis General Plan.

2.8.3 - CITY OF FRESNO MUNICIPAL CODE – CHAPTER 9, ARTICLE 33

The purpose of the City of Fresno Municipal Code – Chapter 9, Article 33is to implement the provisions of the Medicinal and Adult Use Cannabis Regulation and Safety Act ("MAUCRSA") to accommodate the needs of medically-ill persons in need of and provide access to cannabis for medicinal purposes as recommended by their health care provider(s), as well as provide access to adult use cannabis, while imposing sensible regulations on the use of land to protect the City's residents, neighborhoods, and businesses from disproportionately negative impacts. As such, it is the purpose and intent of this Article to regulate the cultivation, processing, manufacturing, testing, sale, delivery, distribution, and transportation of cannabis, cannabis products, medicinal cannabis, and medicinal cannabis products in a responsible manner to protect the health, safety, and welfare of the residents of the city and to enforce rules and regulations consistent with state law. The provisions of this Article are in addition to any other permits, licenses, and approvals

which may be required to conduct business in the city, and are in addition to any permits, licenses, and approvals required under state, city, or other law.

2.8.4 - CITY OF FRESNO DEVELOPMENT CODE

The purpose of the City of Fresno Development Code is to implement the General Plan and, if applicable, operative plans, to protect and promote the public health, safety, peace, comfort, convenience, prosperity, and general welfare of the City of Fresno. More specifically, the Development Code is adopted to achieve the following, consistent with the goals, objectives, and policies of the General Plan and any other operative plan:

- Provide the economic and social advantages resulting from an orderly planned use of land resources;
- To provide a precise guide for the physical development of the City in a manner as to progressively achieve the arrangement of land uses depicted in the General Plan;
- To foster a harmonious and workable relationship among land uses and ensure compatible infill development;
- To support economic development and job creation;
- To provide for the housing needs of all economic segments of the community;
- To promote high quality architecture and sustainable design. Sustainable Design is a philosophy that seeks to maximize the quality of the built environment, while minimizing or eliminating negative impact to the natural environment;
- To promote the stability of existing land uses that conform to the General Plan, protecting them from inharmonious influences and harmful intrusions;
- To promote a safe and efficient traffic circulation system, including bicycle facilities and pedestrian amenities, and to support a multi-modal transportation system;
- To facilitate the appropriate location of community facilities, institutions, parks, and recreational areas;
- To protect and enhance real property values;
- To safeguard and enhance the appearance of the City; and
- To define duties and powers of governing bodies and officials responsible for the implementation of this Code.

2.8.5 - CITY OF FRESNO HOUSING ELEMENT

The Housing Element provides the City of Fresno with a coordinated and comprehensive strategy for promoting the production of safe, decent, and affordable housing for all community residents. The City of Fresno's Housing Element specifically intends to:

- Provide direction for future planning programs to ensure that sufficient consideration is given to housing goals and policies;
- Establish and portray community goals and policies relative to housing through the identification of existing, stated, and implicit goals, and the identification of housing needs and problems; and
- Establish and identify programs intended to implement and attain the community's goals and policies, taking into consideration the feasibility of those programs, and act as a meaningful guide to decision-makers considering housing-related issues.

2.8.6 - FRESNO YOSEMITE INTERNATIONAL AIRPORT LAND USE COMPATIBILITY PLAN

The Airport Land Use Compatibility Plan (ALUCP) was adopted in 2018 and complies with Aeronautics Law, Public Utilities Code (Chapter 4, Article 3.5) regarding public airports and surrounding land use planning. As required by that law, proposals for public or private land use developments that occur within defined airport influence areas are subject to compatibility review. The principle airport land use compatibility concerns addressed by the ALUCP are (1) exposure to aircraft noise, (2) land use safety with respect to both people and property on the ground and the occupants of aircraft, (3) protection of airport air space, and (4) general concerns related to aircraft overflights.

The ALUCP identifies policies and compatibility criteria for influence zones or Planning Area boundaries. The ALUCP maps and labels these zones as 1-6, ranging from the most restrictive (1 – Runway Protection Zone) to the least restrictive (6 –Traffic Pattern Zone) while the E is intended to address special land use development.

2.9 - Sources

This Draft EIR is dependent upon information from many sources. Some sources are studies or reports that have been prepared specifically for this document. Other sources provide background information related to one or more issue areas that are discussed in this document. The sources and references used in the preparation of this Draft EIR are listed in Chapter 10, *Bibliography,* and are available for review during normal business hours at the:

City of Fresno Planning and Development Department
2600 Fresno Street
Fresno, California 93721

CHAPTER 3 - PROJECT DESCRIPTION

3.1 - Project Overview

This Environmental Impact Report (EIR) has been prepared to identify and evaluate potential environmental impacts associated with the Proposed Regulation and Permitting of Commercial Cannabis Activities (Project), by the City of Fresno (Project Proponent), proposed in Fresno, California. This chapter summarizes the proposed Project, including an amendment to Sections 15-2739 and 15-2739.1 of the Fresno Municipal Code, relating to adult use and medicinal cannabis retail business and commercial cannabis business, and Article 21 to Chapter 12 of the Fresno Municipal Code, relating to cultivation of marijuana.

The Project is located in the incorporated City of Fresno, California. (Figure 3-1 - *Regional Location;* Figure 3-2 - *Vicinity Map*).

3.2 - Project Location and Environmental Setting

REGIONAL SETTING

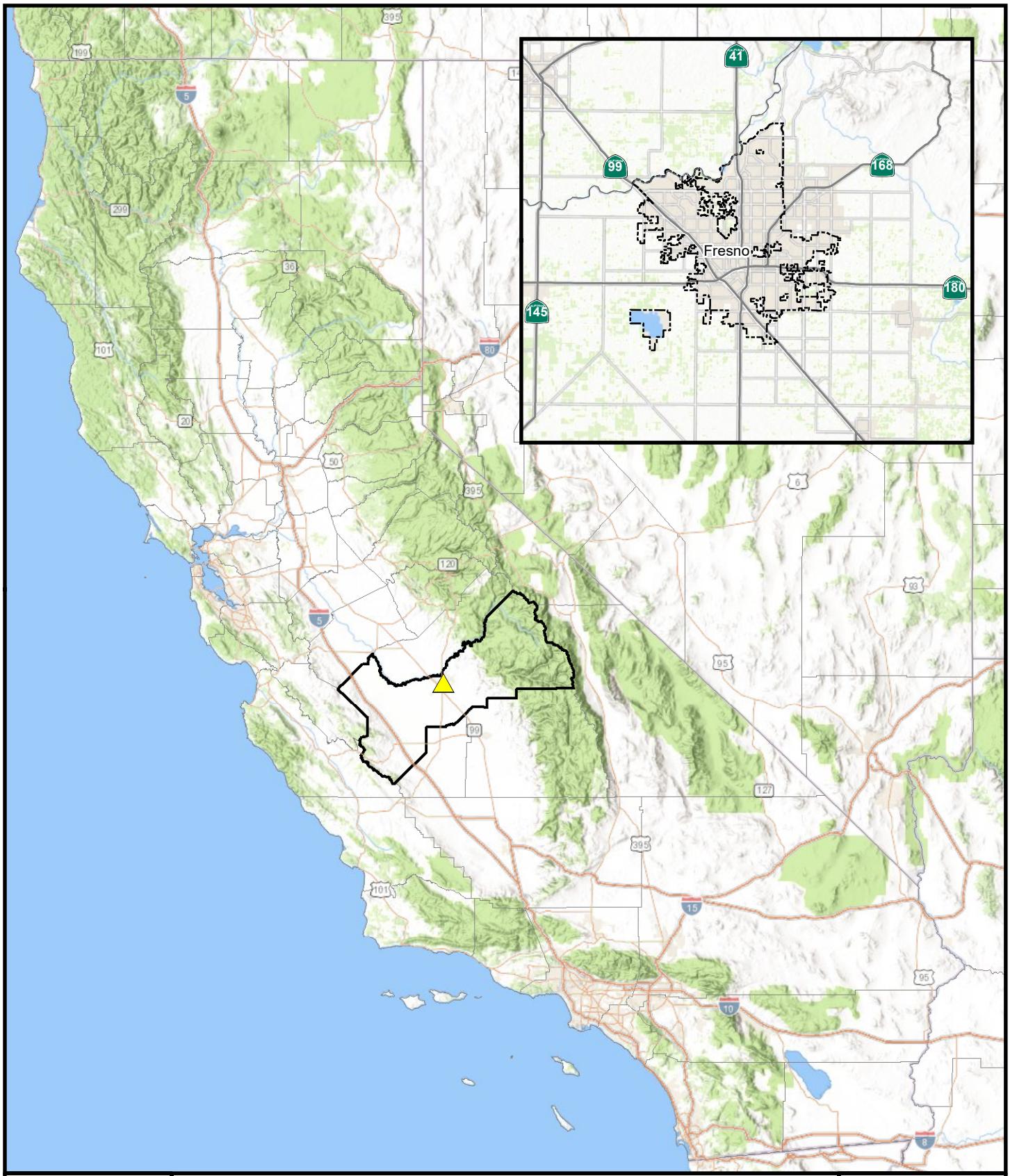
The City of Fresno (City) is located in Fresno County and is situated in the central portion of the San Joaquin Valley, in the State of California. The City encompasses approximately 113 square miles. Fresno is the largest city in Fresno County and has a current estimated population of 536,683 residents (California Department of Finance, 2019).

LOCAL SETTING

The topography of the City is relatively flat with little topographic variation. It occurs at an elevation of approximately 328 feet above mean sea level (AMSL). The surrounding land is relatively flat with a sharp rise towards the foothills of the Sierra Nevada Mountain Range to the east. State Route (SR) 99 runs northwest-southeast on the western edge of the City, connecting it with Sacramento and Bakersfield. SR-41 runs north-south through the heart of the City, connecting it with Yosemite National Park. SR-168 links the Downtown to Clovis, and SR-180 runs east-west within the southern portion of the City.

The northern border of the City is largely defined by the San Joaquin River, which flows to the Sacramento-San Joaquin River Delta and San Francisco Bay. The eastern border of the City mostly abuts the city limits of the City of Clovis. The western border of the City traverses Highway 99 and passes through western rural residential and agricultural lands of the unincorporated County. The southern boundary extends as far south as Malaga Avenue. The City is more clearly depicted in Figure 3-2.

The City center is within Township 13 South, Range 20 East, Mount Diablo Baseline and Meridian and the U.S. Geological Survey 7.5 Minute Fresno South Quadrangle.



Regional Location

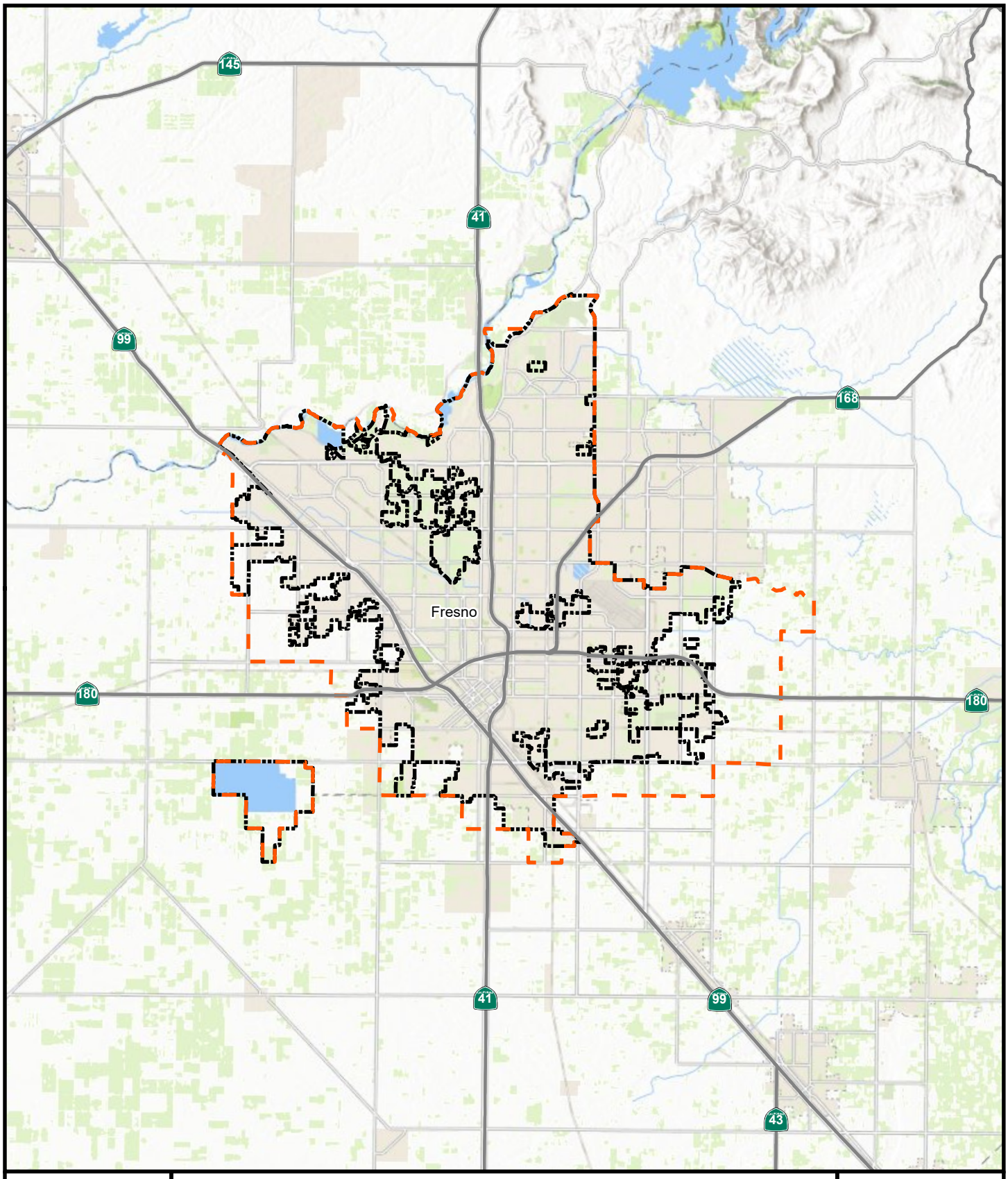
Figure 3-1

Project Location | Fresno County | County Boundary

N

0 100 Miles

QK Sources: ESRI Esri, HERE, Garmin, (c)



Vicinity

City Limits

Sphere of Influence

N

0 4

Miles

QK Sources:
ESRI Sources: Esri, HERE,

Figure 3-2

The latitude and longitude of the approximate center of the City site is 36.74077° N, -119.78562° E. The Universal Transverse Mercator (UTM) coordinates for the approximate center are Easting 252,462 meters and Northing 4,070,374 meters, in Zone 11S.

3.3 - Regulatory Context

SUMMARY OF CANNABIS REGULATION

The laws and regulations surrounding cannabis cultivation and manufacturing are complex and vary considerably among the federal, State, and local levels of government. The Federal Controlled Substances Act of 1970 makes it a crime under federal law to manufacture, distribute or dispense, or possess cannabis. However, State and local jurisdictions can regulate cannabis if their laws do not positively conflict with the Controlled Substances Act. Key elements of the recent City regulatory history and current regulatory framework were described in the *Project Context* section of Chapter 1, *Introduction*, of this EIR and are also summarized below:

- June 2012 - Fresno City Council adopted a regulatory ordinance that added Article 21 to Chapter 12 to the Fresno Municipal Code. Section 12-2103 prohibited the outdoor cultivation of cannabis; however, no prohibition was placed on indoor cultivation and/or within an outdoor fully enclosed and secured structure (special permit required).

- March 2014 - Fresno City Council adopted a regulatory ordinance that repealed and then adopted Article 21 of Chapter 12 which prohibited all cannabis cultivation by any person in all zone districts within the City.

- September 2017 – Fresno City Council adopted a text amendment prohibiting recreational cannabis activities by Section 15-2739.1 to the Fresno Municipal Code.

- December 2017 - Fresno City Council directed staff to initiate the process to amend the Zoning Code to allow medicinal cannabis operations, cultivation, manufacturing, extraction, testing, distribution, delivery, and dispensaries within the City.

- March 2018 and thereafter – Development and Resource Management Director initiated amendments to the Zoning Code to allow for adult use cannabis cultivation, manufacturing, extraction, testing, and distribution, and retail.

- December 2018 - Fresno City Council adopted a cannabis regulatory ordinance which includes requirements for medicinal and adult use cannabis permits, operation requirements, location restrictions, and application requirements.

- January 2020 – Fresno City Council adopted revisions to the Cannabis Retail Business and Commercial Business Ordinance.

TYPES OF CULTIVATION AND MANUFACTURING

Cannabis cultivation occurs in a variety of forms, generally distinguished and characterized by indoor operations, outdoor operations, and greenhouse operations. For the purposes of analysis in this EIR, a summary description of typical methods, technologies, and materials is provided below.

Indoor

Cannabis can be grown indoors in a soil-like medium with pre-made or commercial soil in one and a half to three-gallon pots or using hydroponics under artificial light that allows the cultivator complete control over the growing environment. A typical indoor plant growth cycle can range from six weeks to nine months, usually averaging two to four months for each cultivation event, depending upon the species, and enabling year-round cultivation. One light that casts 45,000 lumens [typical of high intensity discharge (HID) lighting used for indoor grows], is enough to cover a growing area of approximately three feet by three feet. An average of four crops per year is assumed.

Mixed Light/Greenhouse

Mixed light growing combines artificial light with sunlight and can be used for light deprivation growing practices. Greenhouses are the most common form of mixed light growing. Hoop houses are typically modified to be operated as greenhouses. Greenhouse growing combines natural sunlight with growing in a glass or plastic structure. Greenhouse cultivators can control temperature, humidity, soil, air circulation, and light.

Greenhouses can also be equipped with supplemental lighting fixtures, which allow the greenhouse to be used in the winter, when days are shorter and ambient temperatures are colder. While extensive supplemental lights are often used, greenhouse growing reduces the amount of electrical power used, in comparison to indoor grows. This type of growing also allows multiple grow cycles. An average of three crops per year is assumed. However, it should be noted, Section 9-3312 of Article 33 of the Fresno Municipal Code prohibits outdoor cultivation.

Outdoor

Cannabis grown outdoors is primarily grown in fabric or wooden containers of pre-made or commercial soil, or in some cases planted directly in the ground. The plants need fertile soil and long hours of daylight; therefore, cannabis is generally sown from late spring to early summer and harvested from late summer to early fall. Growers generally choose areas that receive 12 hours or more of sunlight a day. Typical outdoor growers may cultivate on their own property or practice guerrilla farming, which means planting cannabis in remote areas such as forest clearings or mountain ridges on lands that they do not own. An average of two crops per year is assumed. However, it should be noted, Section 9-3312 of Article 33 of the Fresno Municipal Code prohibits outdoor cultivation.

Manufacturing Cannabis Products

Cannabis product manufacturing starts with harvested flower buds and trim that have been cured and dried, so they are ready for consumption. Cannabis flower buds and/or trim may be chopped and further dried. High quality cannabis buds are typically sold as-is without further processing. Remaining parts of the cannabis harvest can be processed into a variety of cannabis products though infusion and extraction.

Washed cannabis plant material may be introduced directly into some products, such as butter for infusion into baked goods, or finely chopped in a blender or food processor for cannabis juice or placed in alcohol to make tinctures. Cannabis plant material may also be sifted and processed using a series of screens (producing dry sift), using ice-water (producing ice water hash), using dry ice (producing dry ice hash aka "kief"), or in a heated press to make resin.

For solvent extraction, a solvent is pumped through compressed cannabis material to extract Tetrahydrocannabinol Acid (THCA), Cannabidiol Acid (CBDA), plus other cannabinoids and terpenes. The solvent may be butane, propane, pentane, hexane, CO_2, a combination of butane and propane, or food grade alcohol. The extracted material is then heated in a ventilated oven to decarboxylate both the THCA into Tetrahydrocannabinol (THC) and the CBDA into Cannabidiol (CBD) and other cannabinoids. This process may produce live resin, shatter, and/or sugar wax. The extracted material may be sold as-is, or may be further refined by alcohol distillation, winterization (super-cooling in alcohol to remove plant lipids and waxes), filtering, or by chromatography (a laboratory process for the separation of a mixture by passing it in solution or suspension through a medium in which the components move at different rates). The resultant product may then be infused to make tinctures, edibles, salves, vaporizers, or drinks. The resultant product may also be sold for dabbing (the flash vaporization of cannabis concentrates once applied to a hot surface and inhaled).

Construction Methods

Any proposed grading or building necessary to construct retail, laboratories, cultivation, distribution, or manufacturing sites would be subject to Chapter 11 – Building Permits and Regulations, Chapter 15 – Citywide Development Code, and Article 21 of Chapter 12 of the Fresno Municipal Code in addition to the California Building Code – Title 21. The Fresno Municipal Code requires new facilities to meet certain standards for lighting, landscaping, parking, signage, heights, floor area ratios, etc.

Indoor cultivation and manufacturing would occur within existing buildings or within new buildings constructed for the purposes of commercial cannabis activities.

Construction of indoor cultivation and manufacturing sites could also involve the repurposing and remodeling of existing buildings. Construction methods employed in existing indoor facilities converted to grow sites would include the installation of additional lights, fans, filters, and sufficient ventilation and electrical systems. Improvements would also likely be made to water

lines and fire detectors/sprinklers. Improvements to accommodate manufacturing activities would vary based on product type and processes.

Construction of new buildings to serve as indoor grow or manufacturing sites would involve the typical methods of building commercial space, manufacturing facility, or warehouse depending on the type of site. Hoop houses that are improved with electrical, mechanical and/or ventilation are considered indoor greenhouses by the City's Development Code and Building Code, meaning that these types of non-traditional hoop houses would be subject to the requirement for a building permit. However, it should be noted that traditional hoop houses (not fully enclosed) are considered outdoor greenhouses and are prohibited under the City's Development Code.

Development, grading, and building would be subject to all existing regulations and required land use permit approvals under the Fresno Municipal Code. Plumbing and electricity lines, hardware for lights, light movers, ballasts, vent fans, intake fans, and exhaust fans would be installed, subject to regulation. Improvements for roads, driveways, parking, and utilities may be required.

TYPES OF PERMITTED CANNABIS BUSINESSES

Article 33 of Chapter 9 of the Fresno Municipal Code defines the permitted types of retail and commercial cannabis businesses. Under Article 33, the types of cannabis related businesses allowed are as follows:

Cannabis Retail Businesses

A Cannabis Retail Business is defined as "a business where cannabis, cannabis products, or devices for the use of cannabis or cannabis products are offered, either individually or in any combination, for retail sale, including an establishment (whether fixed or mobile) that delivers, pursuant to express authorization, cannabis and cannabis products as part of a retail sale, and where the operator holds a valid commercial cannabis business permit from the city authorizing the operation of a retailer, and a valid state A-license or M-License as required by state law to operate a retailer."

Commercial Cannabis Businesses

A Commercial Cannabis Business is defined as "any business or operation that engages in commercial cannabis activity, except for delivery or sales of cannabis, with a license issued by the State. It does not include a cannabis retail business or medicinal cannabis retail business."

Commercial Cannabis Businesses may be further categorized within the operating parameters of any of the following terms:

DISTRIBUTOR

A distributor is defined as "a person holding a valid commercial cannabis business permit for distribution issued by the city, and, a valid state license for distribution, required by state law to

engage in the business of purchasing cannabis from a licensed cultivator, or cannabis products from a licensed manufacturer, for sale to a licensed retailer."

CULTIVATOR

A cultivator is defined as "a person holding a valid commercial cannabis business permit for cultivation issued by the city, and, a valid state license for cultivation."

TESTING LABORATORY

A testing laboratory is defined as "a laboratory, facility, or entity with a commercial cannabis business permit that offers or performs tests of cannabis or cannabis products and that is both of the following:

- Accredited by an accrediting body that is independent from all other persons involved in commercial cannabis activity in the state.

- Licensed by the bureau."

MANUFACTURER

A manufacturer is defined as "a licensee with a valid commercial cannabis business permit that conducts the production, preparation, propagation, or compounding of cannabis or cannabis products either directly or indirectly or by extraction methods, or independently by means of chemical synthesis, or by a combination of extraction and chemical synthesis at a fixed location that packages or repackages cannabis or cannabis products or labels or container."

In all cases, both types of businesses as well as each of category of operators have specific restrictions and standards within the code that limit their operations and total number of businesses which can be established within the City. Those items are discussed further within Section 3.5, *Proposed Project*.

3.4 - Project Objectives

State CEQA Guidelines require that the EIR project description include a statement of the objectives of the proposed Project. The primary objectives of the Project are to:

- Regulate commercial cannabis cultivation, manufacturing, distribution, testing and retail sales of cannabis products within the City in a manner consistent with State law, and allow the orderly development and oversight of commercial cannabis cultivation and manufacturing businesses;

- Develop a program that encourages cannabis cultivators, manufacturers, distributors and retail sellers to operate legally and secure necessary permits and licenses to operate in

full compliance with City regulations, maximizing the proportion of activities within the City and minimizing unlicensed activities;

- Provide efficiency and clarity in the commercial cannabis cultivation, manufacturing, distribution, testing and retail sales licensing/permit processes, regulations, and standards to facilitate participation and use by applicants;

- Prevent impacts of cannabis cultivation, manufacturing, distribution, and retail sales sites on children and sensitive populations;

- Encourage the commercial cultivation, manufacturing, distribution, testing and retail sales of high-quality local cannabis products that meet the demand for Fresno area cannabis and cannabis products, including the needs of medical patients and their caregivers, as well as adult personal use as authorized under Proposition 64;

- Develop a legal, local cannabis industry to improve the City's tax base in balance with other objectives;

- Ensure compatibility of cultivation, manufacturing, distribution, testing and retail sales sites with surrounding land uses, especially residential neighborhoods, educational facilities, and agriculture operations;

- Minimize adverse effects of commercial cultivation, manufacturing, distribution, testing and retail sales on the natural environment, natural resources and wildlife, as well as effects on water supply and water quality;

- Regulate sites and premises used for commercial cultivation, manufacturing, distribution, testing and retail sales to avoid the risks of criminal activity, degradation of the visual setting and neighborhood character, obnoxious odors, hazardous materials, and fire hazards;

- Ensure cannabis is cultivated, manufactured, distributed, tested and sold in a manner that supports public health and safety;

- Ensure adequate law enforcement and fire protection response to cultivation, manufacturing, distribution, testing and retail sales; and

- Promote energy and resource efficiency in cannabis cultivation, manufacturing, distribution, testing and retail sales of cannabis products.

3.5 - Proposed Project

The City of Fresno is proposing an amendment to Sections 15-2739 and 15-2739.1 of the Fresno Municipal Code, Article 33 to Chapter 9 of the Fresno Municipal Code, and Article 21 to Chapter

12 of the Fresno Municipal Code, relating to adult use and medicinal cannabis retail business and commercial cannabis business.

PROJECT COMPONENTS

The text amendment is currently in draft form and are located in Appendix B of the this EIR. Both would require the appropriate licensing and land use entitlements. Table 3-1 below summarizes the commercial cannabis uses and their corresponding number of eligible sites for location, maximum number of permits to be issued, and maximum square footage for occupancy, all of which apply to the entire city limits

Table 3-1
Commercial Cannabis Uses

Commercial Cannabis Uses	Eligible Sites	Max. Permits	Max. SF[1]
Cultivation, Distribution, and Manufacturing Within Cannabis Innovation Zone	591	8	700,000
Cultivation, Distribution, and Manufacturing Outside of Cannabis Innovation Zone	953	8	
Cannabis Retail Businesses	5,564	21	55,000
Testing Laboratories	13,807	Unlimited	100,000
Totals	**20,915**	**N/A**	**855,000**

[1]Maximum square foot used for analysis in DEIR

In general, the ordinances would allow for the following:

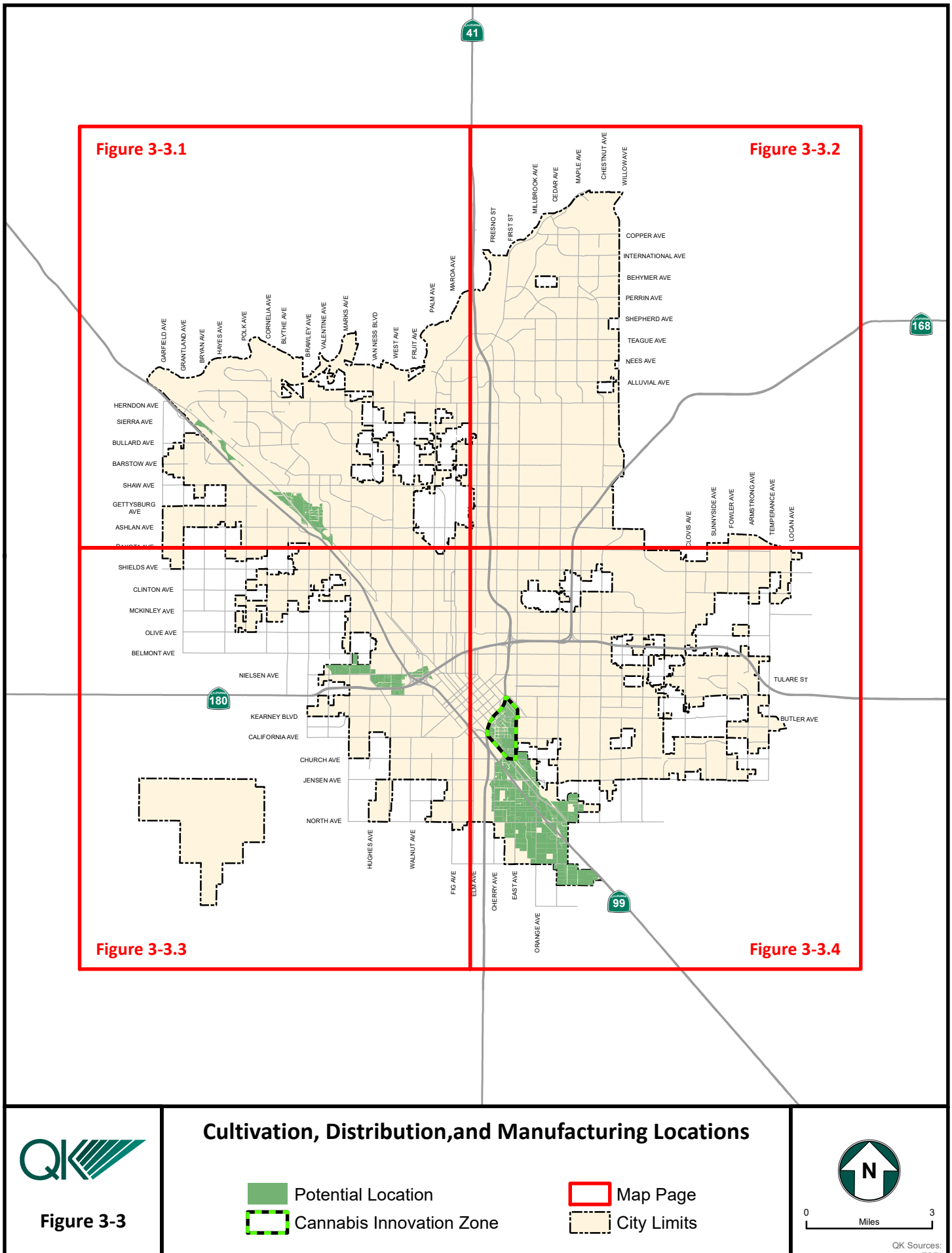
Cultivation, Distribution, and Manufacturing

- Eight businesses would be permitted inside the Cannabis Innovation Zone, defined as the area bounded by State Route 41, Golden State Boulevard, Church Avenue, East Avenue, and Parallel Avenue. (See Figure 3-3, 3-3.1 through 3-3.4.)

- Eight businesses would be permitted within industrial zoned property within one-half mile of Highway 99 between Shaw and Clinton Avenues, or within one mile of Highway 99 north of Shaw and south of Clinton Avenues, or within one mile of Highway 180 west of Highway 99. All buildings in which a cultivator, distributor, or manufacturer is located shall be located no closer than 1,000 feet from any property boundary containing a residence, school, daycare, or youth center. (See Figure 3-3, 3-3.1 through 3-3.4.)

Testing Laboratories

- Testing laboratories may take place in a Commercial, Employment, or Downtown District. There is no limit on how many may be permitted. (See Figures 3-4, 3-4.1 through 3-4.4.)



Cultivation, Distribution,and Manufacturing Locations

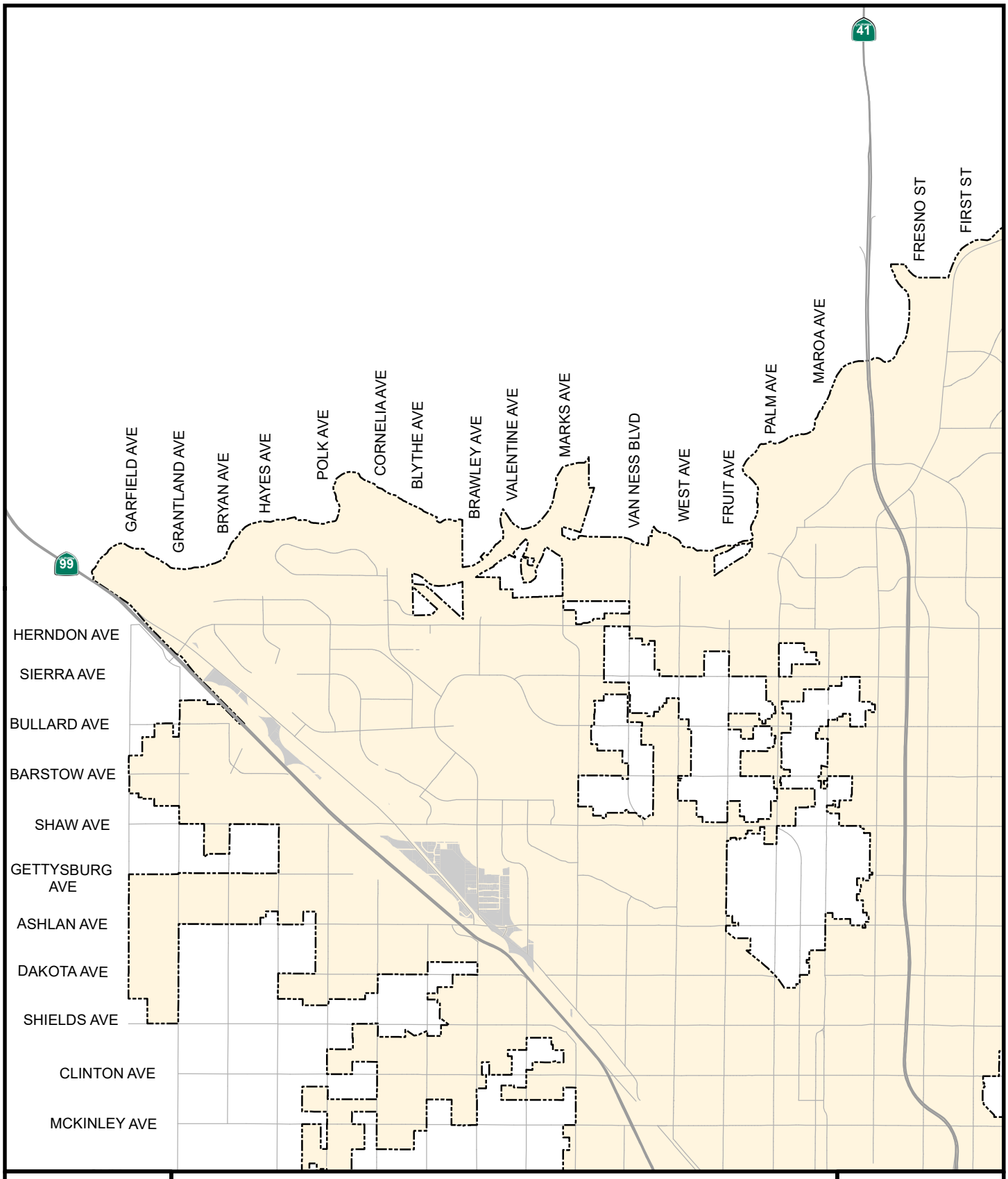
Figure 3-3

Potential Location
Cannabis Innovation Zone
Map Page
City Limits

N

0 3
Miles

QK Sources: ESRI



Cultivation, Distribution, and Manufacturing Locations

IL - Light Industrial

City Limits

N

0 1 Miles

QK Sources: ESRI

Figure 3-3.1

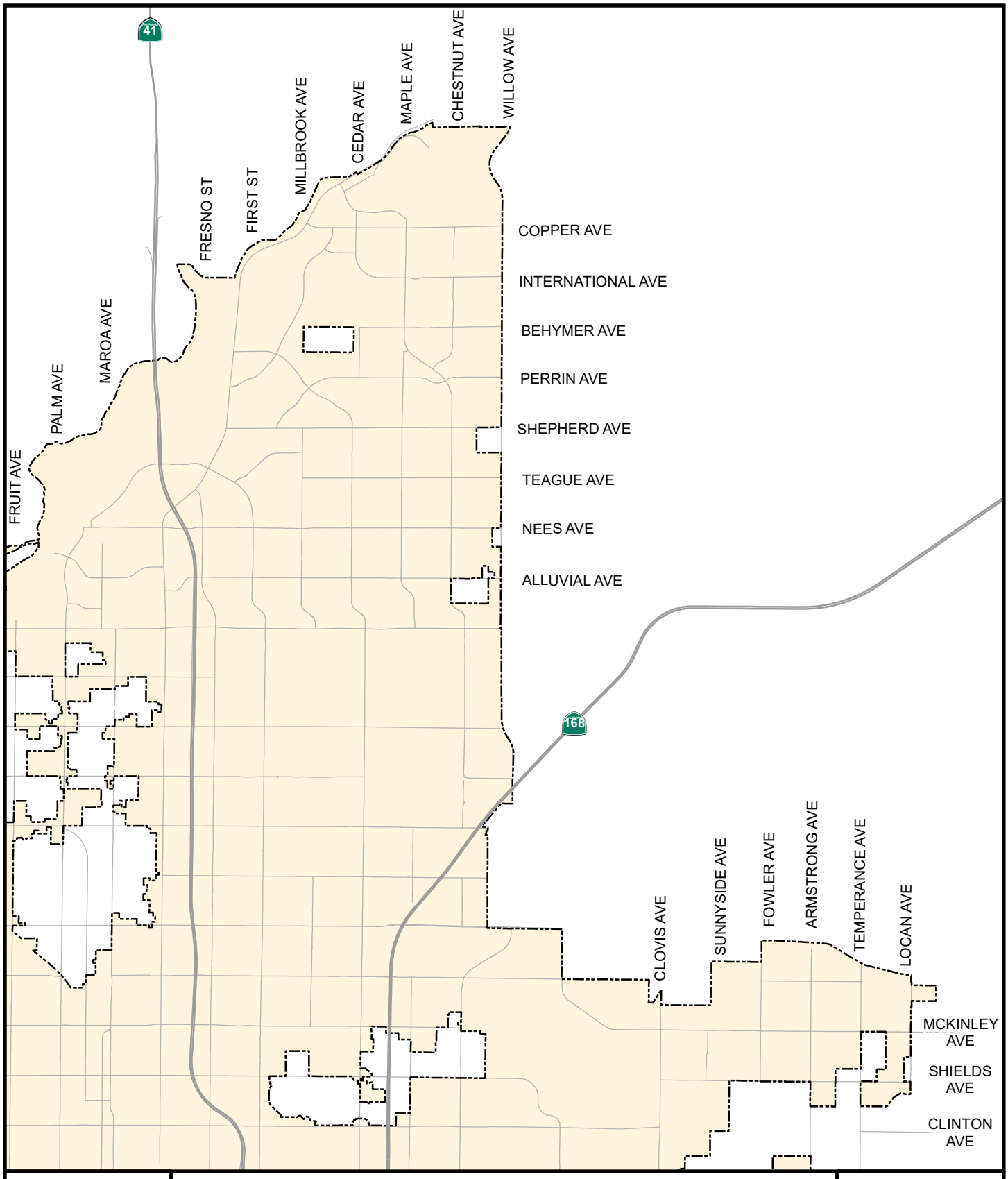


Figure 3-3.2

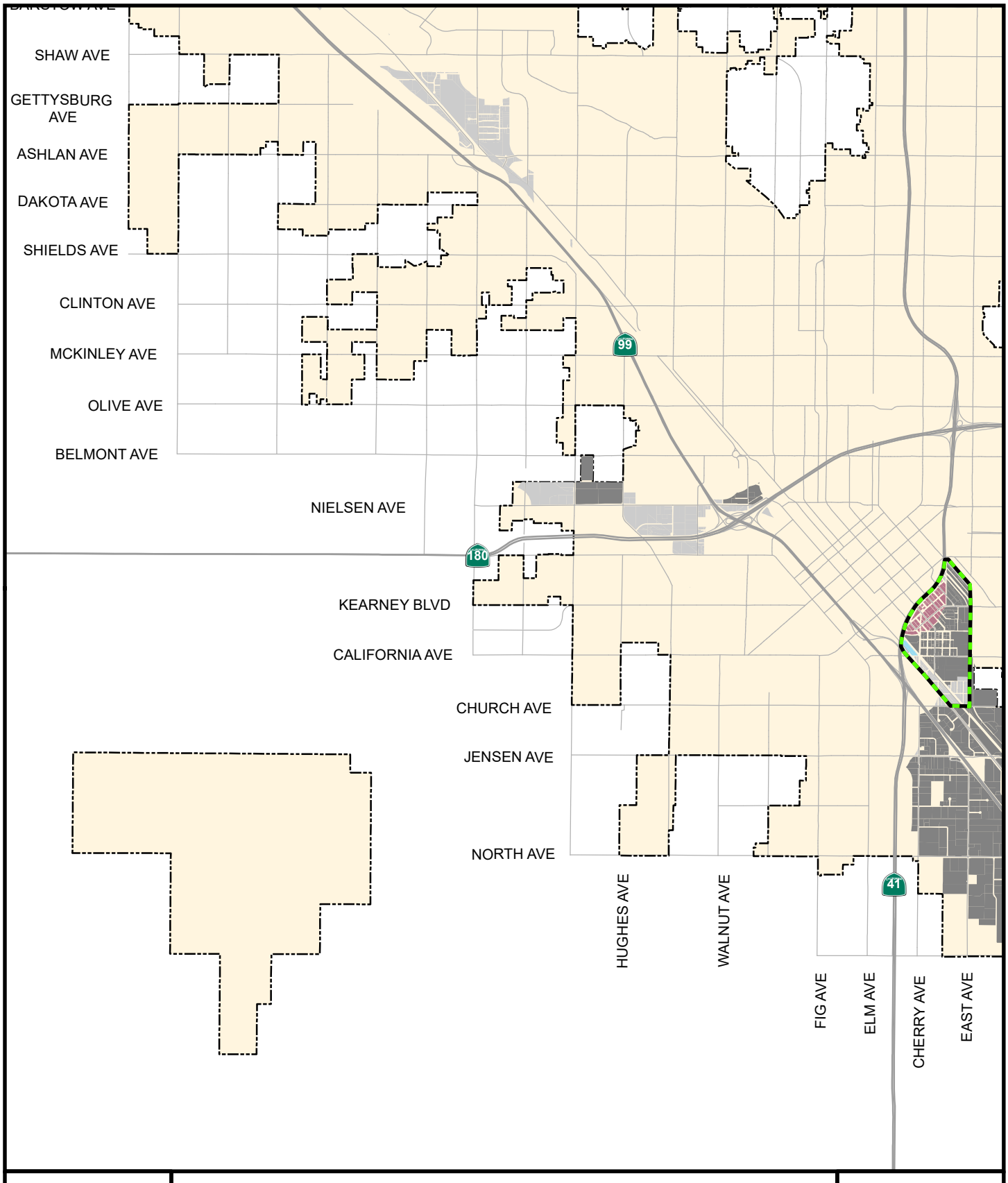
Cultivation, Distribution, and Manufacturing Locations

City Limits

N

0 Miles 1

QK Sources: ESRI



Cultivation, Distribution, and Manufacturing Locations

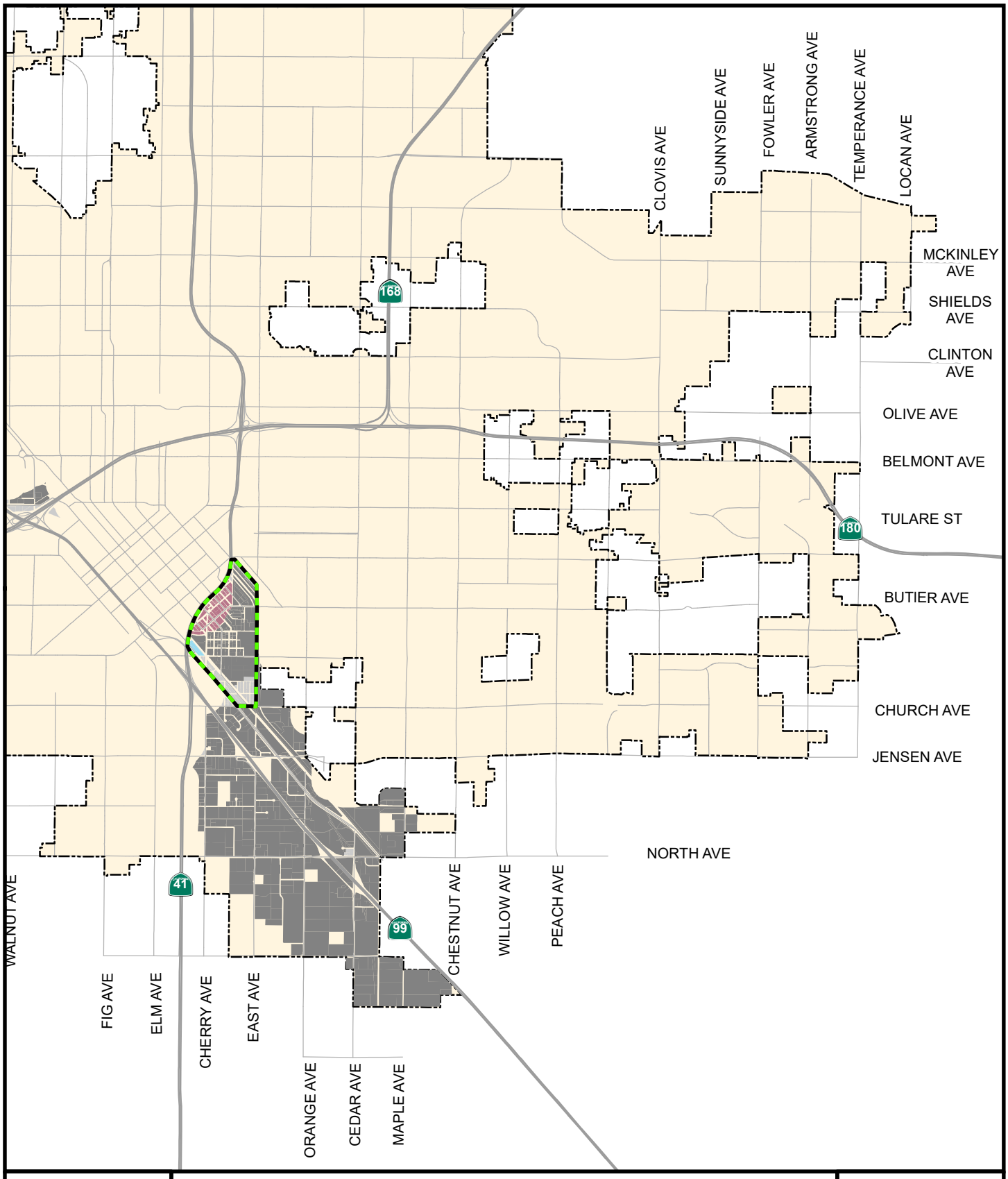
DTN - Downtown Neighborhood
IH - Heavy Industrial
IL - Light Industrial
PI - Public and Institutional
Cannabis Innovation Zone
City Limits

N

0 1 Miles

QK Sources: ESRI

Figure 3-3.3



Cultivation, Distribution, and Manufacturing Locations

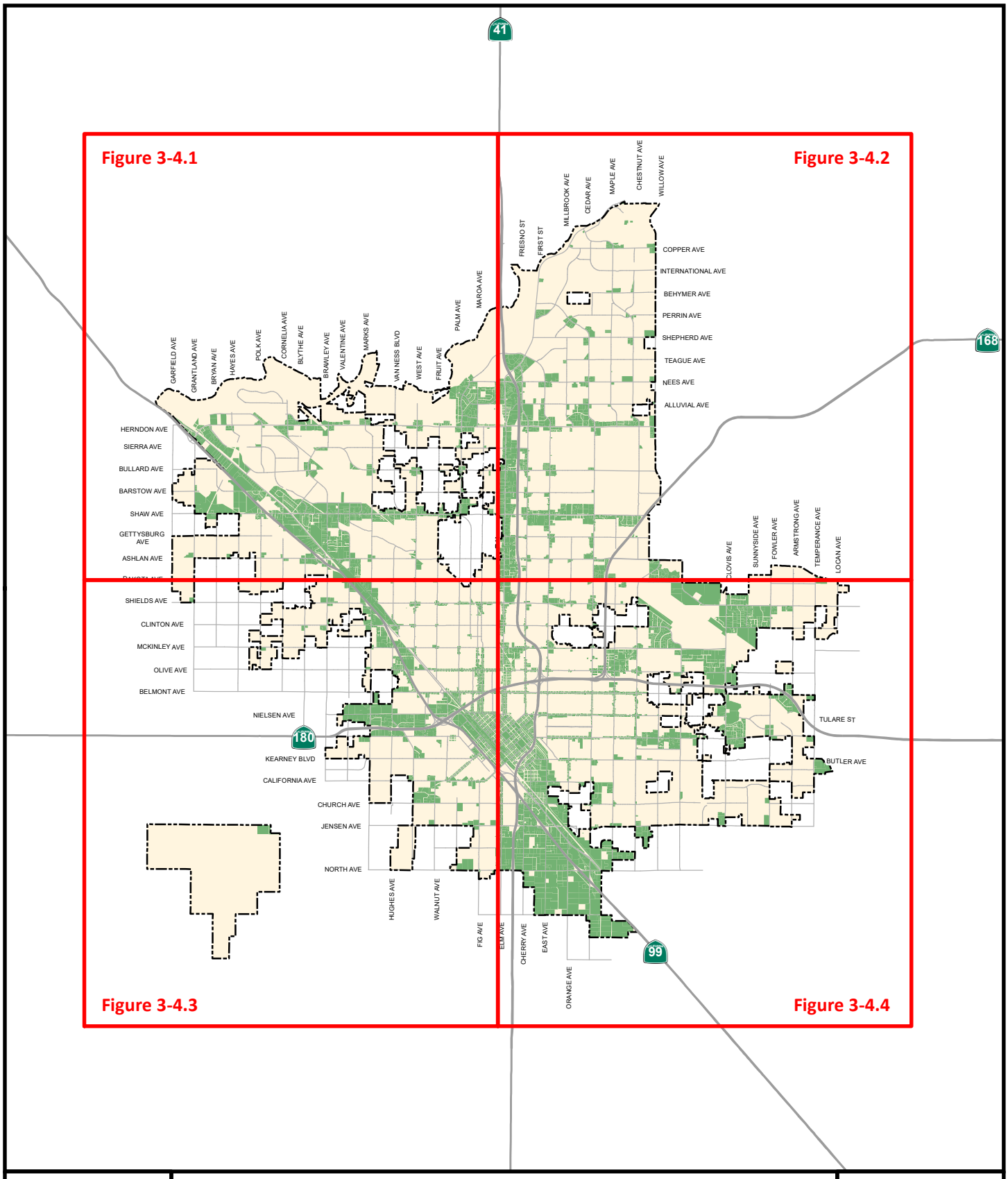
DTN - Downtown Neighborhood
IH - Heavy Industrial
IL - Light Industrial
PI - Public and Institutional
Cannabis Innovation Zone
City Limits

N

0 1 Miles

QK Sources: ESRI

Figure 3-3.4



Testing Laboratories

Figure 3-4

Potential Location

Map Page

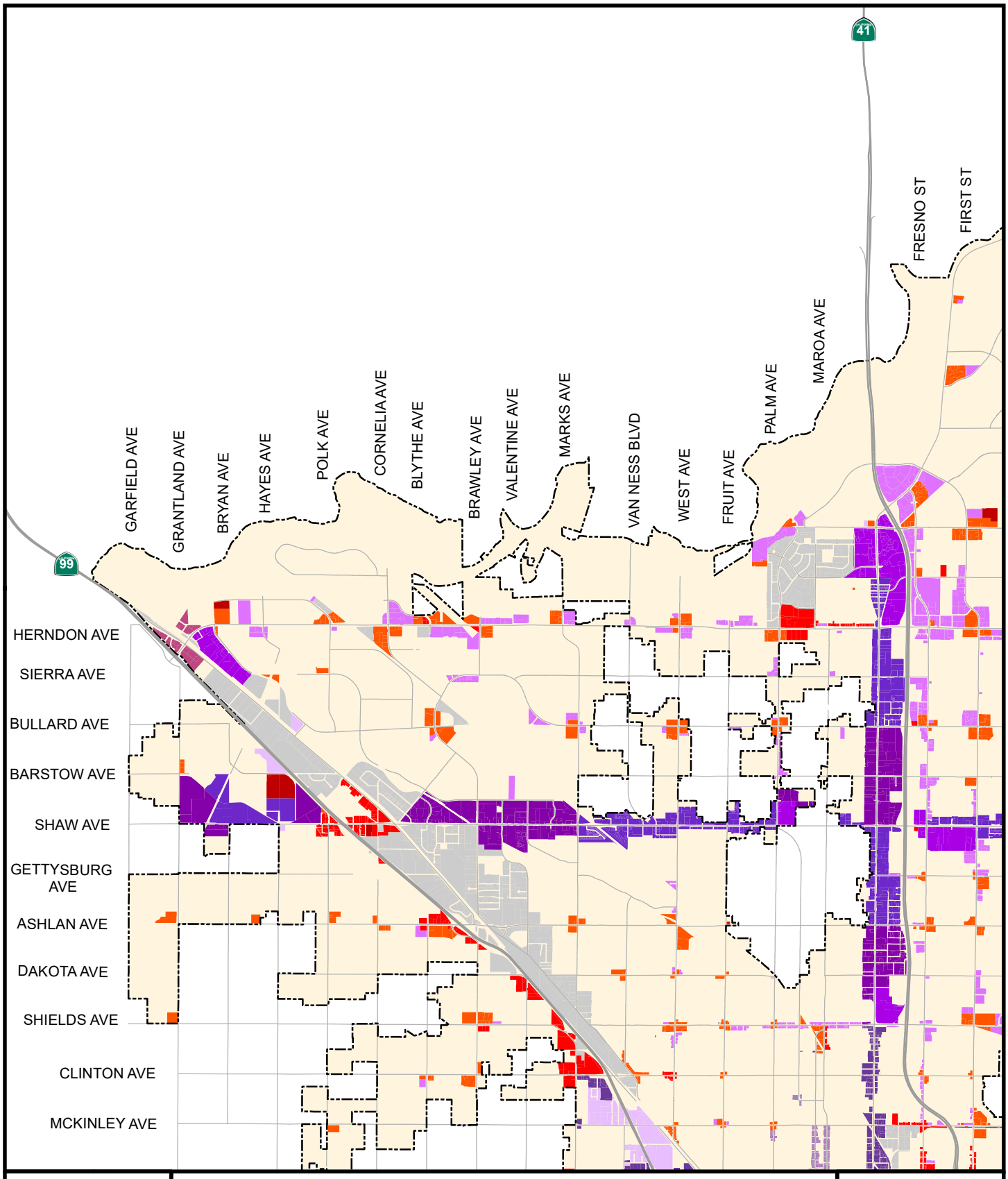
City Limits

N

0 3

Miles

QK Sources: ESRI



Testing Laboratories

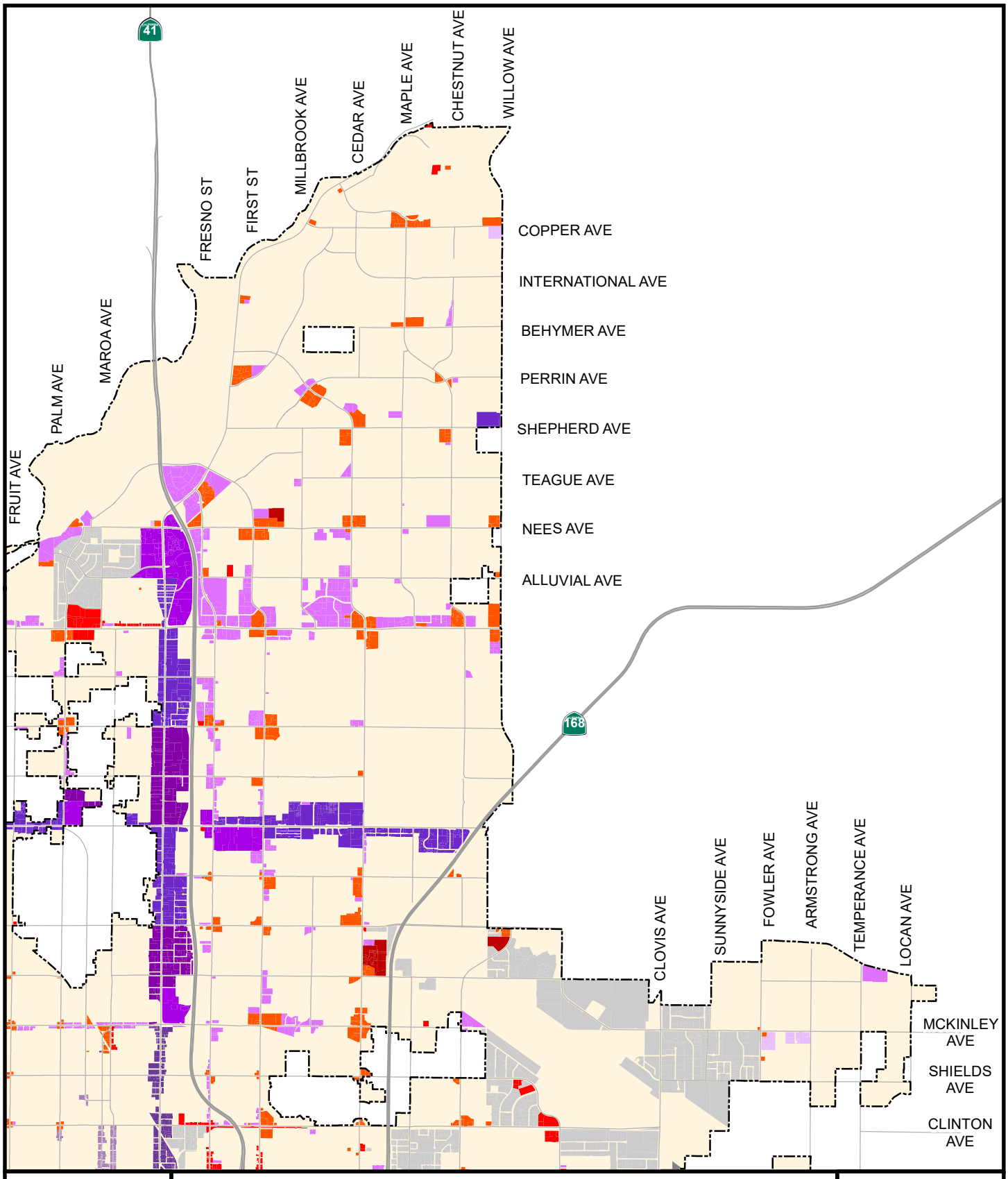
- NMX - Neighborhood Mixed Use
- CMX - Corridor/Center Mixed Use
- RMX - Regional Mixed Use
- CMS - Commercial Main Street
- CC - Commercial Community
- CR - Commercial Regional
- CG - Commercial General
- CH - Commercial Highway and Auto
- CRC - Commercial Recreation
- O - Office
- BP - Business Park
- IL - Light Industrial
- City Limits

N

0 1 Miles

QK Sources: ESRI

Figure 3-4.1



Testing Laboratories

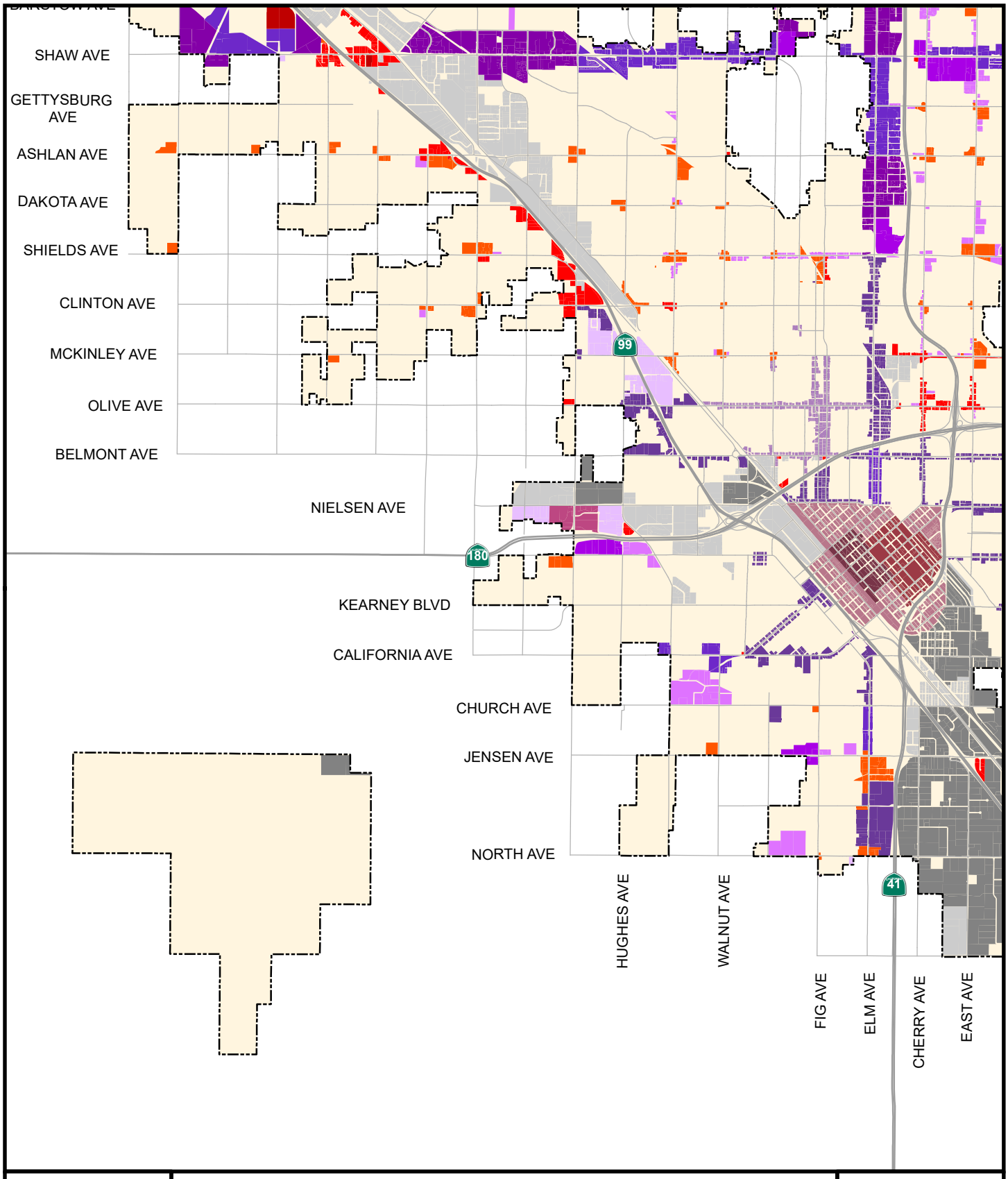
- NMX - Neighborhood Mixed Use
- CMX - Corridor/Center Mixed Use
- RMX - Regional Mixed Use
- CMS - Commercial Main Street
- CC - Commercial Community
- CR - Commercial Regional
- CG - Commercial General
- CRC - Commercial Recreation
- O - Office
- BP - Business Park
- IL - Light Industrial
- IH - Heavy Industrial
- City Limits

N

0 1 Miles

QK Sources: ESRI

Figure 3-4.2



Testing Laboratories

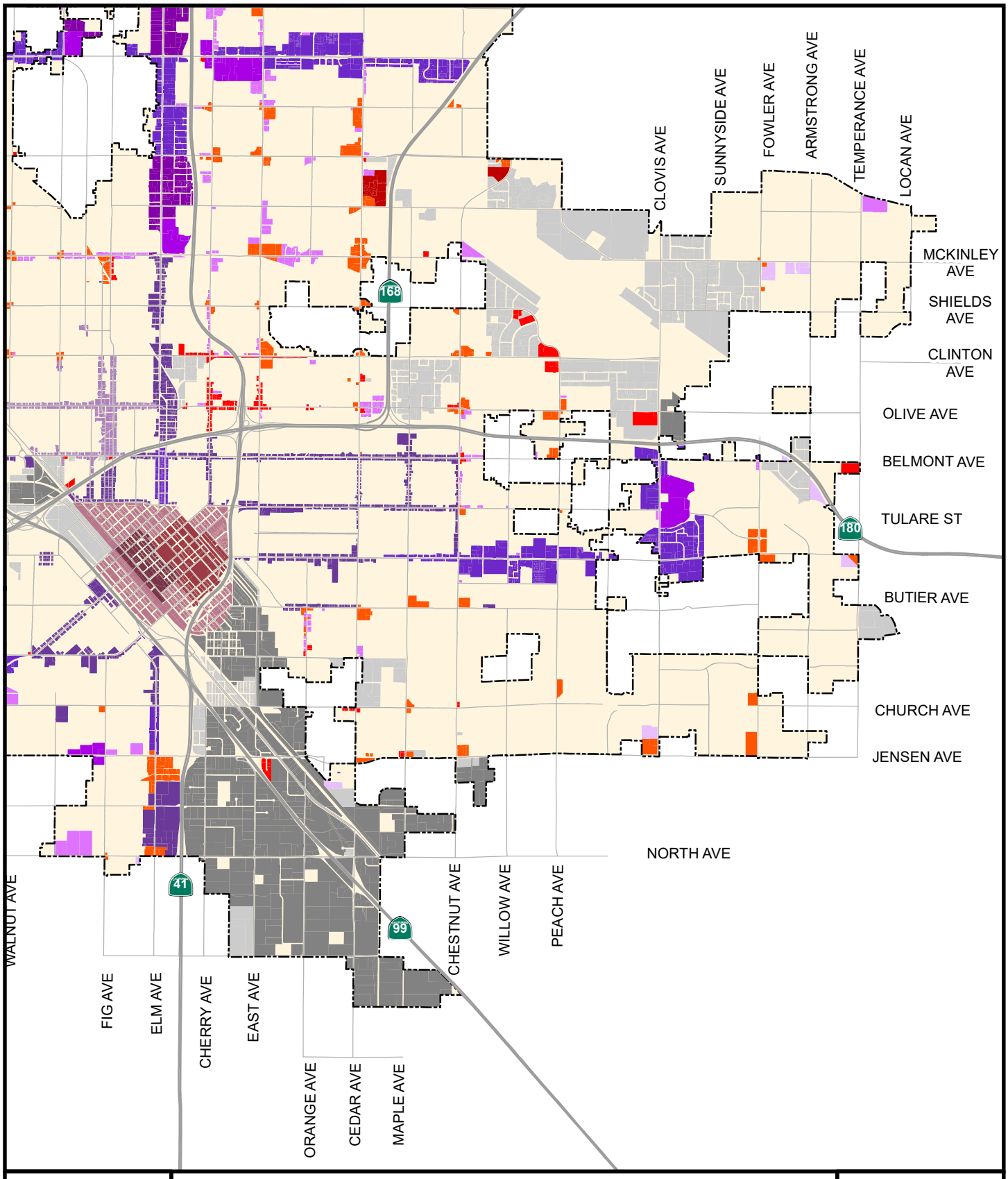
- DTC - Downtown Core
- DTG - Downtown General
- DTN - Downtown Neighborhood
- NMX - Neighborhood Mixed Use
- CMX - Corridor/Center Mixed Use
- RMX - Regional Mixed Use
- CMS - Commercial Main Street
- CC - Commercial Community
- CR - Commercial Regional
- CG - Commercial General
- CH - Commercial Highway and Auto
- CRC - Commercial Recreation
- O - Office
- BP - Business Park
- IL - Light Industrial
- IH - Heavy Industrial
- City Limits

N

0 1 Miles

QK Sources: ESRI

Figure 3-4.3



Testing Laboratories

- DTC - Downtown Core
- DTG - Downtown General
- DTN - Downtown Neighborhood
- 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
- CRC - Commercial Recreation
- O - Office
- BP - Business Park
- IL - Light Industrial
- IH - Heavy Industrial
- City Limits

N

0 1 Miles

QK Sources: ESRI

Figure 3-4.4

Cannabis Retailers

- Twenty-one total possible cannabis retail locations – this includes up to 14 medicinal and/or adult use cannabis retail locations (two per Council District); with the potential to add seven additional retailers (one additional per Council District) upon Council Resolution. (See Figure 3-5, 3-5.1 through 3-5.4.)

- Retailers would be restricted to the Downtown Neighborhood (DTN), Downtown General (DTG), Commercial Main Street (CMS), Commercial Community (CC), Commercial Regional (CR), Commercial General (CG), Commercial Highway (CH), Neighborhood Mixed-Use (NMX), Corridor/Center Mixed-Use (CMX), or Regional Mixed-Use (RMX) zone districts. In addition, retailers would be required to maintain a minimum distance of 800 feet from any property boundary containing another cannabis retailer, school, daycare center, or youth center (i.e. parks, playgrounds, facilities hosting activities for minors).

- Hours of operation for retailers would be limited to 6:00 a.m. to 10:00 p.m.

- Retail delivery allowed if part of store-front operation.

Cannabis Cultivation

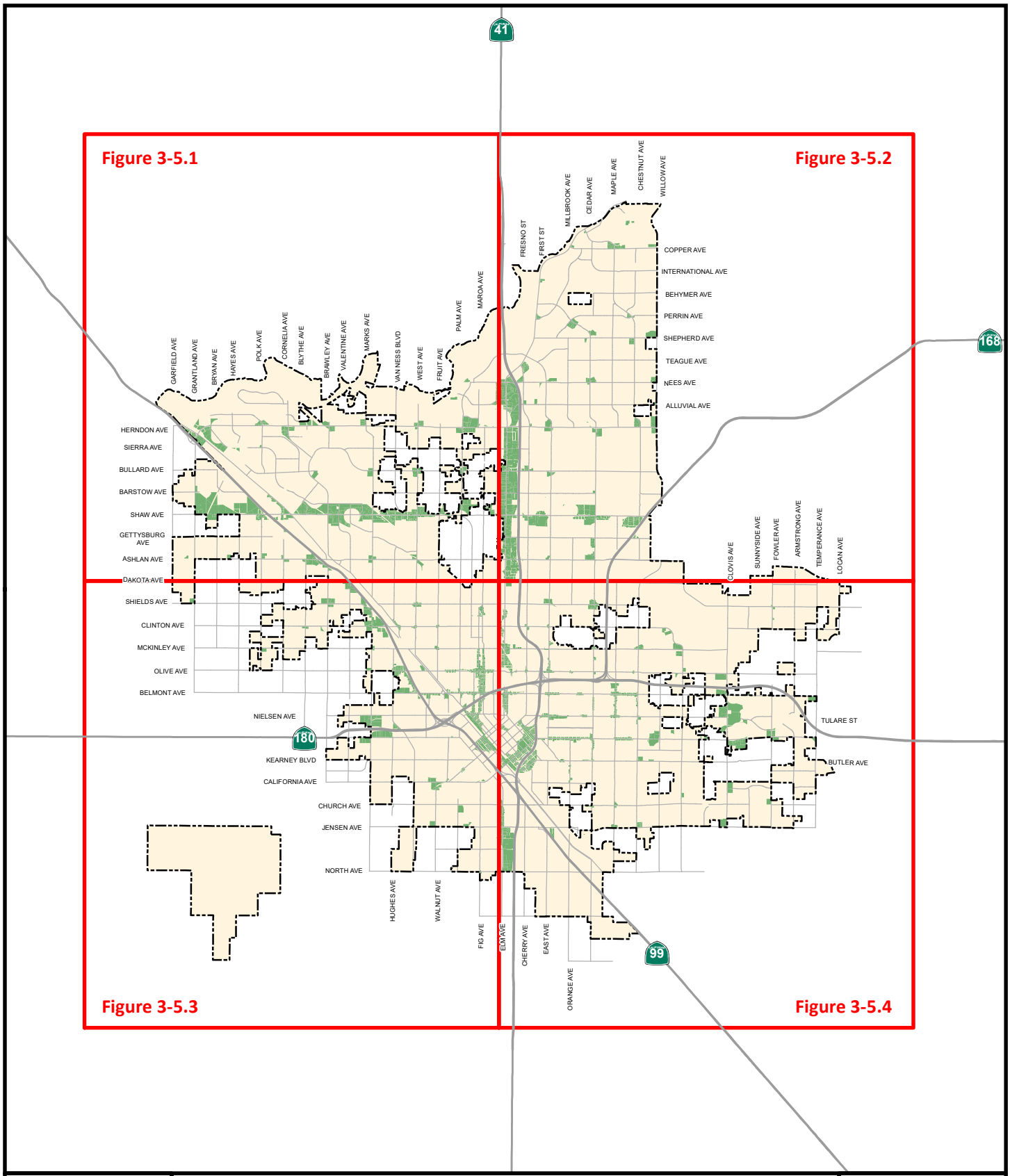
- The ordinance prohibiting all cultivation does not apply to a private residence with six plants or less grown indoors or to any person/property that obtains a city commercial cannabis business permit.

3.6 - Entitlements Required

The City is the Lead Agency for the proposed Project, consistent with State CEQA Guidelines Section 15065(b). As such, this EIR will be used by the City to both evaluate the potential environmental impacts that could result from implementation of the Project and develop changes in the proposed Project and/or adopt mitigation measures which would address those impacts.

The Fresno City Council will consider adoption of the Project after certification of the Final EIR. Pursuant to CEQA Guidelines Section 15093, the decision-makers must "*balance, as applicable, the economic, legal, social, technological, or other benefits of a proposed project against its unavoidable environmental risks when determining whether to approve the project. If the specific economic, legal, social, technological, or other benefits of a proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered 'acceptable'*."

If the City, as Lead Agency, approves the proposed Project and significant, unavoidable environmental impacts have been documented, a Statement of Overriding Considerations must be written, which shall state the specific reasons to support the approval based on the Final EIR and/or other information in the record.



Cannabis Retailers

Figure 3-5

Potential Retail Locations | Map Page | City Limits

N

0 3 Miles

QK Sources: ESRI

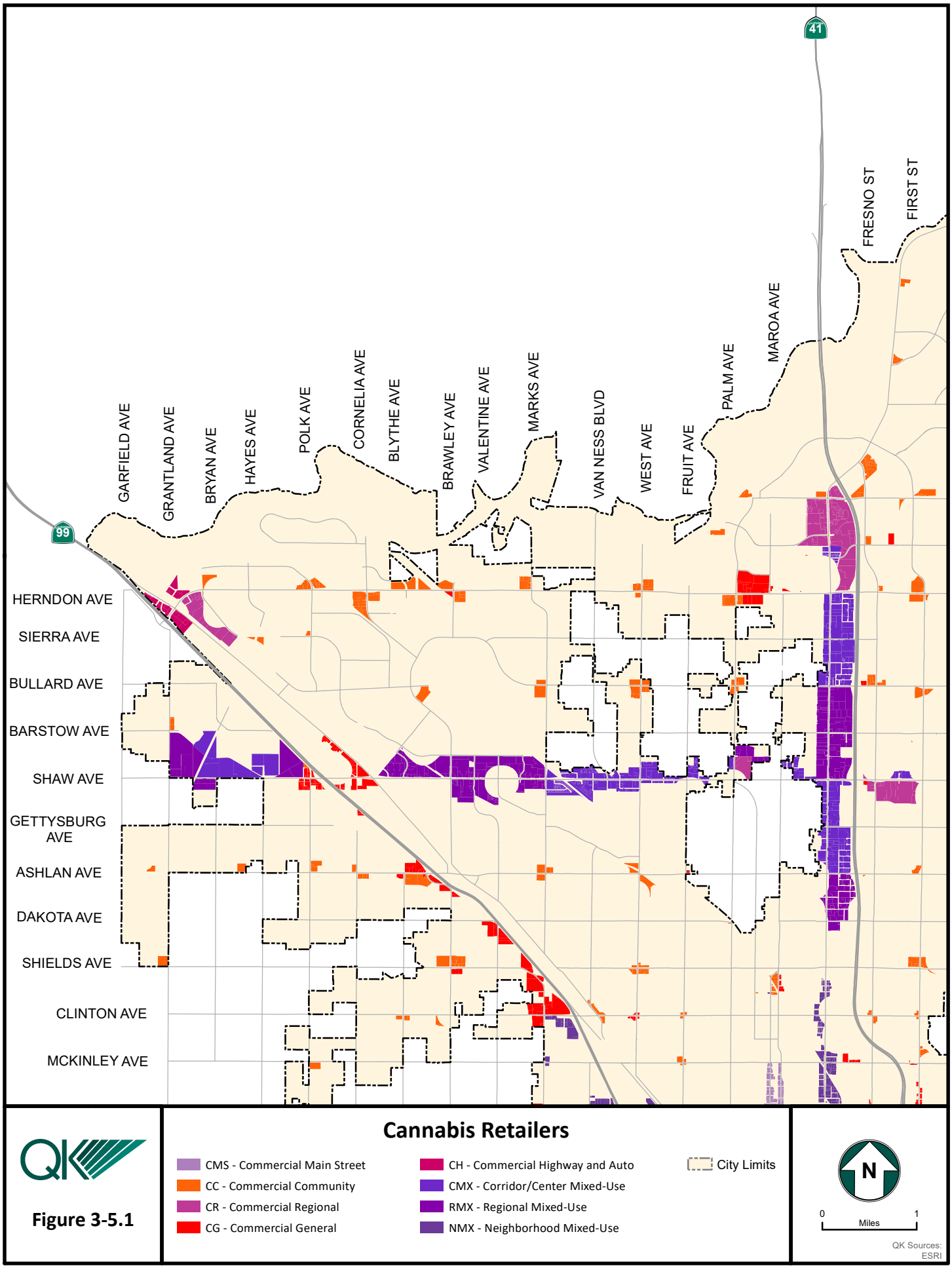
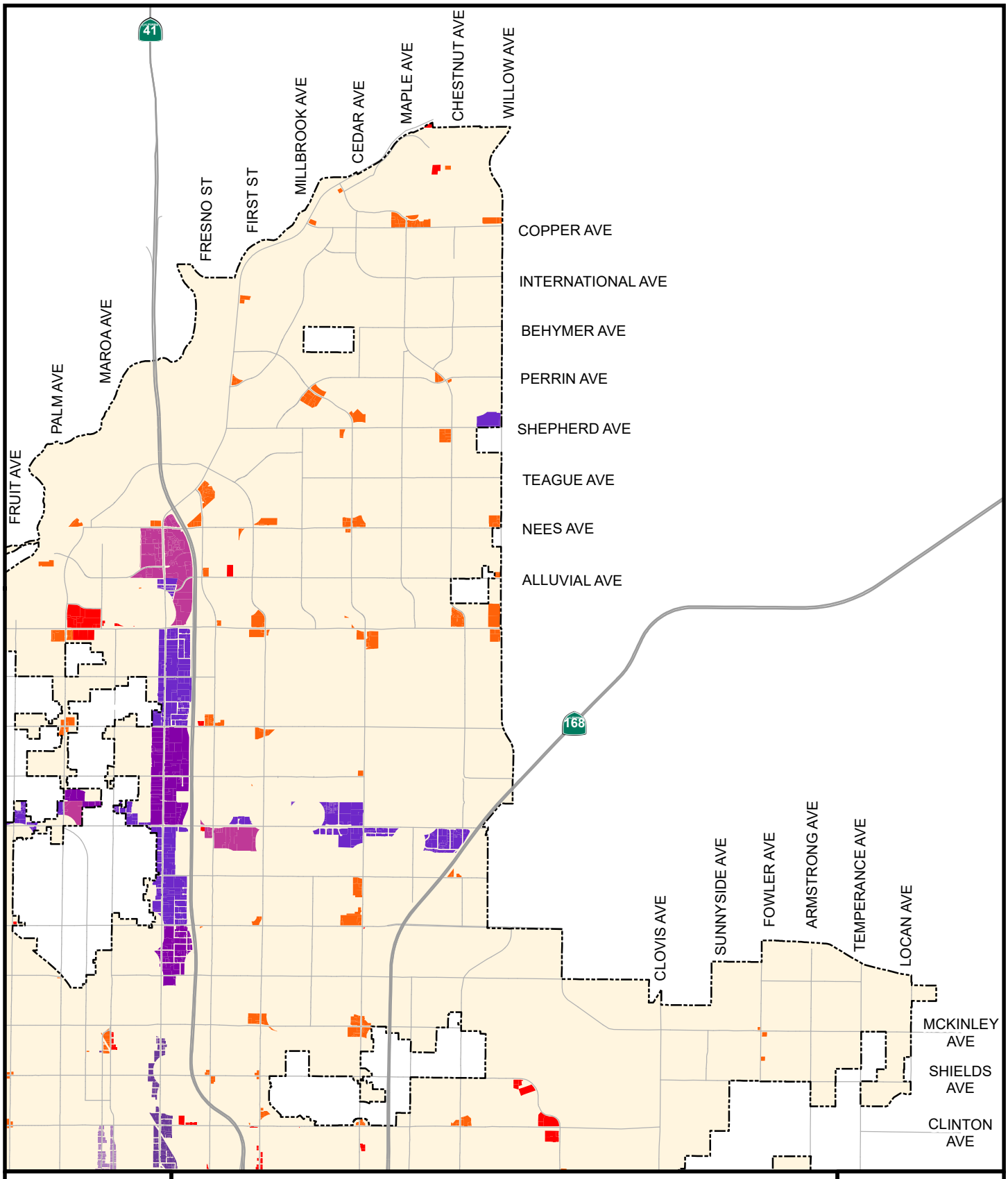

41
99
GARFIELD AVE
GRANTLAND AVE
BRYAN AVE
HAYES AVE
POLK AVE
CORNELIA AVE
BLYTHE AVE
BRAWLEY AVE
VALENTINE AVE
MARKS AVE
VAN NESS BLVD
WEST AVE
FRUIT AVE
PALM AVE
MAROA AVE
FRESNO ST
FIRST ST
HERNDON AVE
SIERRA AVE
BULLARD AVE
BARSTOW AVE
SHAW AVE
GETTYSBURG AVE
ASHLAN AVE
DAKOTA AVE
SHIELDS AVE
CLINTON AVE
MCKINLEY AVE
Cannabis Retailers
CMS - Commercial Main Street
CC - Commercial Community
CR - Commercial Regional
CG - Commercial General
CH - Commercial Highway and Auto
CMX - Corridor/Center Mixed-Use
RMX - Regional Mixed-Use
NMX - Neighborhood Mixed-Use
City Limits
N
0
1
Miles
QK Sources: ESRI

Figure 3-5.1



Cannabis Retailers

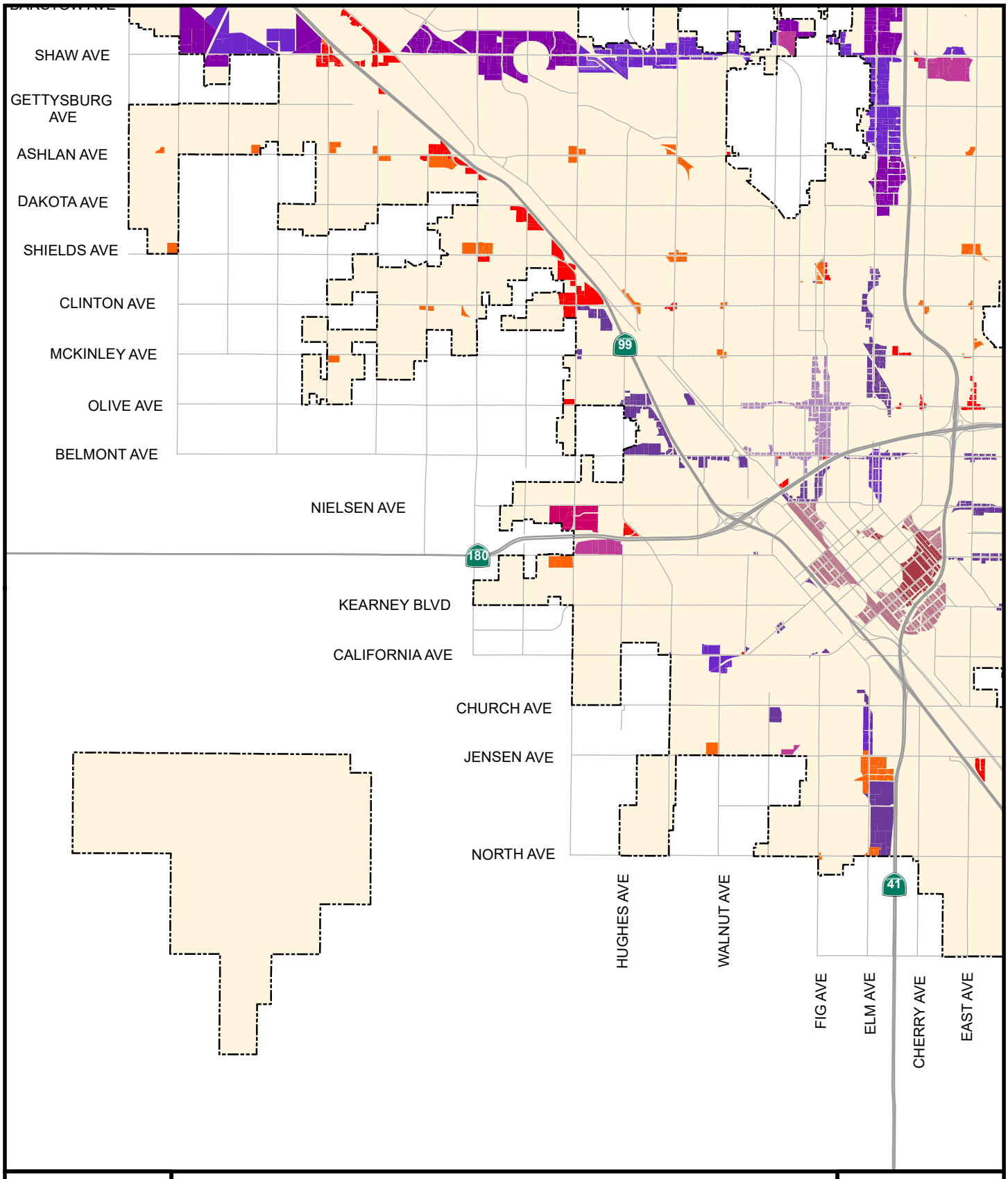
- CMS - Commercial Main Street
- CC - Commercial Community
- CR - Commercial Regional
- CG - Commercial General
- CMX - Corridor/Center Mixed-Use
- RMX - Regional Mixed-Use
- NMX - Neighborhood Mixed-Use
- City Limits

N

0 Miles 1

QK Sources: ESRI

Figure 3-5.2



Cannabis Retailers

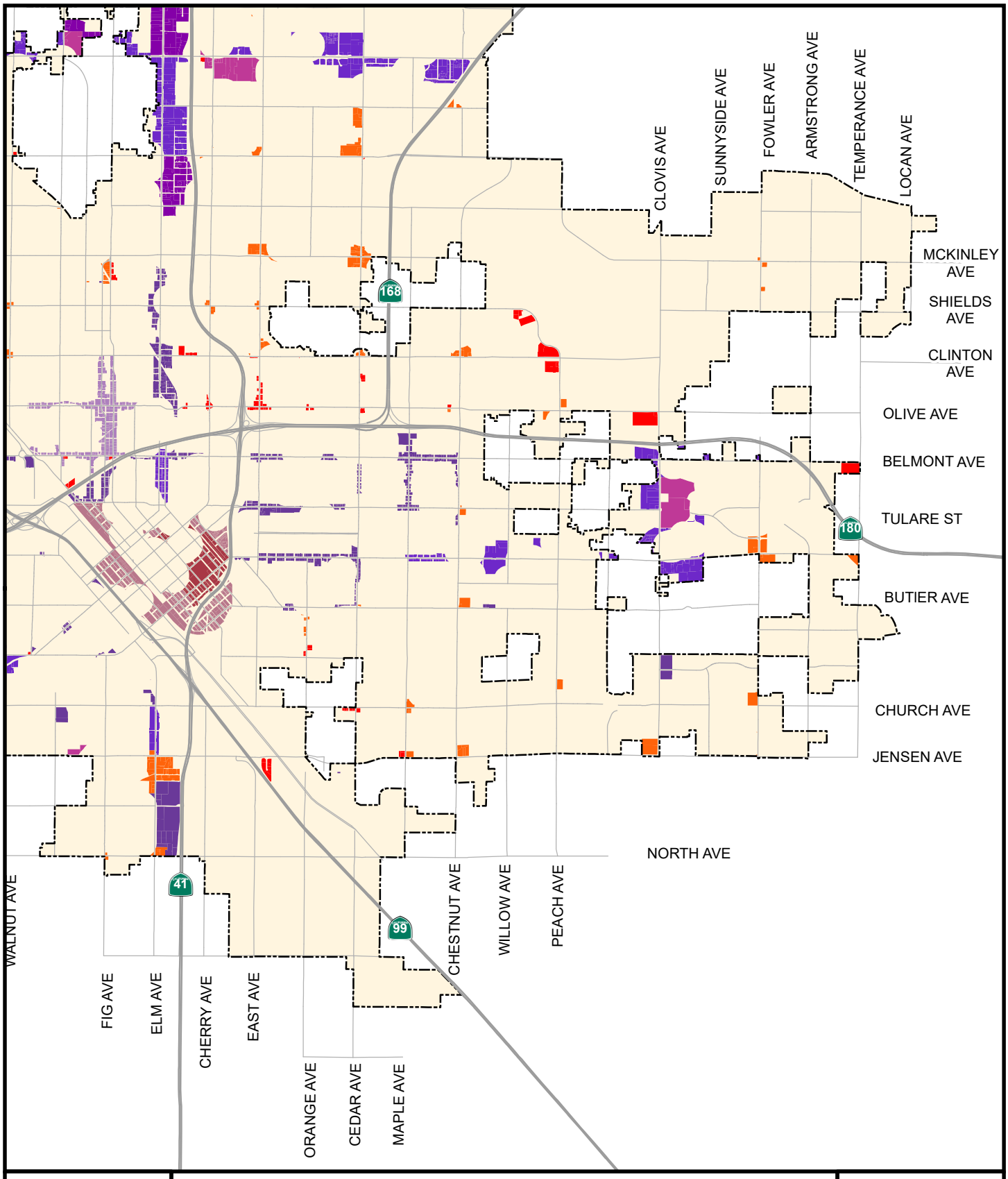
- DTG - Downtown General
- DTN - Downtown Neighborhood
- CMS - Commercial Main Street
- CC - Commercial Community
- CR - Commercial Regional
- CG - Commercial General
- CH - Commercial Highway and Auto
- CMX - Corridor/Center Mixed-Use
- RMX - Regional Mixed-Use
- NMX - Neighborhood Mixed-Use
- City Limits

N

0 1 Miles

QK Sources: ESRI

Figure 3-5.3



Cannabis Retailers

- DTG - Downtown General
- DTN - Downtown Neighborhood
- CMS - Commercial Main Street
- CC - Commercial Community
- CR - Commercial Regional
- CG - Commercial General
- CMX - Corridor/Center Mixed-Use
- RMX - Regional Mixed-Use
- NMX - Neighborhood Mixed-Use
- City Limits

N

0 1 Miles

QK Sources: ESRI

Figure 3-5.4

Implementation of the proposed Project would require the following regulatory and/or legislative actions by the Fresno City Council, following recommendation from the Planning Commission:

- Certify the Final EIR;
- Consider and adopt Findings and a Statement of Overriding Considerations, as necessary;
- Adopt amendments to Article 33 of Chapter 9 of the Fresno Municipal Code;
- Repeal Zoning Ordinance Sections 15-2739 and 15-2739.1, at appropriate time;
- Adopt proposed Zoning Ordinance Sections 15-2739 and 15-2739.1; and
- Adopt amendments to Article 21 of Chapter 12 of the Fresno Municipal Code.

OTHER RESPONSIBLE AGENCIES

Future activities related to cannabis businesses may require consideration and approval from a variety of agencies, who will be CEQA responsible or trustee agencies in this environmental process. The specific responsible agencies may vary, depending upon the nature of the planned activity, location and the resources impacted by cultivation, manufacturing, distribution, testing, and retail activities. A preliminary list of potentially responsible and trustee agencies is provided below.

- California Department of Fish and Wildlife (CDFW)
- California Bureau of Cannabis Control (CalCannabis)
- California Department of Food and Agriculture (CDFA)
- San Joaquin Valley Air Pollution Control District (SJVAPCD)
- California Department of Public Health (CDPH)
- Central Valley Regional Water Quality Control Board (RWQCB)
- California Department of Transportation (CalTrans)
- California Department of Equalization
- California Department of Justice
- California Franchise Tax Board
- California Environmental Protection Agency

3.7 - Cumulative Projects

CEQA requires that an EIR evaluate cumulative impacts. Cumulative impacts are the Project's impacts combined with the impacts of other related past, present and reasonably foreseeable future projects. As set forth in the CEQA Guidelines, the discussion of cumulative impacts must reflect the severity of the impacts, as well as the likelihood of their occurrence; however, the discussion need not be as detailed as the discussion of environmental impacts attributable to the project alone. As stated in CEQA, Public Resources Code, Section 21083(b) (2), "a project may have a significant effect on the environment if the possible effects of a project are individually limited but cumulatively considerable."

According to the CEQA Guidelines:

Cumulative impacts refer to two or more individual effects, which, when considered together, are considerable and which compound or increase other environmental impacts.

- The individual effects may be changes resulting from a single project or a number of separate projects.

- The cumulative impact from several projects is the change in the environment, which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time (California Code of Regulations [CCR], Title 14, Division 6, Chapter 3, §15355).

In addition, as stated in the CEQA Guidelines, it should be noted that:

The mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable (CCR, Title 14, Division 6, Chapter 3, Section 15064[I][5]).

Cumulative impact discussions for each environmental topic area are provided at the end of each technical analysis contained within Chapter 4, under *Impacts and Mitigation Measures*. The cumulative impacts discussions explain the geographic scope of the area affected by each cumulative effect (e.g., immediate project vicinity, city, county, watershed, or air basin). The geographic area considered for each cumulative impact depends upon the impact that is being analyzed. For example, in assessing aesthetic impacts, the pertinent geographic study area is the vicinity of the areas of new development under the proposed plan from which the new development can be publicly viewed and may contribute to a significant cumulative visual effect. In assessing macro-scale air quality impacts, on the other hand, all development within the air basin contributes to regional emissions of criteria pollutants, and basin-wide projections of emissions are the best tool for determining the cumulative effect.

Section 15130 of the CEQA Guidelines permits two different methodologies for completion of the cumulative impact analysis:

- The 'list' approach permits the use of a list of past, present, and probable future projects producing related or cumulative impacts, including projects both within and outside the city; and

- The 'projections' approach allows the use of a summary of projections contained in an adopted plan or related planning document, such as a regional transportation plan, or in an EIR prepared for such a plan. The projections may be supplemented with additional information such as regional modeling.

This EIR uses the projections approach and takes into account growth from the proposed plan within the Fresno City boundary and Sphere of Influence (SOI), in combination with impacts from

projected growth in the rest of Fresno County and the surrounding region. The following provides a summary of the cumulative impact scope for each impact area:

- Aesthetics: The cumulative setting for visual impacts includes potential future development under the proposed Project combined with effects of development on lands adjacent to the Project area within the City.

- Agriculture Resources: Cumulative impacts to agriculture resources occur from potential future development under the proposed Project combined with effects of development on lands within the region.

- Air Quality: Cumulative air quality impacts could occur from a combination of the proposed Project combined with regional growth within the San Joaquin Valley Air Basin.

- Biological Resources: The geographic scope of the cumulative analysis for biological resources considers the ten-mile radius surrounding the Project area.

- Cultural and Tribal Resources: Cumulative impacts to cultural resources occur from potential future development under the proposed Project combined with effects of development on lands within the region.

- Geology, Soils, and Seismicity: Potential cumulative geological impacts could arise from a combination of the development of the proposed Project together with future development in the immediate vicinity of the adjoining jurisdictions.

- Greenhouse Gas Emissions: The cumulative impact analyses for greenhouse gas (GHG) emissions are related to ongoing development in Fresno and the entire region. Because GHG emissions are not confined to a particular air basin but are dispersed worldwide, the cumulative analysis focuses on the global impacts.

- Hazards and Hazardous Materials: Potential cumulative hazardous impacts could arise from a combination of the development of the proposed Project together with the regional growth in the immediate vicinity of the Plan Area.

- Hydrology and Water Quality: The geographic context used for the cumulative assessment of water quality and hydrology impacts is the Kings Subbasin, which encompasses the entire Project area.

- Land Use and Planning: The cumulative setting for land use and planning includes the City planning regulations and regional planning, with which the City is required to comply to.

- Noise: The analysis addresses the operational and construction noise and vibration impacts of the proposed Project on the noise environment in the Project area and the surrounding area. The traffic noise levels are based on cumulative traffic conditions that take into account cumulative development in the region.

- Population and Housing: Impacts from cumulative growth are considered in the context of their consistency with regional planning efforts.

- Public Services and Recreation: Cumulative impacts are considered in the context of the growth from development under the proposed Project within the City combined with the estimated growth in the service areas of each service provider.

- Transportation and Traffic: The analysis of the proposed Project addresses cumulative impacts to the transportation network in Fresno and the surrounding area.

- Utilities and Service Systems: Cumulative impacts are considered in the context of the growth from potential future development under the proposed Project combined with the estimated growth in the service areas of each utility's service area.

CHAPTER 4 - ENVIRONMENTAL IMPACT ANALYSIS

Approach to Environmental Analysis

Sections 4.1 through Section 4.20 of this Draft EIR contain discussions of the environmental setting, regulatory setting, thresholds of significance, and potential environmental impacts related to construction and operation of the proposed Project. These sections also include a discussion of mitigation measures and the level of significance after the implementation of mitigation measures.

Section 15125(a) of the CEQA Guidelines identifies that an EIR include a description of the physical environmental conditions in the vicinity of the project. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant.

The study area for the analysis of project and cumulative impacts is the Fresno city limits, the portions of Fresno County located adjacent to the City, as well as portions of the City of Clovis and the County of Madera that may be impacted by the proposed Project. The applicable cumulative projections include growth projections from the Fresno General Plan, Fresno County General Plan, Madera County General Plan, and buildout projections within the City of Clovis General Plan.

The regulatory setting includes a discussion of the regulatory environment as it existed prior to the implementation of the Project. There are federal, State, regional, and local regulations identified within each environmental issue discussion, where appropriate. It is acknowledged that although the existing City of Fresno development codes currently guide development within the City, the proposed Project will add new standards and regulations to provide new guidance for future development of cannabis related activities.

The impact analysis contains a discussion of project-specific impacts as well as cumulative impacts. The Project that is evaluated is Text Amendment No. P19-02978 - Evaluating the Proposed Regulation and Permitting of Commercial Cannabis Activities. The Project components are an amendment to Sections 15-2739 and 15-2739.1 of the Fresno Municipal Code, Article 33 to Chapter 9 of the Fresno Municipal Code, and Article 21 to Chapter 12 of the Fresno Municipal Code, relating to adult use and medicinal cannabis retail business and commercial cannabis business. The above Project components are evaluated in Section 4.1 through Section 4.20. Specific components of the Project are not separately evaluated; however, the Project, as a whole, is evaluated. The Project, as a whole, is referred to as the proposed Project, throughout this EIR.

The impacts within the impact analysis section are identified as *no impact, less-than-significant impact, potentially significant impact,* or *significant impact*. The project-specific impacts address the potential environmental impacts that could occur under the development activity anticipated to occur with the proposed Project.

Environmental Topics

The potential environmental effects associated with the implementation of the proposed Project are analyzed in the following topical environmental issue areas:

- Aesthetics
- Agriculture/Forestry
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology/Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology/Water Quality
- Land Use/Planning
- Mineral Resources
- Noise
- Population/Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities/Service Systems
- Wildfire
- Mandatory Findings of Significance

Organization of Issue Areas

Each environmental issue Section contains the following components:

- Introduction - includes a brief discussion of the information used for the analysis.

- Environmental Setting - identifies and describes the existing physical environmental conditions of the Project area associated with each of the impact sections.

- Regulatory Setting - provides an understanding of the regulatory environment that exists prior to the implementation of the Project. This discussion includes the applicable goals, objectives, and policies from the City of Fresno 2035 General Plan as well as other regulations that currently exist.

- Methodology – identifies which criteria, technical documents or formulas were used to analyze specific environmental impacts.

- Thresholds of Significance - identifies thresholds from Appendix G of the CEQA Guidelines that assist in determining the significance of an impact. Some thresholds include a more detailed discussion to address the City of Fresno's or other local agency's specific significance criteria for the Project area.

- Project Impacts - describes environmental changes to the existing physical conditions that may occur if the proposed Project is implemented and evaluates these changes with respect to the CEQA thresholds of significance. This section includes a project-specific impact analysis and a cumulative impact analysis. Mitigation measures are identified for potentially significant project and cumulative impacts, if determined feasible. The mitigation measures are those measures that could avoid, minimize, or reduce an environmental impact. This section also includes a discussion of the level of significance after mitigation that describes the level of impact significance remaining after mitigation measures are implemented.

Level of Significance

Determining the severity of project and cumulative impacts is fundamental to achieving the objectives of CEQA. CEQA Guidelines Section 15091 requires that decision-makers mitigate, as completely as is feasible, the significant impacts identified in the Project EIR. If the Project EIR identifies any significant unmitigated impacts, CEQA Guidelines Section 15093 requires decision-makers in approving a project to adopt a Statement of Overriding Considerations that explains why the benefits of the project outweigh the adverse environmental consequences identified in the EIR.

The level of significance for each impact examined in this EIR is determined by considering the predicted magnitude of the impact against the applicable threshold. Thresholds are developed using criteria from the CEQA Guidelines and checklist; federal, State, and local regulatory schemes; local/regional plans and ordinances; accepted practice; consultation with agencies and recognized experts; and other professional opinions. When adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence.

Format Used of Impact Analysis and Mitigation Measures

The format adopted in this EIR to present the evaluation of impacts is described and illustrated below.

Summary Heading of Impact

Impact 4.1-1: An impact summary heading appears immediately preceding the impact description (Summary Heading of Impact in this example). The impact number correlates to the section of the report (4.1 for Aesthetics in this example) and the sequential order of the impact

(1 in this example) within that section. To the right of the impact number is the impact statement, which identifies the potential impact, corresponding to CEQA thresholds.

Project Impact Analysis

A narrative analysis follows the impact statement. The analysis identifies the significant environmental effects of the proposed project on the environment, based on an examination of the changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published. Direct and indirect significant effects of the project on the environment are identified and described for both the short-term and long-term effects. The analysis includes relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services.

Cumulative Impact Analysis

A narrative analysis of cumulative impacts follows the project impacts section. The cumulative impacts analysis includes a discussion of the level of impact that would occur if the proposed project in combination with cumulative development, as described in Chapter 1 - *Executive Summary* of this EIR, are implemented. If the combined level of impact is *no impact*, or *less-than-significant* impact, the project's incremental effect would be less than cumulatively considerable. If the combined level of impact is *significant*, the project's incremental effect is determined to be cumulatively considerable. The discussion of cumulative impacts is guided by the standards of practicality and reasonableness and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact.

Mitigation Measures

Mitigation measures to reduce potential project-specific and cumulative impacts include a summary heading and described using the format presented below:

MM 4.4-1: Project-specific or cumulative mitigation is identified that would reduce the impact to the lowest degree feasible. The mitigation number links the particular mitigation to the impact section with which it is associated (Impact 4.4-1 in this example).

Level of Significance After Mitigation

This section identifies the resulting level of significance of the project-specific or cumulative impact following mitigation.

4.1 - Aesthetics

4.1.1 - INTRODUCTION

This section discusses impacts associated with the potential for the Project to degrade the existing visual character or quality of the area and its surroundings through changes in the existing landscape. Potential effects are evaluated relative to important visual features (e.g., scenic highways, scenic features) and the existing visual landscape and its users.

Degradation of the visual character of a site is usually addressed through a qualitative evaluation of the changes to the aesthetic characteristics of the existing environment, and the Project-related modifications that would alter the visual setting.

Aesthetics, as addressed in the California Environmental Quality Act (CEQA), refers to visual considerations in the physical environment. Because a person's reaction and attachment to a given viewshed are subjective, visual changes inherently affect viewers differently. Accordingly, aesthetics analysis, or visual resource analysis, is a systematic process to logically assess visible change in the physical environment and the anticipated viewer response to that change. This section of this Environmental Impact Report (EIR) describes the existing landscape character of the Project area, existing views of the surrounding environment, the visual characteristics of the potential Project locations, and the landscape changes that would be associated with the implementation of the Project.

This analysis is primarily based on the information provided by the City of Fresno Cannabis Regulatory Ordinance and available data. Where additional information has been used to evaluate the potential impacts, the information has been referenced. This information includes, but is not limited to, review of plans, working knowledge of the City and its surroundings by QK staff, Google Earth images, and internet sources. Regulatory standards were also investigated, including the City of Fresno General Plan and the City of Fresno Development Code.

Visual Resource Terminology

When viewing the same landscape, people may have different responses to that landscape and any proposed visual changes, based upon their values, familiarity, concern, or expectations for that landscape and its scenic quality. Because each person's attachment to and value for a particular landscape is unique, visual changes to that landscape inherently affect viewers differently. However, generalizations can be made about viewer sensitivity to scenic quality and visual changes, if any exist. Recreational users (e.g., hikers, equestrians, tourists, and people driving for pleasure) are expected to have high concern for scenery and landscape character. People who are commuting daily through the same landscape generally have a moderate concern for scenery, while people working at industrial sites generally have a lower concern for scenic quality or changes to existing landscape character. The visual sensitivity of a landscape is affected by the viewing distances at which it is seen, such as closeup or far away. The visual sensitivity of

a landscape also is affected by the travel speed at which a person is viewing the landscape (high speeds on a highway, low speeds on a hiking trail, or stationary at a residence).

The same feature of a project can be perceived differently by people depending on the distance between the observer and the viewed object. When a viewer is closer to a viewed object in the landscape, more detail can be seen, and there is greater potential influence of the object on visual quality because of its form or scale (relative size of the object in relation to the viewer). When the same object is viewed at background distances, details may be imperceptible but overall forms of terrain and vegetation are evident, and the horizon and skyline are dominant. In the middle ground, some detail is evident (e.g., the foreground), and landscape elements are seen in context with landforms and vegetation patterns (e.g., the background). For the purpose of this study, the foreground, middle ground, and background are defined as follows:

- Foreground: Immediate vicinity of viewer and up to one-fourth mile;
- Middle ground: Roughly one-fourth mile to one-third mile from viewer; and
- Background: one-third mile to one-half mile from viewer or greater.

Visual character typically consists of the landforms, rock forms, vegetation patterns, water features, and cultural modifications that impart an overall visual impression of an area's landscape. Scenic areas typically include open space, landscaped corridors, and viewsheds. Visual character is influenced by many different landscape attributes including color contrasts, landform prominence, repetition of geometric forms, and uniqueness of textures among other characteristics.

The following terms and concepts are used in the discussion below to describe and assess the aesthetic setting and impacts from the proposed Project.

View Corridor. The line-of-sight (identified as to height, width, and distance) of an observer looking toward an object of significance to the community (e.g., ridgeline, river, historic building, etc.).

Scenic vista. A scenic vista is a viewpoint that provides a distant view of highly valued natural or manmade landscape features for the benefit of the general public. Typical scenic vistas are locations where views of rivers, hillsides, and open space areas can be obtained as well as locations where valued urban landscape features can be viewed in the distance.

Scenic highway. Any stretch of public roadway that is designated as a scenic corridor by a federal, State, or local agency.

4.1.2 - Environmental Setting

Regional Character

The City of Fresno is located in Fresno County and is situated in the central portion of the San Joaquin Valley, in the State of California. The City encompasses approximately 113 square miles.

Fresno is the largest city in Fresno County and has a current estimated population of 536,683 residents (California Department of Finance, 2019). Fresno County is California's sixth largest county in land area and encompasses approximately 6,011 square miles.

STATE SCENIC HIGHWAYS

There are no officially designated State Scenic Highways within the City of Fresno (California Department of Transportation, 2019). The nearest one is located along SR-180 approximately seven miles east of the city limits which leads to the Kings Canyon National Park. Additionally, there is an eligible State Scenic Highway along SR-168, approximately five miles from the city limits.

LOCAL CHARACTER

The topography of the City is relatively flat with little topographic variation. It occurs at an elevation of approximately 328 feet above mean sea level (AMSL). The surrounding land is relatively flat with a sharp rise towards the foothills of the Sierra Nevada Mountain Range to the east. SR-99 runs northwest-southeast on the western edge of the City, connecting it with Sacramento and Bakersfield. SR-41 runs north-south through the heart of the City, connecting it with Yosemite National Park. SR-168 links the Downtown to Clovis, and SR-180 runs east-west along the southern edge of the City.

The northern border of the City is largely defined by the San Joaquin River, which flows to the Sacramento-San Joaquin River Delta and San Francisco Bay. The eastern border of the City mostly abuts the city limits of the City of Clovis. The western border of the City traverses SR-99 and passes through western rural residential and agricultural lands of the unincorporated County. The southern boundary extends as far south as East Malaga Avenue.

Existing Visual Character

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, landscape lighting, and signage). 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 and hotels are considered light sensitive, since occupants have expectations of privacy during evening hours and may be subject to disturbance by bright light sources. Light spill is typically defined as the presence of unwanted light on properties adjacent to the property being illuminated. With respect to lighting, the degree of illumination may vary widely depending on the intensity of light generated, height of the light source, presence of barriers or obstructions, type of light source, and weather conditions.

Glare is primarily a daytime occurrence caused by the reflection of sunlight or artificial light on 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 generation is typically related to either moving vehicles or sun angles, although glare resulting from reflected sunlight can occur regularly at certain times of the year no matter where the location. Glare-sensitive uses include residences, hotels, transportation corridors, and aircraft landing corridors.

Project eligible sites are located throughout the city limits, including predominantly urban and developed areas that contain common nighttime light sources such as street lighting and both interior and exterior building security lighting. This type of lighting is common in the Downtown, Commercial, Mixed-use, and Industrial Zones that will accommodate the retail, testing laboratory, and cultivation, distribution, and manufacturing locations within the Project area that are predominantly urban and built-out. The nighttime lighting associated with these zones contain common lighting sources (streetlights, parking lights, interior lights from buildings, lighted recreational facilities, etc.) typically associated with Downtown, Commercial, Mixed-use, and Industrial uses. Additionally, vehicular headlights, associated with nearby passing freeway traffic, add additional light and glare to the existing setting.

4.1.3 - REGULATORY SETTING

This regulatory framework identifies the federal, State, regional, and local statutes, ordinances, and policies that govern the light, glare, viewshed, and scenic character that must be considered by the City of Fresno during the decision-making process for projects that have the potential to affect aesthetics.

Federal

U.S. DEPARTMENT OF TRANSPORTATION

The U.S. Department of Transportation Act of 1966, Section 4(f) which states, “Protection of Publicly Owned Park, Recreation Area, Wildlife or Waterfowl Refuge, or Land from Historic Sites,” was established to provide certain protections to publicly owned parks; recreation areas; wildlife and waterfowl refuges; and land from historic sites of national, State, or local significance. Section 4(f) requires that the federal agency must show that there are no feasible or prudent alternatives to the use of these areas (U.S. Department of Transportation, 2019).

The Project would not result in the conversion of existing publicly owned park areas. Therefore, Project compliance with the U.S. Department of Transportation Act of 1966 was not considered in this analysis.

U.S. DEPARTMENT OF AGRICULTURE, FOREST SERVICE

The National Trails System Act (NTSA) of 1968 seeks to preserve scenic and natural qualities along trails and recognizes the rights of private landowners and provides that "full consideration shall be given to minimizing the adverse effects upon the adjacent landowner or user and his operation" in the development and use of a trail (National Park Service, 2019).

The NTSA assigns management responsibility for trails to various federal resource agencies, depending on which agency holds jurisdiction over the public lands on which the trail is located in a given area (U.S. Forest Service, U.S. Park Service, or BLM). The Project would not result in impacts to scenic and natural qualities along trails that are under the jurisdiction of the U.S. Department of Agriculture, Forest Service. Therefore, Project compliance with the NTSA was not considered in this analysis.

State

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

CEQA Guidelines define a "significant effect" on the environment to mean a "substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the Project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance" (California Code of Regulations (CCR), Title 14, § 15382, 2010).

CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS)

The California Department of Transportation (Caltrans) manages the California Scenic Highway Program, which was created in 1963 by the California State Legislature to preserve and protect scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to highways. A highway may be designated as scenic based on certain criteria, including how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes on the traveler's enjoyment of the view. State laws governing the Scenic Highway Program are found in the Streets and Highways Code, Sections 260 through 263.

The State Scenic Highway System includes a list of highways that are either eligible for designation as Scenic Highways or have been officially designated. The status of a proposed State Scenic Highway changes from eligible to officially designated when the following happens: local governing body applies to Caltrans for scenic highway approval, adopts a Corridor Protection Program, and receives notification that the highway has been officially designated a Scenic Highway (California Department of Transportation, 2017).

There are no eligible or officially designated State Scenic Highways within the City of Fresno. The nearest one is located along SR-180 approximately seven miles east of the city limits which leads to the Kings Canyon National Park. Additionally, there is an eligible State Scenic Highway along SR-168, approximately five miles from the city limits.

Local

CITY OF FRESNO

The principal tools used by the City of Fresno to regulate urban design are the General Plan and the Citywide Development Code. The General Plan governs the distribution and intensity of land uses, sets the principles for evaluating development, and guides the development and growth of the City. The Citywide Development Code establishes specific development standards and design criteria for each zoning district (i.e. parking requirements, walls, fencing, setbacks, building height, etc.).

City of Fresno Municipal Code

Chapter 15 of the Fresno Municipal Code is the "Citywide Development Code." The purpose of the Development Code is to implement the General Plan and, if applicable, operative plans, to protect and promote the public health, safety, peace, comfort, convenience, prosperity, and general welfare of the City of Fresno. More specifically, the Development Code is adopted to achieve the following, consistent with the goals, objectives, and policies of the General Plan and any other operative plan:

- To provide a precise guide for the physical development of the City in a manner as to progressively achieve the arrangement of land uses depicted in the General Plan;
- To foster a harmonious and workable relationship among land uses and ensure compatible infill development;
- To support economic development and job creation;
- To provide for the housing needs of all economic segments of the community;
- To promote high quality architecture and sustainable design. Sustainable Design is a philosophy that seeks to maximize the quality of the built environment, while minimizing or eliminating negative impact to the natural environment;
- To promote the stability of existing land uses that conform to the General Plan, protecting them from inharmonious influences and harmful intrusions;
- To promote a safe and efficient traffic circulation system, including bicycle facilities and pedestrian amenities, and to support a multi-modal transportation system;
- To facilitate the appropriate location of community facilities, institutions, parks, and recreational areas;
- To protect and enhance real property values;
- To safeguard and enhance the appearance of the City; and

- To define duties and powers of governing bodies and officials responsible for the implementation of this code (City of Fresno Municipal Code, Section 15-102).

Article 25 Section 15-2508: Lighting and Glare establishes provisions for the shielding of light or glare that is produced from the operation of mechanical and chemical processes, high-temperature processes such as combustion or welding, or from reflective materials on buildings or used or stored on a site. This section also requires lights to be oriented to deflect light away from adjacent properties and public streets, and to prevent adverse interference with the normal operation or enjoyment of surrounding properties. Additionally, no light, combination of lights, or activity shall cast light onto a property residentially zoned or containing residential uses (exceeding one half-foot candle). Section 15-2508 also establishes that no use shall generate significant glare visible from beyond the lot of the use. Additionally, windows shall not be sources of significant glare or heat that may disrupt adjoining lots, surrounding properties, or nearby traffic.

Article 25 Section 15-2509: Shadow Casting establishes provisions for the analysis of shadow generation as a result of structures exceeding 50 feet in height. If there is indication that the shadow would significantly impact residential properties, alternative designs or other mitigation measures shall be presented.

City of Fresno General Plan

The Urban Form, Land Use, and Design Element of the General Plan evaluates the physical framework for development in the City. It establishes policies related to the location and intensity of new development, citywide land use and growth management policies. The Mobility and Transportation Element provides guidelines for development near scenic corridors. Scenic corridors, as identified in the General Plan, are separate from the California Scenic Highway Mapping System.

The Project would be subject to applicable goals, objectives, policies and measures of the City's General Plan.

CHAPTER 3. URBAN FORM, LAND USE, AND DESIGN ELEMENT

Objective UF-2. Enhance the unique sense of character and identity of the different subareas of the Downtown neighborhoods.

Policy UF-12-g - Impacts on Surrounding Uses. Establish design standards and buffering requirements for high-intensity Activity Centers to protect surrounding residential uses from increased impacts from traffic noise and vehicle emissions, visual intrusion, interruption of view and air movement, and encroachment upon solar access.

Objective LU-6. Retain and enhance existing commercial areas to strengthen Fresno's economic base and site new office, retail, and lodging use districts to serve neighborhoods and regional visitors.

Policy LU-6-a - Design of Commercial Development. Foster high quality design, diversity, and a mix of amenities in new development with uses through the consideration of guidelines, regulations and design review procedures.

Objective LU-7. Plan and support industrial development to promote job growth.

Objective LU-9. Plan land uses, design, and development intensities to supplement and support, and not compete with, the Downtown.

Policy LU-9-f - View Corridors. Promote new view corridors that highlight the Downtown skyline.

Objective D-1. Provide and maintain an urban image that creates a "sense of place" throughout Fresno.

Policy D-1-b - Active Ground Floor Frontage. Encourage all new development located within Activity Centers and/or along BRT corridors to incorporate active ground floor frontages that engage pedestrians to the maximum extent feasible. Establish pedestrian-oriented design standards in the Development Code for building frontages, transparency, fenestration, and entries to create active streetscapes.

Policy D-1-c - Privately Owned Public Spaces. Consider creating and adopting design standards and incentives for providing privately owned public open spaces and plazas for gathering to enhance the pedestrian realm and provide opportunities for social interaction.

Policy D-1-g - Reducing Surface Parking. Consider adopting and implementing incentives to replace existing large surface parking lots in centers with parking structures, and to incorporate them into high-density mixed-use developments.

Policy D-1-h - Screening of Parking. Consider requiring all new development with parking in Activity Centers and along corridors to be screened or concealed. Locate principal pedestrian entrances to new non-residential buildings on the sidewalk; any entrances from parking areas should be incidental or emergency use only.

Policy D-1-j - Lighting Standards. Update lighting standards to reflect best practices and protect adjoining uses from glare and spillover light.

Objective D-2. Enhance the visual image of all "gateway" routes entering the Fresno Planning Area.

Policy D-2-a - Design Requirements for Gateways. Create unified design requirements for gateways to welcome travelers to the City's Activity Centers.

Policy D-2-b - Funding for Gateway Enhancements. Pursue funding to implement gateway enhancement plans and programs.

Policy D-2-c - Highway Beautification. Work with Caltrans, the Fresno Council of Governments, Tree Fresno, neighboring jurisdictions, and other organizations to obtain funding for highway beautification programs.

Objective D-4. Preserve and strengthen Fresno's overall image through design review and create a safe, walkable and attractive urban environment for the current and future generations of residents.

Policy D-4-c - Appropriate Day and Night Activity. Promote new residential, commercial and related forms of development that foster both day and appropriate nighttime activity; visual presence on the street level; appropriate lighting; and minimally obstructed view areas.

Policy D-4-d - Design for Safety. Continue to involve the City's Police Department in the development review process to ensure new buildings are designed with security and safety in mind.

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

Objective D-5. Maintain and improve community appearance through programs that prevent and abate blighting influences.

Policy D-5-a - Code Enforcement. Continue enforcement of the Fresno Municipal Code to remove or abate public nuisances in a timely manner.

Policy D-5-b - Clean Streets. Promote community partnerships and continued City efforts toward litter clean-up and abatement of trash stockpiles on public and private streets.

Policy D-5-c - Façade Improvements. Pursue funding for, and support of, building facade improvement programs.

Policy D-5-d - Graffiti Prevention and Abatement. Seek ways to end graffiti, continue and expand the City's effective Graffiti Abatement Program.

Policy D-5-e - Community Sanitation. Continue efforts in Operation Clean-Up to address rubbish/debris associated with homelessness.

Objective D-6. Encourage design that celebrates and supports the cultural and ethnic diversity of Fresno.

Policy D-6-a. Consult with neighboring populations, including non-English speaking groups, to inform the architecture, landscape, programming, and interior design of City-owned facilities such as parks, offices, street lighting, and other visible features.

Policy D-6-b. Consider adopting and implementing incentives for, and support efforts by, private development to incorporate culturally specific architectural elements in areas with a predominant ethnic population.

CHAPTER 4. MOBILITY AND TRANSPORTATION ELEMENT

Objective MT-3. Identify, promote and preserve scenic or aesthetically unique corridors by application of appropriate policies and regulations.

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; and
- Ashlan Avenue- Palm to Maroa Avenues.

CHAPTER 8. HISTORIC AND CULTURAL RESOURCES ELEMENT

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-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-g - Demolition Review. Review all demolition permits to determine if the resource scheduled for demolition is potentially eligible for listing on the Local Register of Historic Resources. Consistent with the Historic Preservation Ordinance, refer potentially eligible resources to the Historic Preservation Commission and as appropriate to the City Council.

4.1.4 - IMPACTS AND MITIGATION MEASURES

Methodology

In general, the potential character, quality, light, and glare impacts associated with projects are evaluated on a qualitative basis. The potential impacts to visual resources within the vicinity of the Project site were qualitatively evaluated based on the following criteria: (1) existing visual quality and scenic attributes of the landscape; (2) location of sensitive receptors in the landscape; (3) assumptions about receptors' concern for scenery and sensitivity to changes in the landscape; (4) the magnitude of visual changes in the landscape that would be brought about by implementation, construction, and operation of the Project; and (5) compliance with State, County, and local policies for visual resources.

Viewer visual sensitivity can be described as viewer awareness of visual changes in the environment and is based on the viewers' perspective while engaging in activities from public areas near a particular site or area. Various types of users can currently view the Project area. The sensitivity of those users to changes within the Project area varies with the type of use, the length of time that the viewer would be within the zone of visual influence (ZVI) for the Project area, and the distance of the viewer to the Project area. The eligible sites under this Project are located in Downtown, Commercial, Mixed-use, and Industrial Zones.

Thresholds of Significance

The following criteria, as established in Appendix G of the CEQA Guidelines, will be utilized to determine if a project could potentially have a significant impact:

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) 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; or

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

Project Impacts

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

As defined, there are no federal, State, or County designated scenic vistas in the vicinity of the Project. Figure MT-2 of the General Plan identifies six vista points along the San Joaquin River Parkway Trail. If developed within close proximity to these vista points, cannabis businesses could have the potential to impact existing views. The nearest eligible commercial cannabis site is approximately 1,220 feet away from an identified vista point located near Palm and Nees Avenues and is currently zoned Office. Under the existing Regulatory Ordinance and proposed Project, the only cannabis related business that has the potential to use this site would be a testing laboratory. Retail, cultivation, manufacturing, and distribution facilities are prohibited on parcels zoned Office.

Testing laboratories associated with implementation of the Project are anticipated to be located in existing buildings; however, a portion of the land zoned Office and located near Palm and Nees Avenue is currently undeveloped. Any new construction would be in full compliance with the City's Building and Zoning Codes and applicable General Plan policies and would not result in development that differs substantially from the aesthetic character of the adjacent and surrounding sites. Furthermore, development of the Project would not block or preclude views to any area containing important or what would be considered visually appealing landforms. Therefore, no identified scenic vistas will be impacted by implementation of this Project. Therefore, the Project will not have a substantial adverse effect on a scenic vista.

The Final PEIR for CalCannabis Cultivation Licensing, completed by the California Department of Food and Agriculture (California Department of Food and Agriculture, 2017), concluded a less-than-significant impact to scenic vistas. The PEIR based its conclusions on the fact that all potential construction activities associated with site development would need to be performed in accordance with all applicable local, State, and federal regulatory systems, including but not limited to those related to scenic resources and visual character/quality. As with any local business, the City would have responsibility for ensuring that site development complies with applicable regulations, including CEQA, through review and issuance of local authorizations, such as permits and licenses, to conduct site development. Similarly, license applicants are required to obtain a Conditional Use Permit (CUP) and corresponding CEQA compliance document from the City Planning and Development Department. The CUP process will analyze and determine the potential for site-specific impacts to scenic vistas. Additionally, the process will include conditions of approval, including permitting requirements where applicable, to ensure that the proposed facilities will have a less-than-significant impacts to scenic vistas.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be *less than significant*.

Impact 4.1-2: Substantially Damage Scenic Resources, Including, but Not Limited to, Trees, Rock Outcroppings, and Historic Buildings within a State Scenic Highway

There are no eligible or officially designated State Scenic Highways within the City of Fresno (California Department of Transportation, 2019). The nearest designated State Scenic Highway is located along SR-180 approximately seven miles east of the city limits as it leads to Kings Canyon National Park. Additionally, there is an eligible State Scenic Highway along SR-168, approximately five miles northeast of the city limits.

The location of eligible sites under this Project are restricted to the Downtown, Commercial, Mixed-use, and Industrial Zones, within existing urbanized areas and surrounded by existing commercial and industrial operations. The Cannabis Innovation Zone is immediately south of Downtown Fresno and consists of Heavy Industrial (HI) and Light Industrial (LI) zoning. This area is bounded by SR-41, Golden State Boulevard, Church Avenue, East Avenue, and Parallel Avenue. This area is primarily developed with industrial-type businesses and contains few vacant parcels of land for new construction.

The Project would result in the permitting of a maximum of eight cannabis businesses inside the Cannabis Innovation Zone and a maximum of eight cannabis businesses would be permitted on industrial zoned property within one-mile of SR-99 between Shaw and Clinton Avenues, or within one mile of SR-99 north of Shaw and south of Clinton Avenues, or within one mile of SR-180 west of SR-99. This construction would be located in existing structures or would result in the construction of new structures. Any new construction would be in full compliance with the City's Building and Zoning Codes and applicable General Plan policies and would not result in development that differs substantially from the aesthetic character of the adjacent and surrounding properties.

The Final PEIR for CalCannabis Cultivation Licensing, completed by the California Department of Food and Agriculture (California Department of Food and Agriculture, 2017), concluded a less-than-significant impact to scenic resources. The PEIR bases its conclusions on the fact that aesthetic impacts of indoor cultivation facilities would be minimal because either the facilities would be existing prior to their use for cannabis cultivation (resulting in little or no noticeable change to the outward appearance of the building during cannabis cultivation from previous uses), or the indoor cultivation facility would be permitted and constructed in accordance with applicable local zoning, design review, and building code requirements.

The General Plan defines historic resources are those buildings, structures, objects or sites that are generally 50 years of age and which have significance due to their association with key events, individuals or ethnic groups, or that possess high artistic values. The City maintains a Local Register of Historic Resources that includes buildings, structures, objects, sites and districts that have sufficient integrity and are significant in Fresno's history.

As noted in Section 4.5, *Cultural Resources*, 10 historic-era archaeological sites in the Project area. The majority are either ineligible or unevaluated for inclusion on NRHP or CHRH lists (see Table 4.5-1). However, two eligible resources, the Fresno-1 Manufactured Gas Plant and the China Alley Historic-era feature are eligible for inclusion on NRHP or CHRH lists.

Additionally, Fresno has four designated historic districts and 12 other districts have been recommended through surveys, community or Specific Plans (see Table 4.5-2). As noted above, all future commercial or retail cannabis businesses proposed to locate within a Specific Plan Area, such as the Tower District Specific Plan, would be required to comply with the applicable Specific Plan regulations and design guidelines related to aesthetic impacts. New construction would have a similar appearance and aesthetic quality as the surrounding existing businesses. Therefore, the Project would not impact historic buildings in the surrounding area.

The Project would not result in any commercial cannabis operations occurring near or within a State designated or eligible State Scenic Highway. Further, the Project does not include the removal of trees determined to be scenic or of scenic value, the destruction of rock outcroppings or the visual degradation of any historic buildings. Finally, the development included in the proposed Project would either exist within existing structures or require new construction that would comply with the City's Building and Zoning Codes and applicable General Plan policies. Therefore, no scenic resources will be affected, and impacts are considered to be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be *less than significant*.

Impact 4.1-3: Substantially Degrade the Existing Visual Character or Quality of Public Views of the Site and Its Surroundings or Conflict with Applicable Zoning and Other Regulations Governing Scenic Quality

The existing visual character in the vicinity of the eligible Project sites varies from site to site, however the predominant character amongst all eligible sites developed, urban land. This consists of a combination of commercial/retail uses, mixed-use, and industrial uses depending on the location of the eligible sites. Eligible sites for future commercial cannabis businesses or cannabis retail businesses are predominantly in highly urbanized areas located along main transportation corridors such as Blackstone Avenue, Herndon Avenue, Shaw Avenue, Shields Avenue, Olive Avenue, Belmont Avenue, and Tulare Street. The properties along these roadways are generally developed with commercial businesses that provide no scenic value. None of these transportation corridors are identified as scenic corridors by the City's General Plan. Eligible sites are also clustered in the City's Downtown, Industrial Park, and around the Fresno Yosemite

National Airport. Development of future commercial cannabis businesses or cannabis retail businesses would have similar aesthetic characteristics

Direct visual impact could occur if commercial or retail cannabis businesses would locate in an area that contains identified scenic resources or value; however, there are no such designated areas of scenic value within proximity of any Project eligible sites. As previously described, the nearest eligible site would be located approximately 1,220 feet away from the nearest General Plan-identified scenic vista. Under the proposed ordinance, this particular site could accommodate either a testing laboratory or a cannabis retailer. Due to this distance and existing building obstructions between the potential site and the scenic vista location, the potential for future buildout of this eligible site is not expected to result in a degradation of visual character for the area.

Any new construction or site improvements associated with a future commercial or retail cannabis businesses would require full compliance with the City's Zoning and Building Codes, and applicable General Plan policies. Additionally, all future commercial or retail cannabis businesses proposed to locate within a Specific Plan Area, such as the Tower District Specific Plan, would be required to comply with the applicable Specific Plan regulations and design guidelines related to aesthetic impacts. Any site preparation, including construction of new roads to accommodate new development, could potentially change the existing character of the land; however, it would be similar in nature to the surrounding existing urban environment that is common amongst the eligible sites.

The proposed and existing ordinance regulates the locations of the eligible sites, and the size, coverage, and appearance of commercial and retail cannabis businesses. Therefore, compliance with the proposed ordinance, the City's Zoning and Building Codes, and applicable plans would prevent the potential for cannabis-related uses to alter or have a substantial adverse visual impact on the visual quality or character of the areas surrounding the eligible sites. Commercial and retail cannabis businesses are not substantially aesthetically different from other commercial and industrial-type operations. Therefore, the Project will not degrade the existing visual character or quality of public views of the site and its surroundings or conflict with applicable zoning and other regulations governing scenic quality.

The Final PEIR for CalCannabis Cultivation Licensing, completed by the California Department of Food and Agriculture (California Department of Food and Agriculture, 2017), concluded a less-than-significant impact to scenic quality. The PEIR bases its conclusions on the fact that all potential construction activities associated with site development would need to be performed in accordance with all applicable local, State, and federal regulatory systems, including but not limited to those related to scenic resources and visual character/quality. Similarly, license applicants are required to obtain a Conditional Use Permit (CUP) and corresponding CEQA compliance document from the City Planning and Development Department. The CUP process will analyze and determine the potential for site-specific impacts to scenic quality. Additionally, this process will include conditions of approval, including permitting requirements where

applicable, to ensure that the proposed facilities will not conflict with applicable zoning or other regulations governing scenic quality.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be *less than significant*.

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

CONSTRUCTION

Lighting

If a future commercial or retail cannabis business were to be proposed on an eligible site, short-term construction related lighting impacts could potentially impact the surrounding environment. Construction of any new project would generally occur from 7:00 a.m. to 10:00 p.m. (Monday through Saturday). For construction work performed between dusk and 10:00 p.m., construction crews would use minimal illumination to perform the work safely. All lighting would be directed downward and shielded to focus illumination on the desired work areas only and prevent light spillage onto adjacent properties. Eligible sites within the City are predominantly occupied by existing buildings. Therefore, most of the future commercial and retail cannabis businesses would be located in existing buildings. As a result, any construction associated with the implementation of the Project would be considered minimal and would not result in a substantial new source of light. Impacts would be considered less than significant.

Glare

Any potential short-term construction activities associated with this Project would occur during daylight hours. A possible increase in truck traffic and the transport of construction materials to the eligible Project sites could temporarily increase glare conditions during construction. Eligible sites within the City are predominantly occupied by existing buildings. Therefore, most of the future commercial and retail cannabis businesses would be located in existing buildings. Therefore, the potential short-term increase in glare would be minimal. Therefore, the impact from glare is anticipated to be less than significant.

OPERATIONAL

Lighting

Implementation of the Project would include the installation of new lighting, including building security lights, parking lot lighting, and interior building lighting. The implementation of the

Project could include the introduction of new lighting in areas that may not have a high level of lighting sources. However, a majority of the eligible sites are located in predominantly urban settings, where both daytime and nighttime lighting already exist. Within the commercial and the industrial zoned eligible sites, the installation of new lighting would be of a similar type and luminosity as the existing uses in the area.

Spillover lighting can cause annoyance, discomfort, or loss in visual performance because of its intensity, direction, or source type and visibility. Viewers in the area of eligible sites could include neighboring business employees and customers, as well as passing motorists. Motorists would observe new light and glare in the area, especially in any eligible areas where no lights currently exist. However, the implementation of the Project will comply with lighting requirements and design standards, including those related to lighting in close proximity to the airport. Impacts to motorists resulting from lighting would be minimal.

The residences located near the Fresno Yosemite National Airport would experience minimal change in nighttime lighting. Existing lighting in this area occurs from the existing office and commercial businesses, the airport, airport parking lot, street lighting, nearby industrial uses, and adjacent residential uses. Commercial cannabis operations in the City that may occur under the proposed ordinance may slightly increase the amount of lighting to the area, however the actual number of new businesses would be limited under the ordinance. Eligible sites within the City are predominantly occupied by existing buildings. Therefore, most of the future commercial and retail cannabis businesses would be located in existing buildings and will not require the construction of new roads or significantly increase any long-term lighting associated with streetlights, vehicular headlights, or exterior lighting from buildings.

The commercial and retail cannabis businesses in the City that may occur under the proposed ordinance would be required to comply with the City's Development Code and operating requirements for Cannabis Retail Business and Commercial Cannabis Businesses under Chapter 9, Article 33 of the FMC, and the goals, objectives, policies, and implementation measures of the General Plan. The nighttime character of the eligible sites and surrounding areas is already predominantly impacted by the lighting from existing land uses. Adherence to Section 15-2015 of the existing Development Code would reduce the operational lighting from any new commercial cannabis operations. Therefore, impacts resulting from any Project introduced lighting would be less than significant.

Glare

Glare is primarily a daytime occurrence caused by the reflection of sunlight or artificial light on highly polished surfaces such as window glass or reflective materials and, to a lesser degree, from broad expanses of light-colored surfaces. The Project could include new sources of glare from windows and glass storefronts, which have the potential to produce glare impacts to travelers on nearby roadways. However, the eligible sites are located within existing urbanized areas which are already predominantly impacted by the glare from existing buildings and sites. Therefore, compliance with the City's Zoning and Building Codes and applicable General Plan policies will

ensure that the eligible sites will be improved in a manner that does not create a new source of substantial glare. Therefore, operational impacts related to glare would be less than significant.

The Final PEIR for CalCannabis Cultivation Licensing, completed by the California Department of Food and Agriculture (California Department of Food and Agriculture, 2017), concluded a less-than-significant impact to light and glare. The PEIR, similar to the Project EIR, bases its conclusions on the fact that the vast majority of commercial cannabis businesses would be located in commercial or industrial settings, which would not have viewer groups (e.g., residences) that would be substantially adversely affected by nighttime lighting. And the issuance of licenses is contingent upon commercial cannabis sites meeting the City's requirements related to zoning and land use compatibility, including requirements for outdoor lighting to be downward facing and/or shielded.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be *less than significant*.

Cumulative Setting Impacts and Mitigation Measures

CUMULATIVE SETTING

The study area for the analysis of cumulative impacts is the City of Fresno and the unincorporated portions of Fresno County located adjacent to the city limits, as well as portions of the City of Clovis and the County of Madera adjacent to the City of Fresno. The applicable cumulative projections include growth projections from the City of Fresno General Plan, Fresno County General Plan, Madera County General Plan, and the City of Clovis General Plan.

The City of Fresno General Plan was last adopted in the year 2014. Anticipated development within the General Plan includes 186,840 dwelling units, 66.4 million square feet (msf) of commercial/office/public facility, 100,000 sf of mixed uses, and 72.8 msf of industrial uses. The General Plan contains approximately 11,714 acres of agricultural land, 12,288 acres of open space, and 12,522 acres of vacant land. Existing agricultural land is primarily located in the southeastern and western portions of the General Plan.

The General Plan contains two major rail lines that generally traverse in a southeast to northwest direction. These railways include the Union Pacific Railroad line that is generally located along SR-99, and the BNSF Railway that diverges from the SR-99 in the southwest and travels through the Downtown to the northwest. There are three airports located within the City of Fresno including the Fresno-Yosemite International Airport located in the eastern portion of the Planning Area, the Fresno-Chandler Downtown Airport located west of Downtown, and Sierra Sky Park Airport that is located on the northern portion of the General Plan.

The County of Fresno General Plan was last adopted in the year 2000. The County General Plan was prepared to accommodate population growth through the year 2020, consistent with the California Department of Finance projection of 1.1 million by 2020. This represents an additional population of approximately 344,000, which includes the year 2020 projections outside the sphere of influences for cities within the East Valley area, which is located east of Interstate 5. Additional development projects are proposed northeast of the City of Fresno Project area including Friant Ranch that represents an additional population of approximately 164,693 through the year 2020.

The County of Madera General Plan was last adopted in the year 1995. The Madera County General Plan identifies population and employment growth projections through the year 2010 and includes 177,071 people and 61,866 employees. Since the adoption of Madera County's General Plan, substantial new development projects have been proposed in the southern portion of Madera County, some of which is proposed within close proximity of the City of Fresno Project area including Gateway, Gunner Ranch, Liberty Groves, North Fork Village, Tesoro Viejo, and River Ranch Estates. These projects include approximately 23,000 units, and supporting uses such as commercial, public facilities, parks, and open space.

The City of Clovis General Plan was last adopted in the year 2014. The Clovis General Plan forecasts the ultimate buildout of the entire Clovis General Plan area that is expected to occur for at least 70 years. The Clovis General Plan forecasts an additional 65,100 residential units, 179,300 population, and 38,250,000 square feet of buildings.

CUMULATIVE IMPACTS

The proposed Project would allow for a limited number of cannabis related businesses to be developed. These businesses are limited to certain urbanized areas of the City and the majority would be proposed in existing buildings. The existing and proposed ordinance regulates the number and locations of these businesses. As new development is constructed in these areas, it will continue to alter the existing landscape character and visual quality of the environment through the addition of new structures, driveways, parking lots, vehicles, non-native landscaping, and people. However, these changes would be similar in visual characteristics to the existing urbanized and developed environment.

CEQA Section 15130(a) states: An EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in Section 15065(a)(3). Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

As noted above, cumulative impacts associated with aesthetic impacts would occur from development within the City of Fresno, portions of Fresno County located adjacent to the Project area as well as portions of the City of Clovis and the County of Madera that can be viewed from, and have views of, the Project area.

Regarding Impact 4.1-1, cumulative impacts are likely to occur to the San Joaquin River bluffs scenic vista due to urbanized development in and around the City of Fresno. The nearest eligible commercial cannabis site is approximately 1,220 feet away from an identified vista point located near Palm and Nees Avenues. However, as noted above, Project specific impacts to these scenic vistas would be less than significant. Therefore, the Project's incremental effect is not considered cumulatively significant, and further cumulative impacts would not be increased.

Regarding Impact 4.1-2, there are no designated State Scenic Highways within Fresno County, therefore cumulative development within the City of Clovis and County of Fresno would not impact State Scenic Highways. In addition, the nearest State Scenic Highway in the County of Madera is SR-41 near Oakhurst, which is located more than 30 miles northeast of the Project area. Therefore, future development in accordance with the City's Zoning and Building Codes applicable General Plan policies, and the regulations outlined in the proposed ordinance would result in no cumulative impact on State Scenic Highways.

Regarding Impact 4.1-3, cumulative development within the city limits and development that would occur within the City of Clovis, the County of Fresno, and the County of Madera, is anticipated to contribute to the conversion of rural and agricultural land to urban uses. This conversion is expected to result in a substantial alteration of the existing visual character of the area. However, cannabis related businesses allowed under the existing and proposed ordinance would be limited to existing Downtown, Commercial, Mixed-use, and Industrial Zones, and Project impacts are considered less than significant. New construction would have a similar appearance and aesthetic quality as the surrounding existing businesses. As such, the Project would not reduce or degrade the visual quality or character of the surrounding area.

Therefore, the Project's incremental effect is not considered cumulatively significant, and further cumulative impacts would not be increased.

Regarding Impact 4.1-4, cumulative development that is located within the city limits and development that would occur within the City of Clovis, the County of Fresno, and the County of Madera, will contribute to the increase in lighting in the Project vicinity. However, cannabis related businesses allowed under the existing and proposed ordinance would be limited to existing Downtown, Commercial, Mixed-use, and Industrial Zones, and Project impacts are considered less than significant. Therefore, the Project's incremental effect is not considered cumulatively significant, and further cumulative impacts would not be increased.

Mitigation Measures

No mitigation measures are required.

Cumulative Level of Significance

Cumulative impacts would be *less than significant*.

4.2 - Agriculture and Forest Resources

4.2.1 - INTRODUCTION

This section addresses potential agriculture and forest impacts that are associated with the Proposed Regulation and Permitting of Commercial Cannabis Activities (Project). The following discussion addresses existing environmental conditions in the affected environment, evaluates the proposed Project's consistency with applicable goals and policies, identifies and analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from proposed Project construction and operation.

A description of the environmental setting (affected environment) for agriculture and forest resources is presented below in Section 4.2.2, *Environmental Setting*, including discussion of Prime Farmland and current Williamson Act contracts. The regulatory setting applicable to agriculture and forest resources is presented in Section 4.2.3, *Regulatory Setting*, while the project impacts and associated mitigation measures are analyzed in Section 4.2.4, *Impacts and Mitigation Measures*.

4.2.2 - ENVIRONMENTAL SETTING

Regional

Central California is one of the world's leading growing regions. The Fresno region is characterized as a mature agricultural area, with a well-defined pattern of farming activities. Much of the land under agricultural operations is devoted to relatively stable crops such as orchards and vineyards. The primary crops within Fresno and Madera Counties include fruits and nuts, livestock and poultry, vegetable crops, and field crops.

Fresno County has a long history of agricultural operations. Fresno County covers approximately 6,000 square miles, including approximately 585 square miles of prime farmland, 225 square miles of farmland of statewide importance, 151 square miles of unique farmland, and 46 square miles of farmland of local importance. The 2018 total gross value of agricultural commodities produced in Fresno County was $7,887,583,790, an increase of 12.23 percent over the 2017 crop value (Fresno County Agricultural Commissioner, 2019). The top five commodities for 2018 were almonds, grapes, pistachios, poultry, and garlic which make up more than $4.1 billion, 53 percent, of the total crop value.

4.2.3 - REGULATORY SETTING

Federal

FARMLAND PROTECTION POLICY ACT (7 U.S.C. SECTION 4201)

The purpose of the Farmland Protection Policy Act (FPPA) is to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of Farmland to non-

agricultural uses. It additionally directs federal programs to be compatible with State and local policies for the protection of Farmlands. Congress passed the Agriculture and Food Act of 1981 (Public Law 97-98) containing the FPPA—Subtitle I of Title XV, Section 1539-1549. The final rules and regulations were published in the Federal Register on June 17, 1994.

The FPPA is intended to minimize the impact federal programs have on the unnecessary and irreversible conversion of Farmland to non-agricultural uses. It ensures that, to the extent possible, federal programs are administered to be compatible with State, local units of government, and private programs and policies to protect Farmland. Federal agencies are required to develop and review their policies and procedures to implement the FPPA every two years. The FPPA does not authorize the federal government to regulate the use of private or non-federal land or, in any way, affect the property rights of owners.

For the purpose of FPPA, Farmland includes Prime Farmland, Unique Farmland, and Land of Statewide or Local Importance. Farmland subject to FPPA requirements does not have to be currently used for cropland. It can be forest land, pastureland, cropland, or other land, but not water or urban built-up land (NRCS, 2019).

State

California Department of Conservation (DOC), Division of Land Resource Protection

The Division of Land Resource Protection (DLRP), within the Department of Conservation (DOC), serves as the State's leader in conserving California's irreplaceable agricultural lands. DLRP provides information, and technical and financial assistance to partners to protect California's agricultural land and promote sustainable growth.

The DOC applies the Natural Resources Conservation Service (NRCS) soil classifications to identify agricultural lands, and these agricultural designations are used in planning for the present and future of California's agricultural land resources. The DOC has a minimum mapping unit of 10 acres, with parcels that are smaller than 10 acres being absorbed into the surrounding classifications.

Farmland Mapping and Monitoring Program

The California Department of Conservation established the Farmland Mapping and Monitoring Program (FMMP) in 1982. The FMMP is a non-regulatory program and provides a consistent and impartial analysis of agricultural land use and land use changes throughout California. The FMMP produces maps and statistical data used for analyzing impacts on California's agricultural resources. Agricultural land is rated according to soil quality and irrigation status. The best quality land is called Prime Farmland with additional categories, including Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance. The maps are updated every two years with the use of aerial photographs, a computer mapping system, public review, and field reconnaissance. The most recent update of the FMMP data is 2016. Figure 4.2-1 shows an

overview of the Project boundary in relation to lands designated Prime Farmland, Unique Farmland, or Farmland of Statewide Importance by the FMMP.

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

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

- **Unique Farmland.** Farmland 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 as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.

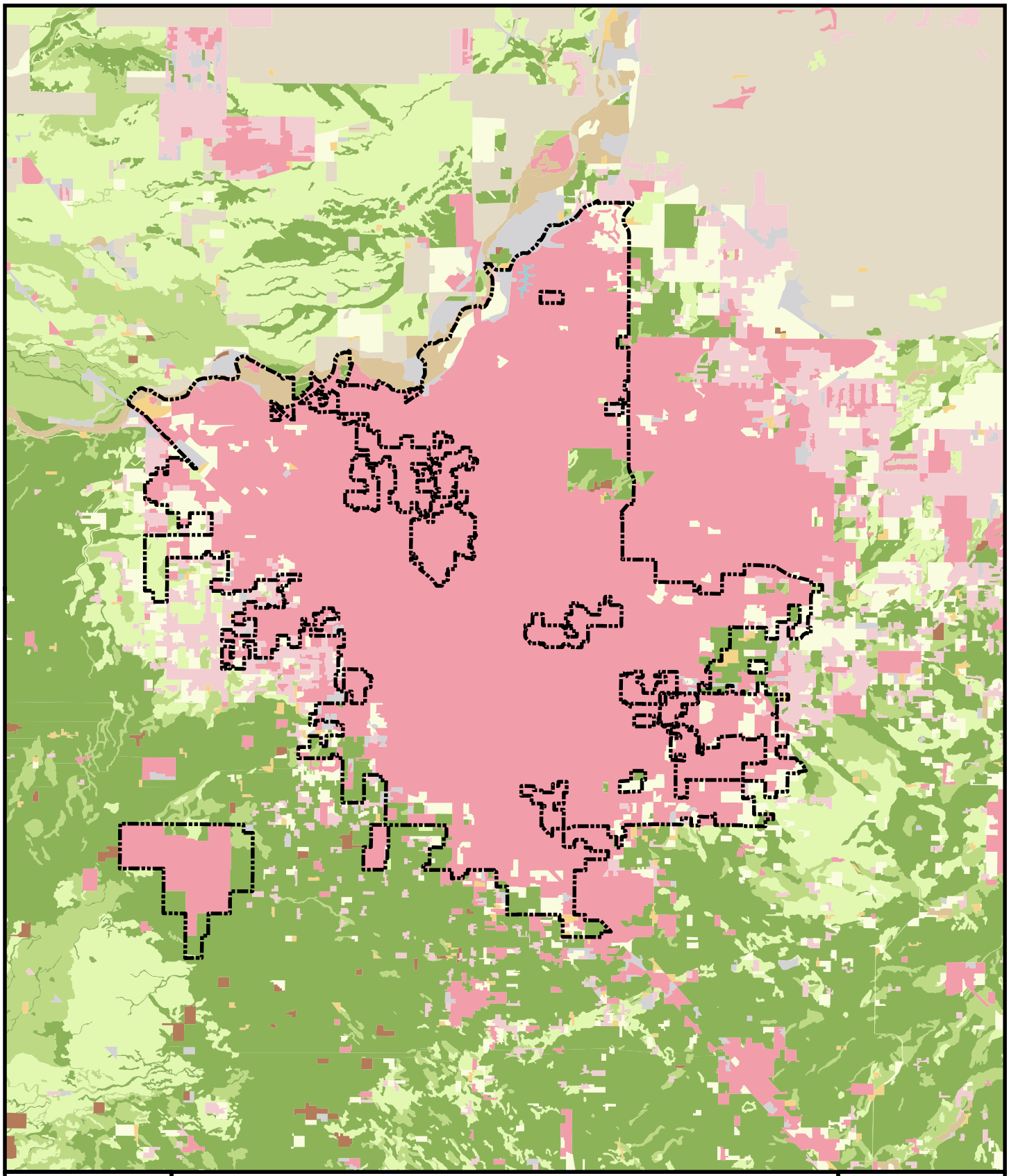
- **Farmland of Local Importance.** Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

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

- **Urban and Built-up Land.** Land 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. This land is used for residential, industrial, commercial, institutional, public administrative purposes, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

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

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



Project Area

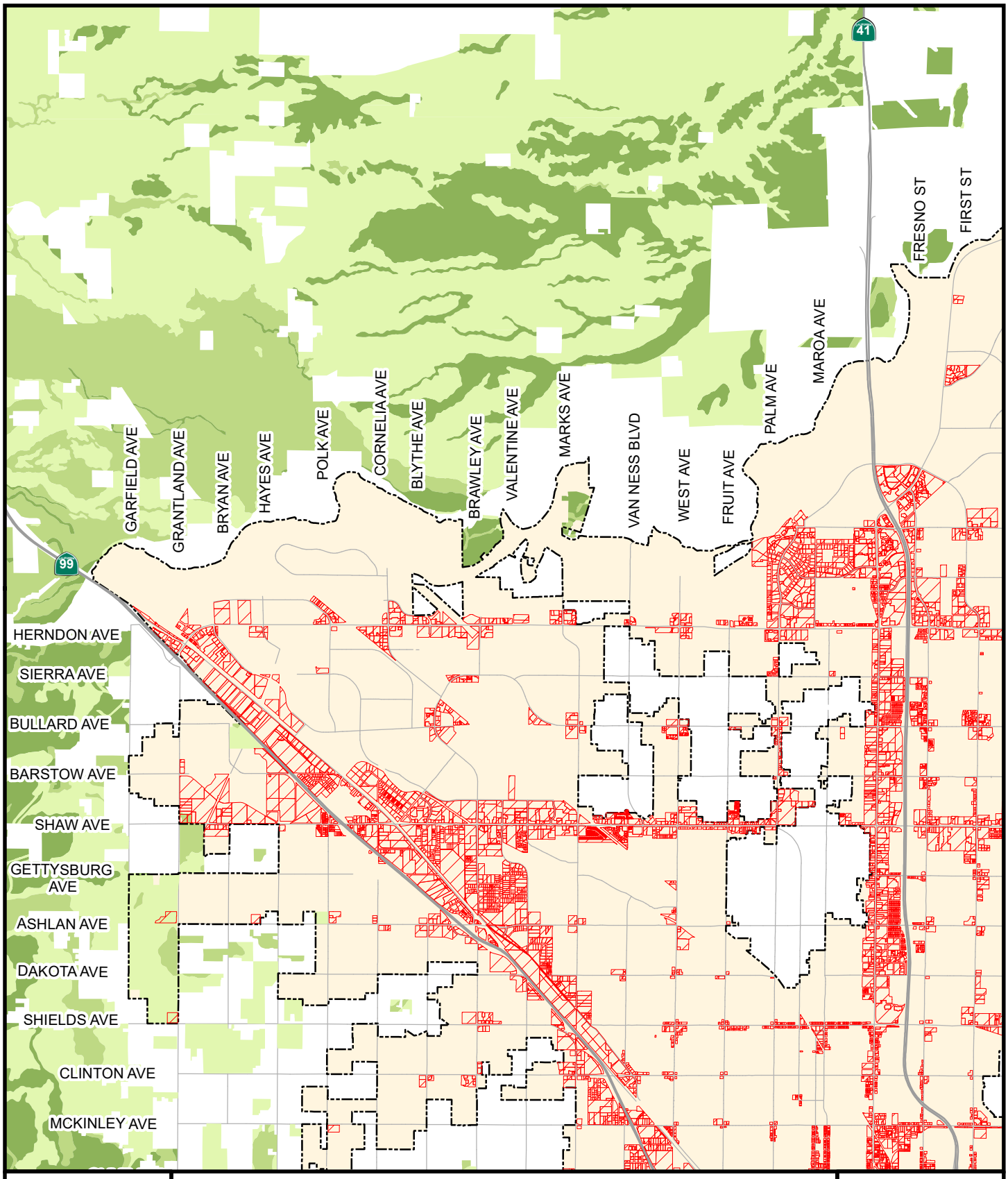
- P - Prime Farmland
- S - Farmland of Statewide Importance
- U - Unique Farmland
- G - Grazing Land
- L - Farmland of Local Importance
- LP - Farmland of Local Potential
- X - Other Land
- CI - Confined Animal Agriculture
- nv - Nonagricultural or Natural Vegetation
- V - Vacant or Disturbed Land
- R - Rural Residential Land
- sAC - Semi-agricultural and Rural Commercial Land
- D - Urban and Built-Up Land
- W - Water Area
- I - Irrigated Farmland
- N - Nonirrigated Farmland
- Z - Out of Survey Area
- City Limits

N

0 Miles 3

QK Sources: ESRI

Figure 4.2-1



FMMP - Eligible Sites

Eligible Sites | City Limits

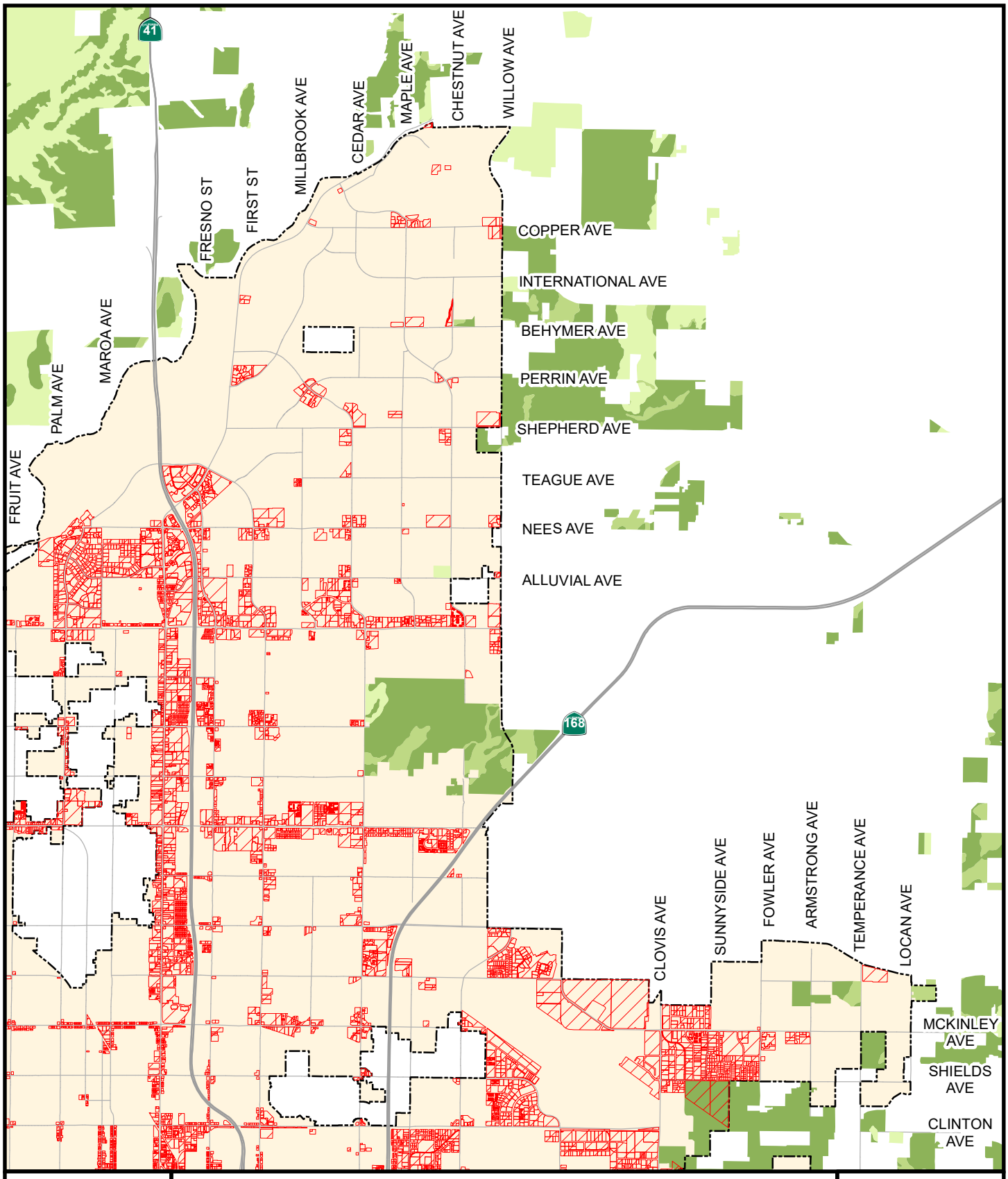
P - Prime Farmland | S - Farmland of Statewide Importance | U - Unique Farmland

N

0 1 Miles

QK Sources: ESRI

Figure 4.2-2.1



FMMP - Eligible Sites

Eligible Sites | City Limits

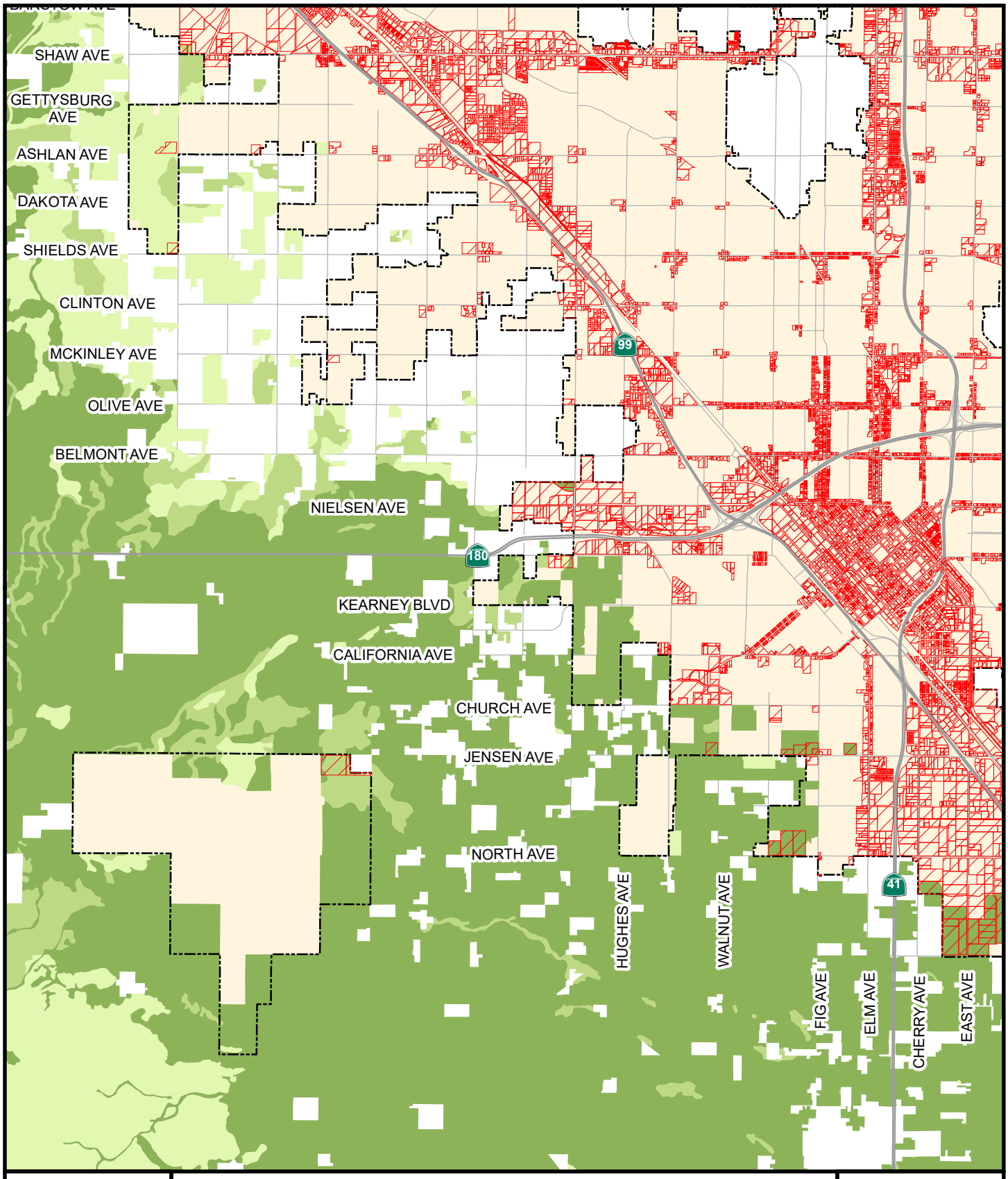
P - Prime Farmland | S - Farmland of Statewide Importance | U - Unique Farmland

N

0 1 Miles

QK Sources: ESRI

Figure 4.2-2.2



FMMP - Eligible Sites

Eligible Sites | City Limits

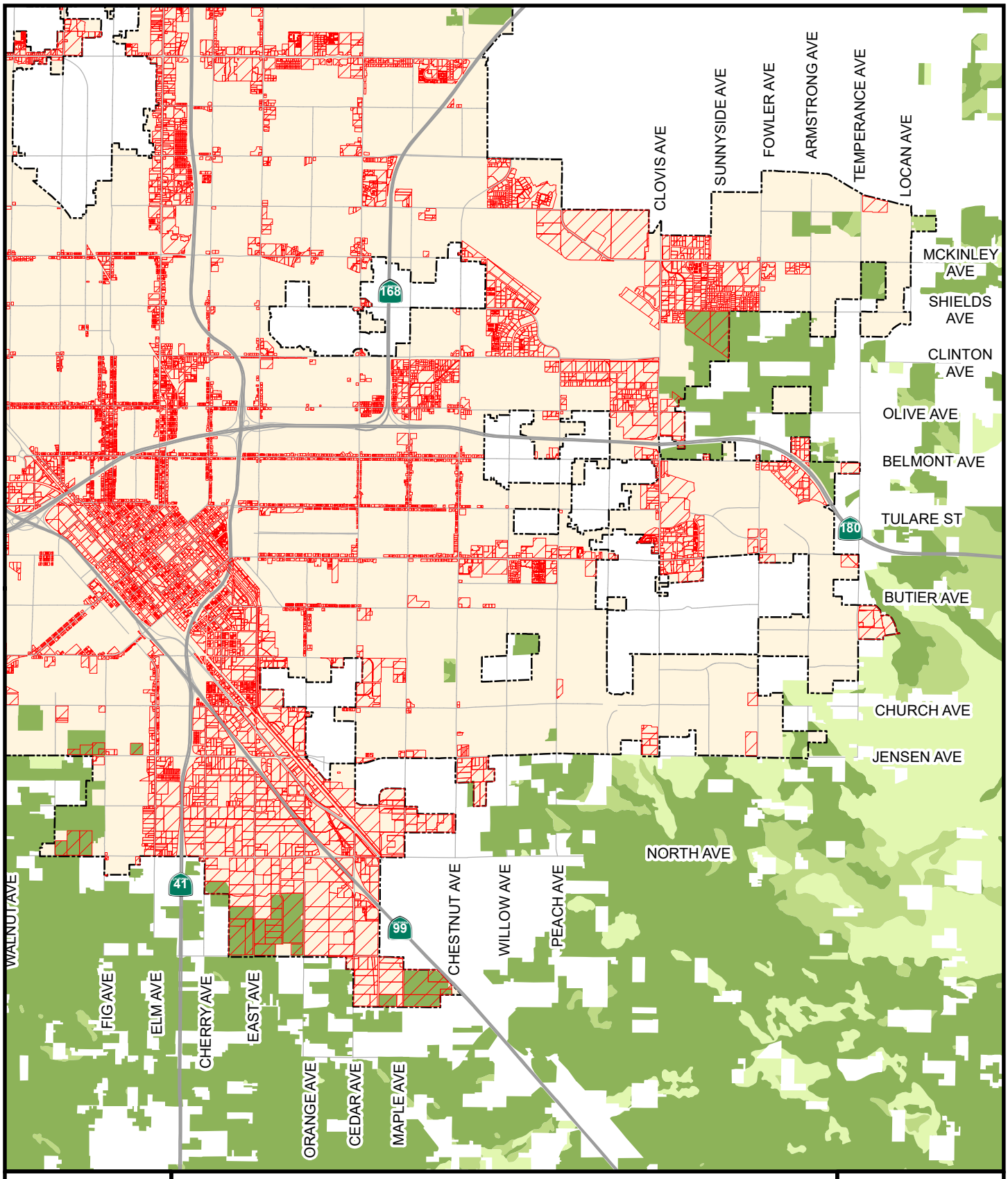
P - Prime Farmland | S - Farmland of Statewide Importance | U - Unique Farmland

N

0 1 Miles

QK Sources: ESRI

Figure 4.2-2.3



FMMP - Eligible Sites

Eligible Sites | City Limits

P - Prime Farmland | S - Farmland of Statewide Importance | U - Unique Farmland

N

0 1 Miles

QK Sources: ESRI

Figure 4.2-2.4

CALIFORNIA LAND CONSERVATION ACT (WILLIAMSON ACT)

The California Land Conservation Act of 1965 (Williamson Act), commonly referred to as the Williamson Act, is found in California Code Section 51200-51297.4. The Act enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space uses. 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. These contracts are for 10 years and automatically renew the following year and roll into the next year unless the owner files a notice of non-renewal.

The Williamson Act enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space uses in return for reduced property tax assessments. Private land within locally designated agricultural preserve areas is eligible for enrollment under Williamson Act contracts. The Williamson Act is administered by the DOC, in conjunction with local governments, which administer the individual contract arrangements with landowners. The minimum preserve size is 100 acres, and minimum standard contract size for Fresno County is 20 acres on Prime Farmland and 40 acres on non-prime within a preserve. The Williamson Act has a minimum contract size of 10 acres. The landowner commits the parcel to a 10-year period wherein no conversion out of agricultural use is permitted. Each year the contract automatically renews unless a notice of non-renewal or cancellation is filed. In return, the land is taxed at a rate based on the actual use of the land for agricultural purposes, as opposed to its unrestricted market value. 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. An application for immediate cancellation can also be requested by the landowner, provided that the proposed immediate cancellation application is consistent with the cancellation criteria stated in the California Land Conservation Act and those adopted by the affected county or city. Non-renewal or immediate cancellation does not change the zoning of the property Upon approval, the landowner must pay a fee equal to 12.5 percent of the unrestricted, current fair market valuation of the property.

FARMLAND SECURITY ZONE ACT

The Farmland Security Zone Act is similar to the Williamson Act and was passed by the California State Legislature in 1999 to ensure that long-term Farmland preservation is part of public policy. Farmland Security Zone Act contracts are sometimes referred to as “Super Williamson Act Contracts.” Under the provisions of this act, a landowner already under a Williamson Act contract can apply for Farmland Security Zone status by entering into a contract with the county. Farmland Security Zone classification automatically renews each year for an additional 20 years. In return for a further 35 percent reduction in the taxable value of land and growing improvements (in addition to Williamson Act tax benefits), the owner of the property promises not to develop the property into non-agricultural uses. Farmland Security Zone Act contracts may be canceled, but only upon a finding that cancellation would both serve the purposes of the Williamson Act and be in the public interest (California Government Code Section 51297).

CALIFORNIA TIMBERLAND PRODUCTIVITY ACT

The California Timberland Productivity Act of 1982 (Government Code Section 51100, et seq) recognizes that forest resources and timberlands of this State, together with the forest products industry, contribute substantially to the health and stability of the State's economy and environment by providing high quality timber, employment opportunities, regional economic vitality, resource protection, and aesthetic enjoyment. Accordingly, the State intends to maintain the limited supply of timberland to ensure its current and continued availability for the growing and harvesting of timber and compatible uses; discourage premature or unnecessary conversion of timberland to urban and other uses; discourage expansion of urban services into timberland; encourage investment in timberlands based on reasonable expectation of harvest; and ensure that forest practice rules adopted by the State Board of Forestry and Fire Protection shall be followed.

Local

CITY OF FRESNO GENERAL PLAN

The Resource Conservation and Resilience section of the General Plan, pertains to air resources, including air quality and greenhouse gas emissions; water resources, including groundwater and waterways; energy resources; and land resources, including farmland and mineral resources.

The City of Fresno Land Use and Circulation Map does not include any land use designations for agricultural purposes. However, there are instances where land designated by the Farmland Mitigation and Monitoring Program is present within the Project area. If agricultural land is to be developed for non-agricultural uses, such development should occur as a gradual outward extension from present non-agricultural areas to minimize fragmentation and provide for the efficient provision of urban services.

The objectives and policies in the Fresno General Plan pertaining to agriculture and forest resources and applicable to the Project are provided below. Other policies, goals, and implementation measures that are more general in nature and not specific to the proposed Project are not included below.

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

Policy RC-9-a. Work to establish a cooperative research and planning program with the Counties of Fresno and Madera, City of Clovis, and other public agencies to conserve agricultural land resources.

Policy RC-9-c - Farmland Preservation Program. In coordination with regional partners or independently, establish a Farmland Preservation Program. When Prime Farmland, Unique Farmland, or Farmland of Statewide Importance is converted to urban uses outside city limits, this program would require that the developer of such a project mitigate the loss of such

farmland consistent with the requirements of CEQA. The Farmland Preservation Program shall provide several mitigation options that may include, but not limited to the following: Restrictive Covenants or Deeds, In lieu Fees, Mitigation Banks, Free Title Acquisition, Conservation Easements, Land Use Regulations, or any other mitigation method that is in compliance with the requirements of CEQA. The Farmland Preservation Program may be modeled after some of all of the programs described by the California Council of Land Trusts.

4.2.4 - IMPACTS AND MITIGATION MEASURES

Methodology

The analysis in this section was conducted through review of: (1) the most current California DOC Division of Land Resource Protection's Important Farmland Map and Farmland Conversion Tables; (2) NRCS soils information; and (3) Fresno County's Williamson Act data.

Economic impacts are beyond the scope of environmental analysis under California Environmental Quality Act (CEQA), except to the extent that they may lead to physical changes to the environment. This EIR does not consider potential economic impacts of the Project on agriculture and forest resources because there are no economic impacts that would result in physical impacts. Section 15131(a) of the CEQA Guidelines states:

> *Economic or social effects of a project shall not be treated as significant effects on the environment. An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic or social changes. The intermediate economic or social changes need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of the analysis shall be on the physical changes.*

Thresholds of Significance

Appendix G of the California Environmental Quality Act (CEQA) Guidelines as amended contain analysis guidelines related to the assessment of agricultural and forestry resources impacts. A project would result in a significant impact 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 Public Resources Code Section 12220(g)), or timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Productions (as defined in Government Code Section 51104(g));

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

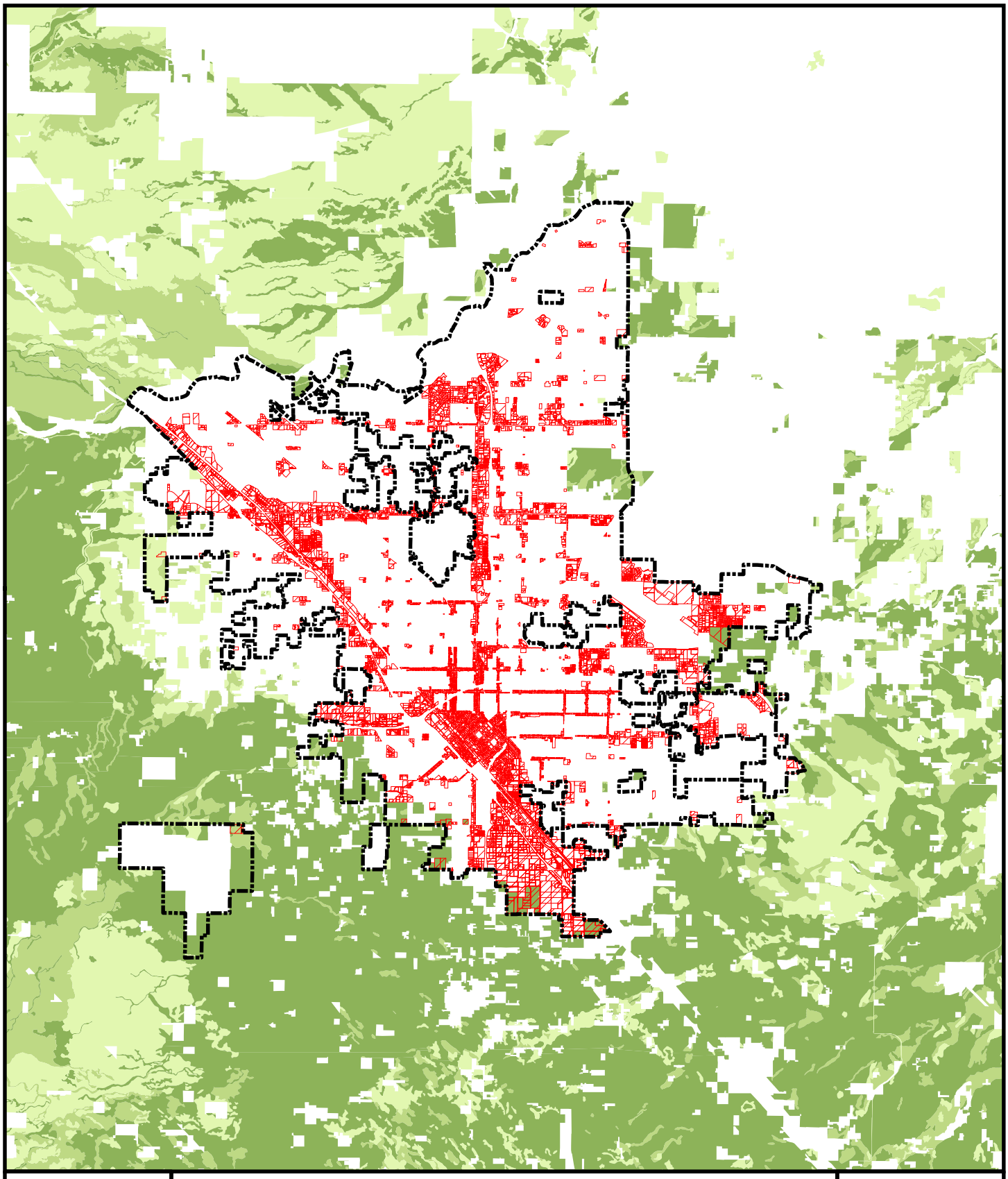
e) Involve other changes in the existing environment which, because of their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.

Project Impacts

Impact 4.2-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as Shown on the Maps Prepared Pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to Non-Agricultural Use

CEQA uses the California Department of Conservation (DOC) FMMP categories of Prime Farmland, Farmland of Statewide Importance, and Unique Farmland to define agricultural land for the purposes of assessing environmental impacts (PRC Section 21060.1(a)). The existing and proposed ordinance requires all cannabis related businesses to be located on commercial, mixed-use, or industrial zoned land. Figures 4.2-2 through 4.2-4 shows the location of eligible sites in relation to lands designated Prime Farmland, Unique Farmland, or Farmland of Statewide Importance by the FMMP. Currently, a total of 63 project eligible sites are located in areas designated as Prime Farmland or Farmland of Statewide Importance, according to most recent data from the DOC. This represents a total of 809-acres of the 15,186-acres of eligible sites. The remainder of the eligible sites are currently zoned for commercial, mixed-use, or industrial. Because the FMMP is not updated since 2016, properties that are zoned for non-agricultural uses may still be identified as designated farmland in the FMMP database. Although they are designated as such, those sites may have gone through an environmental review when the change in zone district or an annexation into the City was completed. If so, there may have been a requirement to compensate for the loss of agricultural land imposed at that time.

However, because these lands are currently designated farmland, mitigation will be required to ensure that impacts associated with the loss of farmland does not occur. With incorporation of Mitigation Measure MM 4.2-1 that requires replacement of farmland at a ratio of 1:1 acre if no previous mitigation was required, impacts associated with the conversion of designated farmland will be less than significant.



FMMP - Eligible Sites

Eligible Sites | City Limits

P - Prime Farmland | S - Farmland of Statewide Importance | U - Unique Farmland

N

0 Miles 3

QK Sources: ESRI

Figure 4.2-2

e: 10/17/201

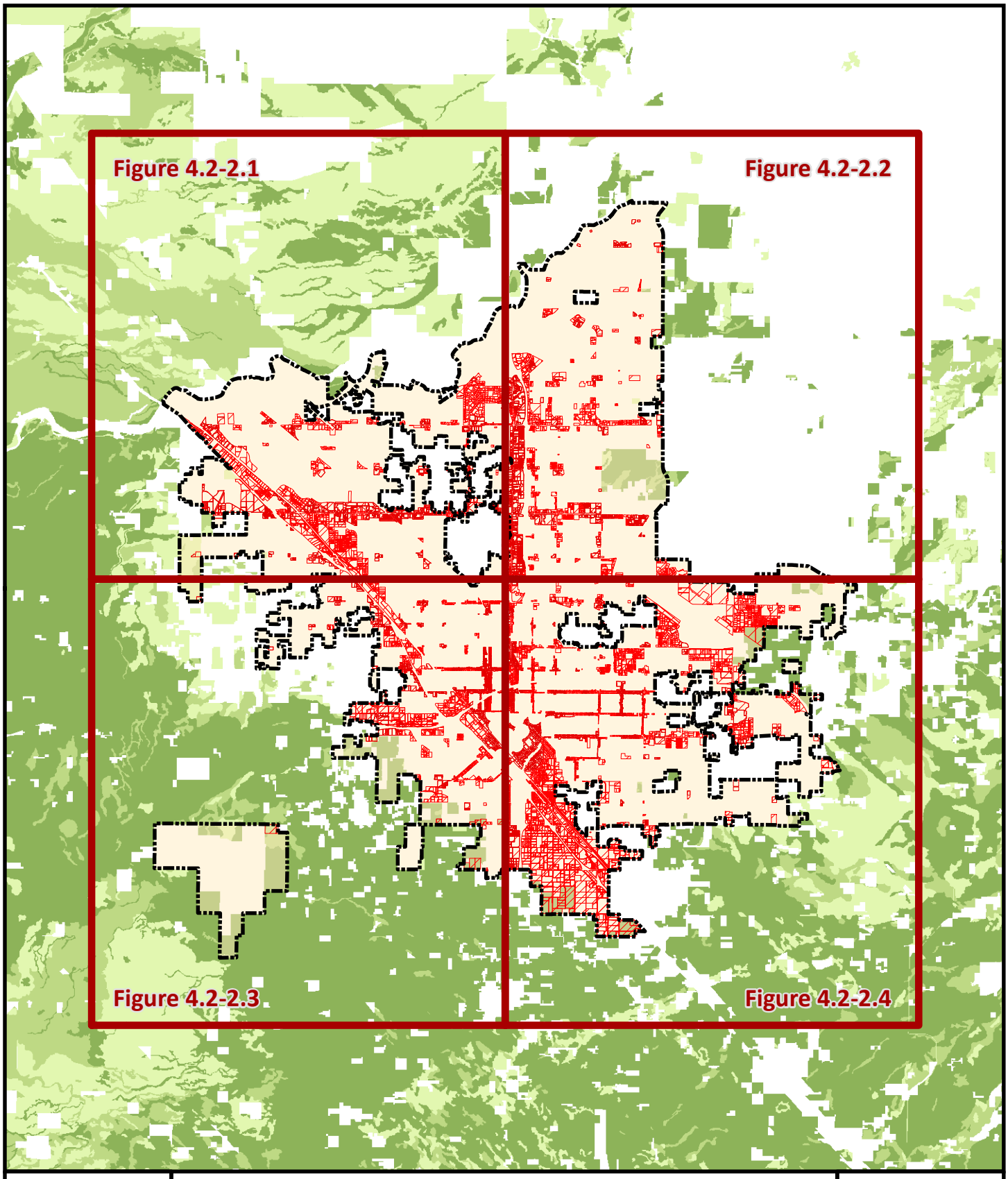


Figure 4.2-2

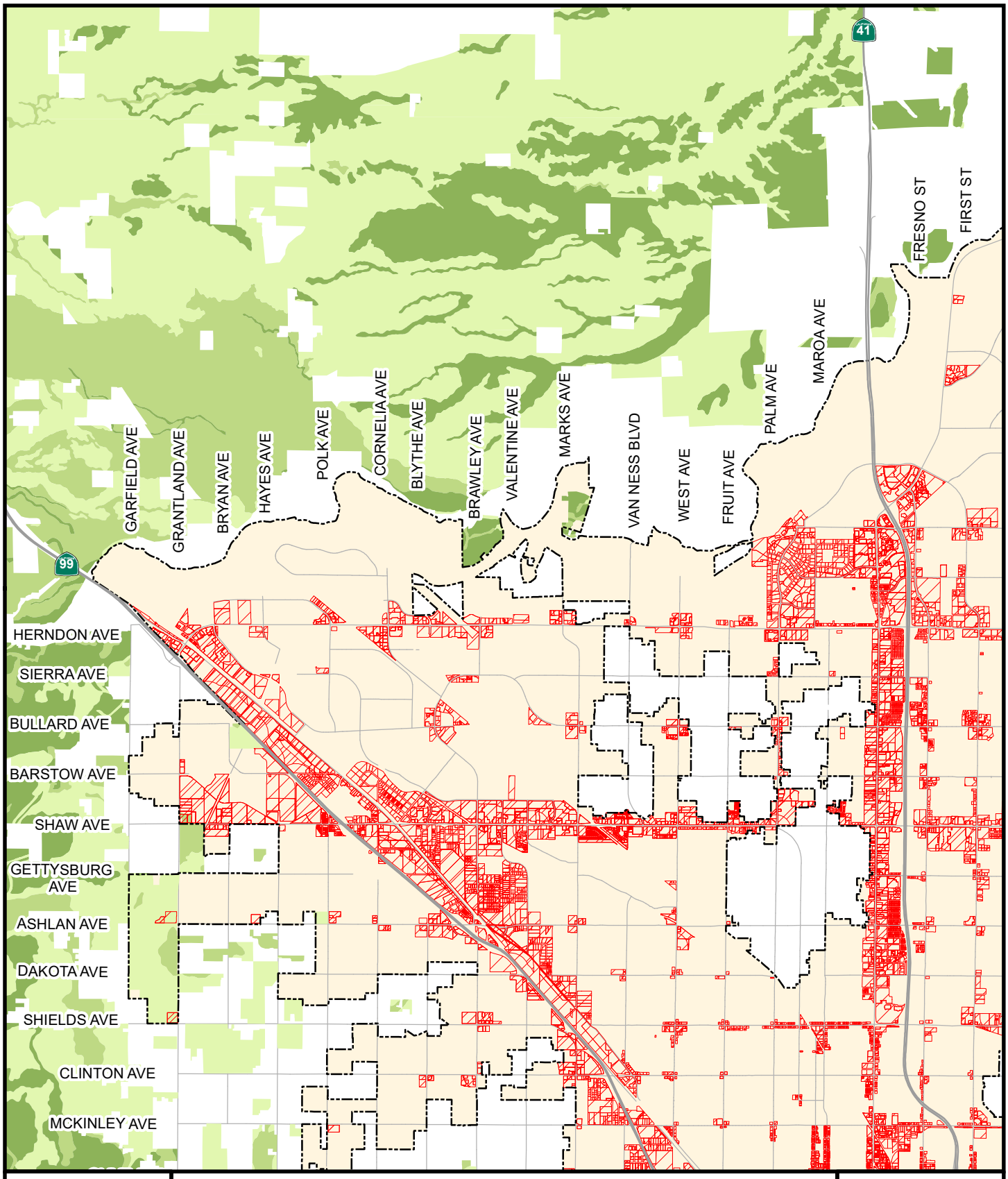
FMMP - Eligible Sites

Eligible Sites
City Limits
P - Prime Farmland
S - Farmland of Statewide Importance
U - Unique Farmland

N

0 3
Miles

QK Sources: ESRI



FMMP - Eligible Sites

Eligible Sites | City Limits

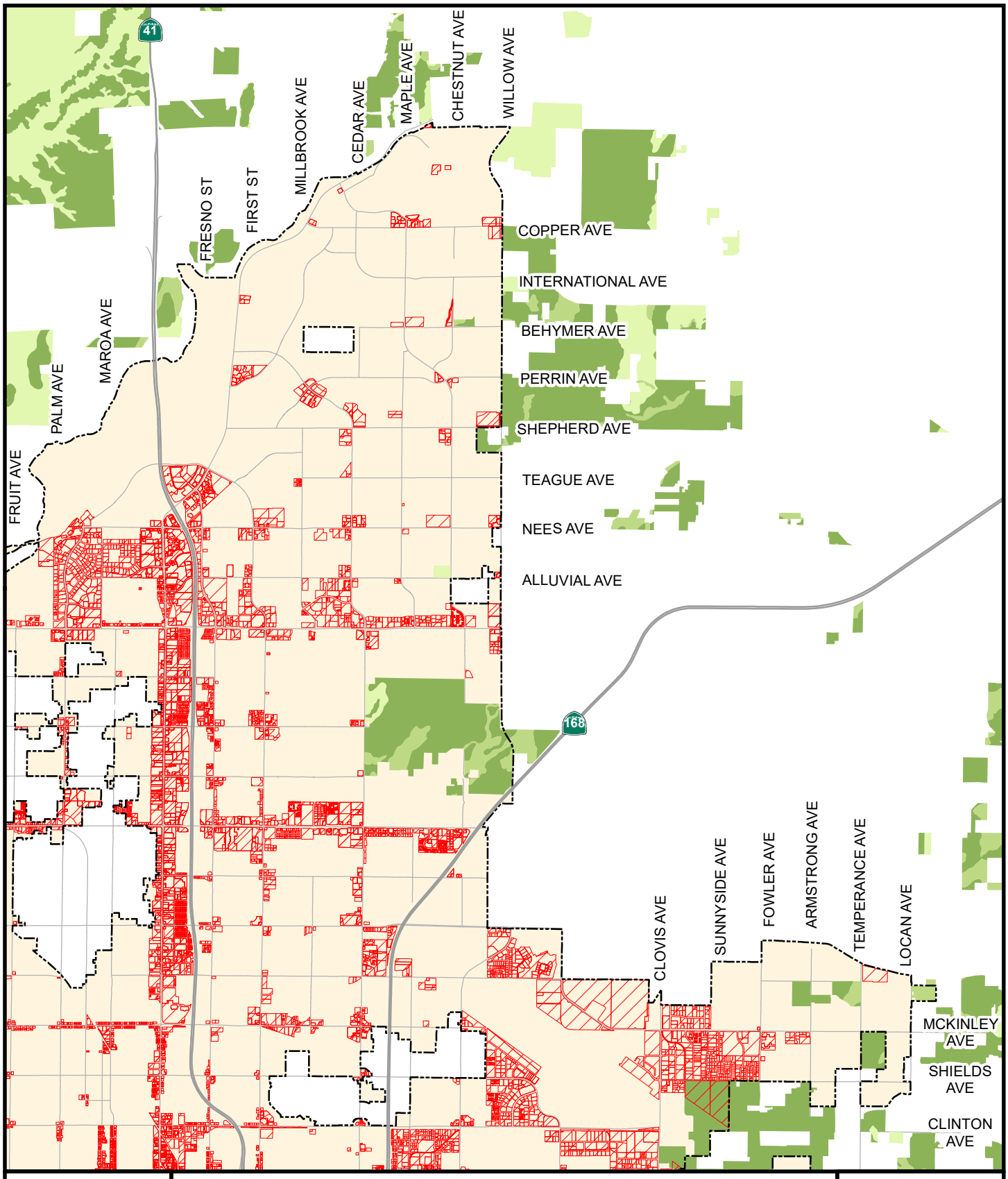
P - Prime Farmland | S - Farmland of Statewide Importance | U - Unique Farmland

N

0 1 Miles

QK Sources: ESRI

Figure 4.2-2.1



FMMP - Eligible Sites

Eligible Sites | City Limits

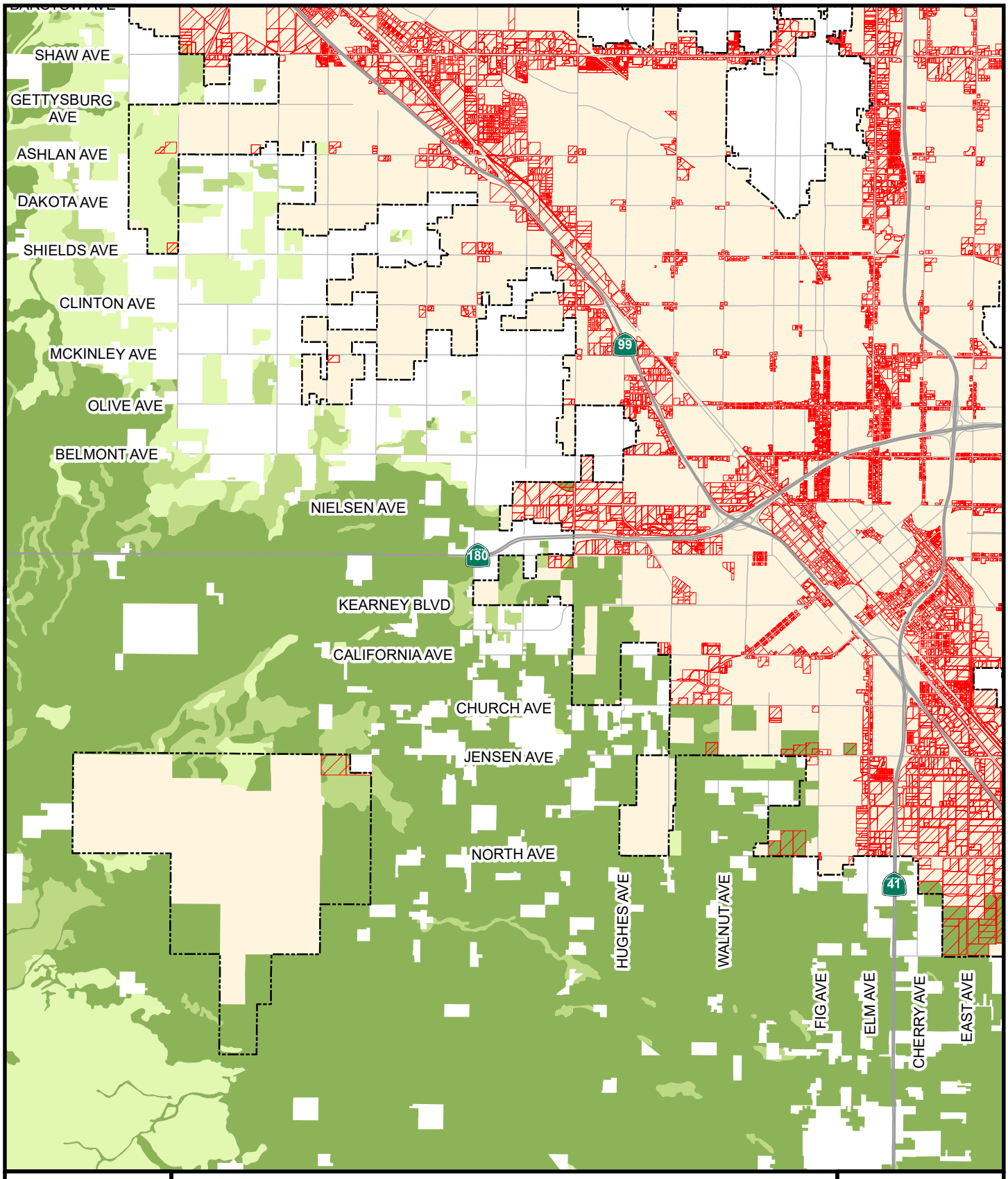
P - Prime Farmland | S - Farmland of Statewide Importance | U - Unique Farmland

N

0 1 Miles

QK Sources: ESRI

Figure 4.2-2.2



FMMP - Eligible Sites

Eligible Sites | City Limits

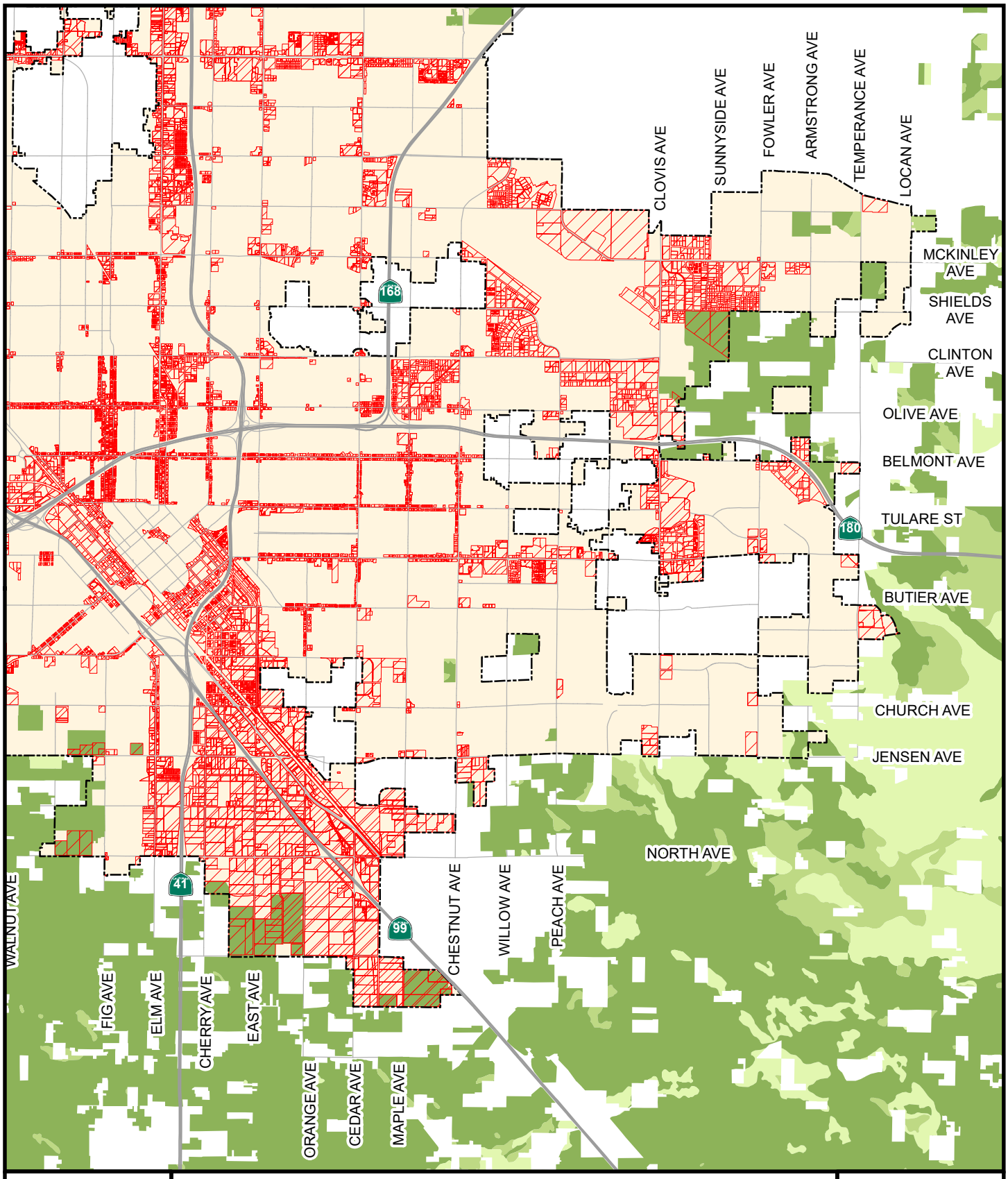
P - Prime Farmland | S - Farmland of Statewide Importance | U - Unique Farmland

N

0 1 Miles

QK Sources: ESRI

Figure 4.2-2.3



FMMP - Eligible Sites

Eligible Sites | City Limits

P - Prime Farmland | S - Farmland of Statewide Importance | U - Unique Farmland

N

0 1 Miles

QK Sources: ESRI

Figure 4.2-2.4

Mitigation Measures

MM 4.2-1: Prior to construction of any approved site plan, if the site has already been subject to mitigation to compensate for the loss of agricultural land, evidence of compliance shall be submitted to the City of Fresno. Once verified, no further action is necessary.

For all other properties, the project applicant shall provide written evidence of completion of one or more of the following measures to mitigate the loss of Prime Farmland, Farmland of Statewide Importance, and/or Unique Farmland, at a ratio of 1:1 for net acreage before conservation, based on the most current mapping data from the Department of Conservation. New acreage is to be calculated by excluding existing roads and areas already developed with structures. A plot plan shall be submitted substantiating the net acreage calculation along with written evidence of compliance.

1. Funding and purchase of agricultural conservation easements (will be managed and maintained by an appropriate entity);

2. Purchase of credits from an established agricultural farmland mitigation bank;

3. Participation in any agricultural land mitigation program adopted by the City of Fresno that provides equal or more effective mitigation than the measures listed above.

Mitigation lands shall meet the definition of Prime Farmland, Farmland of Statewide Importance, and/or Unique Farmland, and be of similar agricultural quality or higher, as informed by definitions established by the California Department of Conservation Completion of the selected measure or, with the City of Fresno Planning and Development Department approval, a combination of measures can occur on qualifying land within the San Joaquin Valley (San Joaquin, Stanislaus, Merced, Fresno, Madera, Kings, Tulare, or Kern County) or outside the San Joaquin Valley with written evidence that the same or equivalent crops can be produced on the mitigation land.

Any application for a conditional use permit shall include the above evidence and mitigation details and shall provide a plot plan substantiating the net acreage calculation along with written evidence of compliance.

Level of Significance After Mitigation

Impacts would be *less than significant with mitigation*.

Impact 4.2-2: Conflict with Existing Agricultural Zoning or Williamson Act Contracts

Williamson Act Land Use Contracts are only allowed on parcels of land zoned for agricultural use and located within an Agricultural Preserve. The existing and proposed ordinance requires all cannabis related businesses to be located in commercial, mixed-use or industrial zone districts.

These areas cannot be subject to Williamson Act Land Use Contracts. Therefore, there would be no impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance

There would be *no impact.*

Impact 4.2-3: Conflict with Existing Zoning for, or Cause Rezoning of, Forest Land (as Defined in Public Resources Code Section 12220(g)), or Timberland (as Defined by Public Resources Code Section 4526), or Timberland Zoned Timberland Productions (as Defined in Government Code Section 51104(g))

As discussed in Impacts 4.2-1, and 4.2-2 above, all of the Project eligible sites are located within existing commercial, mixed-use and industrial zones. The Project area does not contain any lands designated for forest land or timberland zoned for timberland production. The Project will not include any changes to existing land-use designations or zoning districts and will not involve other changes in the existing environment that could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use.

Mitigation Measures

No mitigation measures are required.

Level of Significance

There would be *no impact.*

Impact 4.2-4: Result in the Loss of Forest Land or Conversion of Forest Land to Non-Forest Use

There are no forest resources or zoning for forest lands located in the Project area, within the City of Fresno. Therefore, there would be no impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance

There would be *no impact.*

Impact 4.2-5: Involve Other Changes in the Existing Environment which, Because of Their Location or Nature, Could Result in Conversion of Farmland to Non-Agricultural Use or Conversion of Forest Land to Non-Forest Use

As discussed in Impact 4.2-1, above, the proposed Project prohibits outdoor cultivation and indoor cultivation is restricted to industrially zoned parcels. All cannabis related uses are also restricted to commercial, mixed-use, and industrial zones. There are existing parcels that are zoned for industrial use that are currently being farmed and designated farmland. As noted in Impact 4.2-1, these parcels would be verified at the time of conditional use permit application as to their status within the FMMP. If they are found to remain Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, MM 4.2-1 will require these lands to be mitigated at a ratio of 1:1 acre.

As discussed in Impact 4.2-3, above, there are no forest resources or zoning for forest lands located on the Project site, or nearby within the City of Fresno. Therefore, there would be no impact.

Mitigation Measures

Implement Mitigation Measure MM 4.2-1.

Level of Significance After Mitigation

Impacts would be *less than significant with mitigation.*

Cumulative Setting Impacts and Mitigation Measures

CUMULATIVE SETTING

The study area for the analysis of cumulative impacts is the City of Fresno Project area and the portions of Fresno County located outside of the Project area as well as portions of the City of Clovis and the County of Madera that have cumulative impacts in the Project area. The applicable cumulative projections include growth projections from the City of Fresno General Plan, Fresno County General Plan, Madera County General Plan, and the City of Clovis General Plan.

The City of Fresno General Plan was last adopted in the year 2014. Development within the Project area includes 186,840 dwelling units, 66.4 million square feet (msf) of commercial/office/public facility, 100,000 sf of mixed uses, and 72.8 msf of industrial uses. The Project area contains approximately 11,714 acres of agricultural land, 12,288 acres of open space, and 12,522 acres of vacant land. Existing agricultural land is primarily located in the southeastern and western portions of the Project area.

The Project area contains two major rail lines that generally traverse in a southeast to northwest direction. These railways include the Union Pacific Railroad line that is generally located along

SR-99, and the BNSF Railway that diverges from the SR-99 in the southwest and travels through the Downtown to the northwest. There are three airports located within the City of Fresno including the Fresno-Yosemite International Airport located in the eastern portion of the Planning Area, the Fresno-Chandler Downtown Airport located west of Downtown, and Sierra Sky Park Airport that is located on the northern portion of the Planning Area.

The County of Fresno General Plan was last adopted in the year 2000. The General Plan was prepared to accommodate population growth through the year 2020, consistent with the California Department of Finance projection of 1.1 million by 2020. This represents an additional population of approximately 344,000, which includes the year 2020 projections outside the sphere of influences for cities within the East Valley area, which is located east of Interstate 5. Additional development projects are proposed northeast of the City of Fresno Project area including Friant Ranch that represents an additional population of approximately 164,693 through the year 2020.

The County of Madera General Plan was last adopted in the year 1995. The General Plan identifies population and employment growth projections through the year 2010 and includes 177,071 people and 61,866 employees. Since the adoption of the County's General Plan, substantial new development projects have been proposed in the southern portion of the County, some of which is proposed within close proximity of the City of Fresno Project area including Gateway, Gunner Ranch, Liberty Groves, North Fork Village, Tesoro Viejo, and River Ranch Estates. These projects include approximately 23,000 units, and supporting uses such as commercial, public facilities, parks, and open space.

The City of Clovis General Plan was last adopted in the year 2014. The General Plan forecasts the ultimate buildout of the entire General Plan area that is expected to occur for at least 70 years. The General Plan forecasts an additional 65,100 residential units, 179,300 population, and 38,250,000 square feet of buildings.

CUMULATIVE IMPACTS

A small percentage of the Project eligible sites are vacant infill lots that can support new development, all of which are located in existing commercial and industrial zone districts and in urbanized areas. However, the majority of the Project eligible sites are fully serviced industrial, mixed-use, and commercial lots that have been improved with existing uses and buildings. Implementation of the Project could convert a small number of parcels that are currently being farmed. These impacts are considered less than significant with implementation of Mitigation Measure MM 4.2-1.

CEQA Section 15130(a) states: An EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in Section 15065(a)(3). Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

Future development within the Project area, and outside of the Planning Area such as the County of Fresno, City of Clovis, and County of Madera are anticipated to convert agricultural uses to non-agricultural uses. These future conversions would result in a significant cumulative impact. However, as concluded in this EIR section, implementation of the proposed Project will not contribute to substantial conversion of agricultural uses to non-agricultural uses. Therefore, the Project's incremental effect to impacts on agricultural resources is not considered cumulatively significant.

Mitigation Measures

Implement Mitigation Measure MM 4.2-1.

Cumulative Level of Significance After Mitigation

Cumulative impacts *would be less than significant with mitigation.*

4.3 - Air Quality

4.3.1 - INTRODUCTION

This section describes the affected environmental and regulatory setting for air quality emissions in the City of Fresno. It also describes the impacts on air quality emissions that would result from implementation of the Proposed Regulation and Permitting of Commercial Cannabis Activities (Project), and mitigation measures to reduce identified impacts where possible. Information in this section is based on methodologies and assumptions recommended by the San Joaquin Valley Air Pollution Control District (SJVAPCD), the San Joaquin Valley Clean Air Plan, the Fresno County General Plan Land Use Element, and information from recent environmental documents prepared for the City.

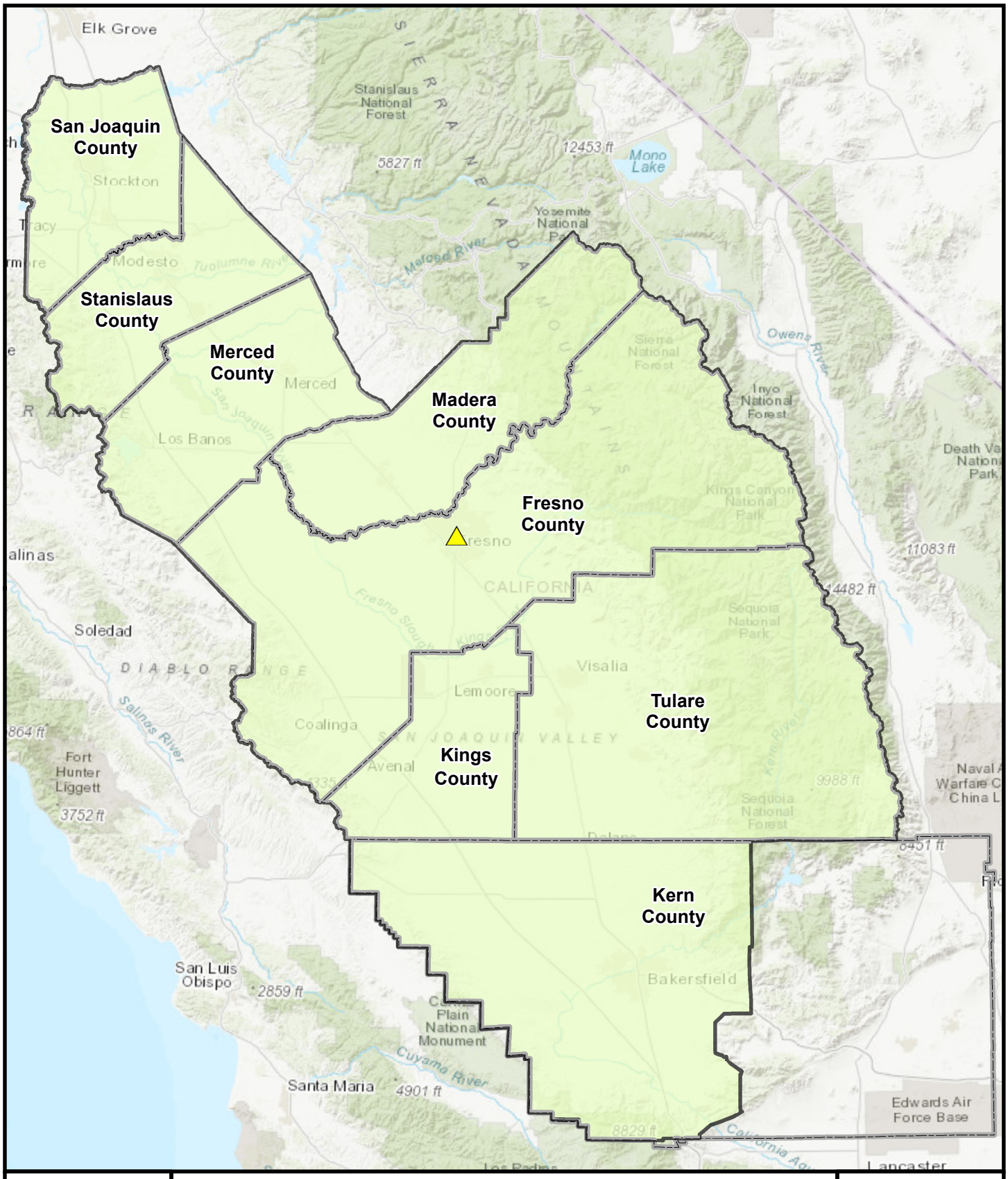
Information in this section is based on Chapter 3, *Project Description*, and the following emissions estimation tools: California Emissions Estimator Model (CalEEMod) version 2016.3.2 (California Air Pollution Control Officers (CAPCOA) 2017) as well as the California Environmental Quality Act (CEQA) Guidelines, SJVAPCD Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI) (SJVAPCD, 2015), and City of Fresno's Municipal Code Chapter 15: Citywide Development Code, Part 5: Administration and Permits, Article 50: Common Procedures, which includes applicability of CEQA.

4.3.2 - ENVIRONMENTAL SETTING

The City of Fresno is located in the County of Fresno in the San Joaquin Valley Air Basin (SJVAB).. The SJVAB 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 SJVAB 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.

Topography and Meteorology

The City of Fresno is located in the San Joaquin Valley Air Basin (SJVAB), which encompasses the bulk of the San Joaquin Valley stretching from Kern County in the south to San Joaquin County in the north. The SJVAB is bounded to the east by the Sierra Nevada Mountain Range, to the west by the Coastal Mountain Range and to the south by the Tehachapi Mountains. The Project area is located in the central portion of the Valley. Figure 4.3-1 illustrates the location of Fresno County within the SJVAB.



San Joaquin Valley Air Basin

△ Project Location | San Joaquin Valley Air Basin | County Boundary

N

0 Miles 30

Figure 4.3-1

The SJVAB has an inland Mediterranean climate with warm, dry summers, relatively cool nights, and cooler winters with limited rainfall. Winters are mild with light rains and frequent heavy fog from December to January. The average temperature in the SJVAB is 57.9 degrees Fahrenheit (°F) (NOAA, 2019). The average maximum daily temperature in July is approximately 91°F and the average minimum daily temperature in January is 36°F (NOAA, 2019). Rainfall occurs mainly in the winter months from November to April and averages 15.8 inches per year (NOAA, 2019).

Air quality is affected by the rate and location of pollutant emissions and by climatic and topographic conditions that influence the movement and dispersion of pollutants. Atmospheric conditions, such as wind speed, wind direction, and air temperature gradients, along with local and regional topography, mediate the relationship between air pollutant emissions and air quality. In the SJVAB, the surrounding mountains restrict air movement and impede the dispersion of pollutants out of the basin. The SJVAB also experiences temperature inversions frequently throughout the year, which restrict vertical dispersion of air pollutants; an inversion occurs when a mass of warm dry air sits over cooler air near the ground, essentially trapping the air mass below (SJVAPCD, 2015). In addition, the Valley's long, hot summers, and stagnant, foggy winters, provide ideal conditions for the formation of photochemical oxidants and reduce dispersion, respectively.

Wind speed and direction determine the dispersion of air pollutants. Marine air comes into the basin from the Sacramento River–San Joaquin River Delta, although most air movement is restricted by the surrounding mountains. Winds from the Bay Area flow northeasterly into the Sacramento Valley and southward into San Joaquin County. This results in weak winds from the north and northeast, with an average speed of seven miles per hour. During the summer, wind from the north flows south and southeasterly through the Valley, through the Tehachapi Pass and into the Southeast Desert Air Basin. Thus, emissions from the San Francisco Bay Area and the Broader Sacramento Air Basins are transported into San Joaquin County and the SJVAB. Emissions in the San Joaquin Valley are then transported to the Southeast Desert and Great Basin Valley Air Basins. In late fall and winter, cold air from the mountains flows into the Valley. This results in winds from the south that flow north and northwesterly. Some emissions from San Joaquin County are transported to the Broader Sacramento Air Basin during these times. However, the winds are relatively light, limiting the dispersion of CO and other pollutants.

In the late fall and winter, when there is little interchange of air between the Valley and the Coast, humidity is high following winter rains, and temperature inversions at ground level persist over the entire Valley for several weeks, air movement is virtually absent and radiation fog, known as tule fog, forms. This is typically when peak concentrations of carbon monoxide (CO), oxides of nitrogen (NOx), and particulate matter (PM) occur.

Air Pollutants of Concern

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and State laws. These regulated air pollutants are known as "criteria air pollutants" and are categorized into primary and secondary pollutants.

Primary air pollutants are those that are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxide (NOx), sulfur dioxide (SO_2), coarse particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), and lead are primary air pollutants. Of these, CO, NOx, SO_2, PM_{10}, and $PM_{2.5}$ are criteria pollutants. ROG and NOx are criteria pollutant precursors and go on to form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. For example, the criteria pollutant ozone (O_3) is formed by a chemical reaction between ROG and NOx in the presence of sunlight. O_3 and nitrogen dioxide (NO_2) are the principal secondary pollutants. Sources and health effects commonly associated with criteria pollutants are summarized in Table 4.3-1, *Air Contaminants and Associated Public Health Concerns*.

Table 4.3-1
Air Contaminants and Associated Public Health Concerns

Pollutant	Major Man-Made Sources	Human Health Effects
Particulate Matter (PM_{10} and $PM_{2.5}$)	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; asthma; chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility.
Ozone (O_3)	Formed by a chemical reaction between reactive organic gases/volatile organic compounds (ROG or VOC)[1] and nitrous oxides (NOx) in the presence of sunlight. Motor vehicle exhaust industrial emissions, gasoline storage and transport, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
Sulfur Dioxide (SO_2)	A colorless gas formed when fuel containing sulfur is burned and when gasoline is extracted from oil. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision,

Pollutant	Major Man-Made Sources	Human Health Effects
		causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO_2)	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include motor vehicles, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone. Contributes to global warming and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
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 motor vehicles (such as cars and trucks) and industrial sources. Due to the phase out of leaded gasoline, metals processing is the major source of lead emissions to the air today. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers.	Exposure to lead occurs mainly through inhalation of air and ingestion of lead in food, water, soil, or dust. It accumulates in the blood, bones, and soft tissues and can adversely affect the kidneys, liver, nervous system, and other organs. Excessive exposure to lead may cause neurological impairments such as seizures, mental retardation, and behavioral disorders. Even at low doses, lead exposure is associated with damage to the nervous systems of fetuses and young children, resulting in learning deficits and lowered IQ.

Notes:
Volatile Organic Compounds (VOCs or Reactive Organic Gases (ROG)) are hydrocarbons/organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases including ROGs and VOCs. Both ROGs and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. The major sources of hydrocarbons are combustion engine exhaust, oil refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry cleaning solutions, and paint (via evaporation).
Source: California Air Pollution Control Officers Association, Health Effects, http://www.capcoa.org/health-effects/, Accessed November 14, 2018.

Other Pollutants

Diesel engine fuel combustion emits particulate matter, referred to as diesel particulate matter (DPM) that can be very small and readily respirable. The particles have hundreds of chemicals adsorbed onto their surfaces, including many known or suspected mutagens and carcinogens (CARB 2016a). Both short and long-term exposure to DPM can result in adverse health effects. Short-term exposure may cause irritation to the eyes, nose, throat and lungs and exacerbate asthma, while chronic exposure has been shown to lead to lung inflammation and cellular changes in animals and has been linked to cancer (U.S. EPA 2017a). Statewide, DPM is estimated to result in 1,400 additional cases of cardiopulmonary death, 100 cases of cardiovascular

hospitalization, 120 cases of respiratory hospitalization, and 600 cases of respiratory emergency room visits (CARB 2016). Most major sources of diesel emissions, such as ships, trains, and trucks, operate in and around ports, rail yards, and heavily traveled roadways. DPM is identified by CARB as a toxic air contaminant (TAC) (CARB 2016a).

Besides DPM, several other pollutants emitted by vehicle exhaust are a public health concern. The U.S. EPA has identified five pollutants of highest priority in addition to DPM: acrolein, acetaldehyde, formaldehyde, benzene, and 1,3-butadiene. The latter five pollutants are found in organic gases emitted by vehicles.

Existing Air Quality

The United States Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have established health-based ambient air quality standards for criteria air pollutants listed in Table 4.3-1 above. The EPA sets National Ambient Air Quality Standards (NAAQS) for criteria pollutants. Primary standards provide public health protection, including protecting the health of "sensitive" populations, such as asthmatics, children, and the elderly. Secondary standards provide public welfare protection, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. In addition, CARB has established California Ambient Air Quality Standards (CAAQS) for these pollutants, as well as for sulfate (SO_4), visibility reducing particles, hydrogen sulfide (H_2S), and vinyl chloride. California standards are generally stricter than national standards. The NAAQS and the CAAQS are shown in Table 4.3-2.

Table 4.3-2
National and California Ambient Air Quality Standards

Pollutant	Averaging Time	National Standards[a]	California Standards[b]
Ozone (O_3)	8 Hours	0.070 ppm (137 µg/m^3)[c]	0.070 ppm (137 µg/m^3)
	1 Hour	--[d]	0.09 ppm (180 µg/m^3)
Carbon Monoxide (CO)	8 Hours	9 ppm (10 mg/m^3)	9.0 ppm (10 mg/m^3)
	1 Hour	35 ppm (40 mg/m^3)	20 ppm (23 mg/m^3)
Nitrogen Dioxide (NO_2)	Annual Average	0.053 ppm (100 µg/m^3)	0.030 ppm (57 µg/m^3)
	1 Hour	100 ppb (188.68 µg/m^3)	0.18 ppm (339 µg/m^3)
Sulfur Dioxide (SO_2)	3 Hour	0.5 ppm (1,300 µg/m^3)	--
	24 Hours	0.14 ppm (365 µg/m^3)	0.04 ppm (105 µg/m^3)

Pollutant	Averaging Time	National Standards[a]	California Standards[b]
	1 Hour	75 ppb (196 µg/m^3)	0.25 ppm (655 µg/m^3)
Particulate Matter (PM_{10})	Annual Arithmetic Mean	--[e]	20 µg/m^3
	24 Hours	150 µg/m^3	50 µg/m^3
Particulate Matter—Fine ($PM_{2.5}$)	Annual Arithmetic Mean	12.0 µg/m^3	12 µg/m^3
	24 Hours	35 µg/m^3	--
Sulfates (SO_4)	24 Hours	--	25 µg/m^3
Lead[f] (Pb)	Rolling Three Month Average	0.15 µg/m^3	--
	30-day Average	--	1.5 µg/m^3
Hydrogen Sulfide (H_2S)	1 Hour	--	0.03 ppm (42 µg/m^3)
Vinyl Chloride (chloroethene)	24 Hours	--	0.01 ppm (26 µg/m^3)
Visibility-Reducing Particles (VRPs)	8 Hours	--	--[g]

Source EPA, 2016; CARB, 2016,
ppm = parts per million; ppb = parts per billion; mg/m^3 = milligrams per cubic meter; µg/m^3= micrograms per cubic meter.
[a] The NAAQS, other than O_3 and those based on annual averages, are not to be exceeded more than once a year. The O_3 standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above the standard is equal to or less than 1. The National Primary Standards, which reflect the levels of air quality necessary, with an adequate margin of safety to protect the public health, are presented.
[b] The CAAQS for O_3, CO, SO_2 (1-hour and 24-hour standards), NO_2, PM_{10}, and $PM_{2.5}$ are values not to be exceeded. All other California standards shown are values not to be equaled or exceeded.
[c] On October 1, 2015, the U.S. EPA Administrator signed the notice for the final rule to revise the primary and secondary NAAQS for O_3. The U.S.EPA is revising the levels of both standards from 0.075 ppm to 0.070 ppm, and retaining their indicators (O_3), forms (fourth-highest daily maximum, averaged across three consecutive years) and averaging times (eight hours). The U.S. EPA is in the process of submitting the rule for publication in the Federal Register. The final rule will be effective 60 days after the date of publication in the Federal Register. The lowered national 8-hour standards are reflected in the table.
[d] One-hour O_3 standard revoked effective June 15, 2005.
[e] Annual PM_{10} standard revoked effective December 18, 2006.
[f] On October 15, 2008, U.S.EPA strengthened the lead standard.
[g] Statewide VRP Standard (except Lake Tahoe Air Basin): Particles in sufficient amounts to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70 percent. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

Table 4.3-3 presents the air quality attainment status for the SJVAB. As indicated in the table, the SJVAB is classified as being in nonattainment for the state one-hour ozone standard, federal and State eight-hour ozone standards, the State PM_{10} standard, and the federal and State 24-hour and annual $PM_{2.5}$ standards.

Table 4.3-3
San Joaquin Valley Attainment Status

Pollutant	Designation/Classification	
	Federal Standards[a]	State Standards[b]
Ozone – One hour	No Federal Standard[f]	Nonattainment/Severe
Ozone – Eight hour	Nonattainment/Extreme[e]	Nonattainment
PM_{10}	Attainment[c]	Nonattainment
$PM_{2.5}$	Nonattainment[d]	Nonattainment
Carbon Monoxide	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxide	Attainment/Unclassified	Attainment
Sulfur Dioxide	Attainment/Unclassified	Attainment
Lead (Particulate)	No Designation/Classification	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified
Vinyl Chloride	No Federal Standard	Attainment

Source: SJVAPCD, 2019.
[a] See 40 CFR Part 81
[b] See CCR Title 17 Sections 60200-60210
[c] On September 25, 2008, EPA redesignated the San Joaquin Valley to attainment for the PM_{10} National Ambient Air Quality Standard (NAAQS) and approved the PM_{10} Maintenance Plan.
[d] The Valley is designated nonattainment for the 1997 $PM_{2.5}$ NAAQS. EPA designated the Valley as nonattainment for the 2006 $PM_{2.5}$ NAAQS on November 13, 2009 (effective December 14, 2009).
[e] Though the Valley was initially classified as serious nonattainment for the 1997 8-hour ozone standard, EPA approved Valley reclassification to extreme nonattainment in the Federal Register on May 5, 2010 (effective June 4, 2010).
[f] Effective June 15, 2005, the U.S. Environmental Protection Agency (EPA) revoked the federal 1-hour ozone standard, including associated designations and classifications. EPA had previously classified the SJVAB as extreme nonattainment for this standard. EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan on March 8, 2010 (effective April 7, 2010). Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB.

Ambient Air Monitoring

The SJVAPCD and CARB operate an air quality monitoring network that provides information on average concentrations of those pollutants for which State or federal agencies have established NAAQS and CAAQS.

For the purposes of background data and this air quality analysis, this analysis relied on data collected in the last three years for the SJVAPCD and CARB monitoring stations that are located in the closest proximity to the Project site. Table 4.3-4 provides the background concentrations for O_3, particulate matter of 10 microns (PM_{10}), particulate matter of less than 2.5 microns ($PM_{2.5}$), CO, NO_2, SO_2, and Pb. Information is provided for the Fresno-Drummond Street, Fresno-Garland, Fresno-Sierra Skypark #2, and Clovis-N Villa Avenue monitoring stations for 2016 through 2018. No data is available for H_2S, Vinyl Chloride or other toxic air contaminants in Fresno County.

Table 4.3-4
Existing Air Quality Monitoring Data in Project Area

Pollutant and Monitoring Station Location	Maximum Concentration			Days Exceeding Standard		
	2016	2017	2018	2016	2017	2018
O_3 – 1-hour CAAQS (0.09 ppm)						
Fresno-Drummond Street	0.117	0.125	0.119	13	8	6
Fresno-Garland	0.117	0.143	0.121	15	16	8
Fresno-Sierra Skypark #2	0.108	0.128	0.100	6	6	4
O_3 – 8-hour CAAQS (0.07 ppm)						
Fresno-Drummond Street	0.094	0.104	0.097	60	31	34
Fresno-Garland	0.095	0.113	0.099	56	68	38
Fresno-Sierra Skypark #2	0.089	0.107	0.087	45	46	30
O_3 – 8-hour NAAQS (0.070 ppm)						
Fresno-Drummond Street	0.093	0.103	0.097	57	29	32
Fresno-Garland	0.094	0.112	0.099	55	64	36
Fresno-Sierra Skypark #2	0.089	0.106	0.087	43	44	27
PM_{10} – 24-hour CAAQS (50 µg/m^3)						
Fresno-Drummond Street	86.3	120.5	154.8	17	17	19
Fresno-Garland	88.8	153.6	136.2	65	97	101
Clovis-N Villa Avenue	74.9	99.4	118.6	10	13	14
PM_{10} – 24-hour NAAQS (150 µg/m^3)						
Fresno-Drummond Street	88.3	115.6	152.2	0	0	0
Fresno-Garland	91.9	160.1	130.4	0	1	0
Clovis-N Villa Avenue	76.2	103.2	114.6	0	0	0
$PM_{2.5}$ - 24-hour NAAQS (35 µg/m^3)						
Fresno-Garland	52.7	86.0	95.7	16	31	36
Fresno-Hamilton & Winery	48.6	88.3	89.8	5	9	11
Clovis-N Villa Avenue	50.4	69.5	82.3	8	19	26
CO - 8-Hour CAAQS & NAAQS (9.0 ppm)						
No data collected	*	*	*	*	*	*
NO_2 - 1-Hour CAAQS (0.18 ppm)						
Fresno-Drummond Street	0.058	0.064	0.075	0	0	0
Fresno-Garland	0.056	0.057	0.068	0	0	0
Fresno-Sierra Skypark #2	0.034	0.050	0.043	0	0	0
NO_2 - 1-Hour NAAQS (0.10 ppm)						
Fresno-Drummond Street	0.059	0.065	0.076	0	0	0
Fresno-Garland	0.056	0.057	0.068	0	0	0
Fresno-Sierra Skypark #2	0.035	0.051	0.043	0	0	0
SO_2 – 24-hour Concentration - CAAQS (0.04 ppm) & NAAQS (0.14 ppm)						
No data collected	*	*	*	*	*	*
Pb - Maximum 30-Day Concentration CAAQS (1500 ng/m^3)						

Pollutant and Monitoring Station Location	Maximum Concentration			Days Exceeding Standard		
	2016	2017	2018	2016	2017	2018
Fresno-Garland	12.1	8.4	*	*	*	*

Source: CARB 2019a
Notes: ppm= parts per million
* There was insufficient (or no) data available to determine the value.

Sensitive Receptors

The SJVAPCD identifies a sensitive receptor as a location where human populations (especially children, senior citizens, and sick persons) are present. Additionally, a sensitive receptor location occurs where there is a reasonable expectation of continuous human exposure to pollutants, according to the averaging period for ambient air quality standards, such as 24 hours, eight hours, or one hour. Examples of sensitive receptors are residences, hospitals, and schools; industrial and commercial uses are not considered sensitive receptors.

4.3.3 - REGULATORY SETTING

Air pollutants are regulated at the national, State, and air basin level; each agency has a different level of regulatory responsibility. The United States Environmental Protection Agency (EPA) regulates at the national level. The California Air Resources Board (CARB) regulates at the State level. The SJVAPCD regulates at the air basin or local level.

Federal

CLEAN AIR ACT

The EPA oversees implementing national air quality programs. EPA's air quality mandates are drawn primarily from the Federal Clean Air Act (FCAA), enacted in 1970. Congress made the most recent major amendments to the FCAA in 1990.

The principal air quality regulatory mechanism on the federal level is the Clean Air Act (FCAA) and, in particular, the 1990 amendments to the FCAA and the NAAQS that it establishes. These standards identify levels of air quality for "criteria" pollutants that are considered the maximum levels of ambient (background) air pollutants considered safe, with an adequate margin of safety, to protect the public health and welfare. The criteria pollutants are O_3, CO, NO_2 (a form of NOx), SO_2 (a form of SOx), PM_{10}, $PM_{2.5}$, and lead (Pb); refer to Table 4.3-2, *National and California Ambient Air Quality Standards*. The EPA also has regulatory and enforcement jurisdiction over emission sources beyond State waters (outer continental shelf) and those that are under the exclusive authority of the federal government, such as aircraft, locomotives and interstate trucking.

The SIP is modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. EPA is

responsible for reviewing all SIPs to determine whether they conform to the mandates of the FCAA and its amendments, and whether implementation will achieve air quality goals. If EPA determines a SIP to be inadequate, a federal implementation plan that imposes additional control measures may be prepared for the nonattainment area. If an approvable SIP is not submitted or implemented within the mandated time frame, sanctions may be applied to transportation funding and stationary air pollution sources in the air basin.

TOXIC AIR CONTAMINANTS AND HAZARDOUS AIR POLLUTANTS

Toxic air contaminants (TACs), or in federal parlance, hazardous air pollutants (HAPs) are a defined set of airborne pollutants that may pose a present or potential hazard to human health. A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. A wide range of sources, from industrial plants to motor vehicles, emit TACs. The health effects associated with TACs are quite diverse and generally are assessed locally, rather than regionally. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage; or short-term acute affects such as eye watering, respiratory irritation (a cough), running nose, throat pain, and headaches.

For evaluation purposes, TACs are separated into carcinogens and noncarcinogens based on the nature of the physiological effects associated with exposure to the pollutant. Carcinogens are assumed to have no safe threshold below which health impacts would not occur. This contrasts with criteria air pollutants for which acceptable levels of exposure can be determined and for which the ambient standards have been established (Table 4.3-2). Cancer risk from TACs is expressed as excess cancer cases per one million exposed individuals, typically over a lifetime of exposure.

EPA and, in California, CARB regulate HAPs and TACs, respectively, through statutes and regulations that generally require the use of the maximum available control technology or best available control technology for toxics to limit emissions.

State

STATE AIR TOXICS PROGRAM

Toxic air contaminants are another group of pollutants of concern in California. There are hundreds of different types of toxic air contaminants, with varying degrees of toxicity. Sources of toxic air contaminants include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle engine exhaust. Public exposure to toxic air contaminants can result from emissions from normal operations, as well as accidental releases of hazardous materials during upset spill conditions. Health effects of toxic air contaminants include cancer, birth defects, neurological damage and death.

California regulates toxic air contaminants through its Air Toxics Program, mandated in Chapter 3.5 (Toxic Air Contaminants) of the Health and Safety Code (Health and Safety Code Section 39660 et seq.) and Part 6 (Air Toxics "Hot Spots" Information and Assessment) (Health and Safety Code Section 44300 et seq.). CARB, working in conjunction with the State Office of Environmental Health Hazard Assessment (OEHHA), identifies toxic air contaminants. Air toxic control measures may then be adopted to reduce ambient concentrations of the identified toxic air contaminant to below a specific threshold, based on its effects on health, or to the lowest concentration achievable through use of best available control technology for toxics. The program is administered by CARB. Air quality control agencies, including the SJVAPCD, must incorporate air toxic control measures into their regulatory programs or adopt equally stringent control measures as rules within six months of adoption by CARB.

CALIFORNIA REGULATIONS AND BUILDING CODES

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California's energy consumption relatively flat even with rapid population growth.

Title 20 Appliance Efficiency Regulations

The appliance efficiency regulations (California Code of Regulations Title 20, Sections 1601-1608) include standards for new appliances. Twenty-three categories of appliances are included in the scope of these regulations. These standards include minimum levels of operating efficiency, and other cost-effective measures, to promote the use of energy- and water-efficient appliances.

Title 24 Building Energy Efficiency Standards

California's Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations Title 24, Part 6), was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The 2016 Building Energy Efficiency Standards approved on January 19, 2016 went into effect on January 1, 2017. The 2019 Building Energy Efficiency Standards were adopted on May 9, 2018 and took effect on January 1, 2020. Under the 2019 standards, homes will use about 53 percent less energy and nonresidential buildings will use about 30 percent less energy than buildings under the 2016 standards.

Title 24 California Green Building Standards Code

The California Green Building Standards Code (California Code of Regulations Title 24, Part 11 code) commonly referred to as the CALGreen Code, is a statewide mandatory construction code developed and adopted by the California Building Standards Commission and the Department of Housing and Community Development. The CALGreen standards require new residential and commercial buildings to comply with mandatory measures under the topics of planning and

design, energy efficiency, water efficiency/conservation, material conservation and resource efficiency, and environmental quality. CALGreen also provides voluntary tiers and measures that local governments may adopt that encourage or require additional measures in the five green building topics. The most recent update to the CALGreen Code went into effect January 1, 2017.

Local

SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT

Air districts have the primary responsibility to control air pollution from all sources other than those directly emitted from motor vehicles, which are the responsibility of CARB and the EPA. Air districts adopt and enforce rules and regulations to achieve State and federal ambient air quality standards and enforce applicable State and federal law.

The local air quality agency is the San Joaquin Valley Air Pollution Control District (SJVAPCD). The SJVAPCD is comprised of eight contiguous counties in Central California (Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare Counties). The SJVAPCD has jurisdiction over the San Joaquin Valley Air Basin. The SJVAPCD adopts and enforces controls on stationary sources of air pollutants through its permit and inspection programs and regulates open burning. Through its permitting powers, the SJVAPCD enforces limitations for emission of criteria and toxic air contaminants. Other SJVAPCD responsibilities include monitoring air quality, preparation of clean air plans, and responding to citizen air quality complaints.

In order to maintain consistency with CEQA, the SJVAPCD adopted its Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI) to assist applicants in complying with the various requirements of CEQA (SJVAPCD, 2015). According to the SJVAPCD's GAMAQI, a project would have potentially significant air quality impacts when the project:

- Creates a conflict with or obstructs implementation of the applicable air quality plan;
- Causes a violation of any air quality standard or generates substantial contribution towards exceeding an existing or projected air quality standard;
- Results in a cumulatively considerable net increase of any criteria pollutant for which the project region is designated nonattainment under a NAAQS and CAAQS (including emissions which exceed quantitative thresholds for O_3 precursors);
- Exposes sensitive receptors to substantial pollutant concentrations; or
- Creates objectionable odors that affect a substantial number of people.

The SJVAPCD GAMAQI thresholds are designed to implement the general criteria for air quality emissions as required in the CEQA Guidelines, Appendix G, Paragraph III (Title 14 of the California Code of Regulations §15064.7) and CEQA (California Public Resources Code Sections 21000 et. al). SJVAPCD's specific CEQA air quality thresholds are presented in Table 4.3-5.

Table 4.3-5
SJVAPCD CEQA Thresholds of Significance

Criteria Pollutant	Significance Level	
	Construction	Operational
CO	100 tons/yr	100 tons/yr
NOx	10 tons/yr	10 tons/yr
ROG	10 tons/yr	10 tons/yr
SOx	27 tons/yr	27 tons/yr
PM_{10}	15 tons/yr	15 tons/yr
$PM_{2.5}$	15 tons/yr	15 tons/yr

Source: SJVAPCD 2015

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.

RTP/SCS

Regional Transportation Plans (RTP) address the mobility needed to keep our region moving and our communities connected. Fresno Council of Governments' (FCOG) 2018 RTP charts the long-range vision of regional transportation in Fresno County through the year 2040. The RTP identifies existing and future transportation related needs, while considering all modes of travel, analyzing alternative solutions, and identifying what can be completed with 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 for the first time in its 2018 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 National Ambient Air Quality Standards (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. Emissions from projected growth must not exceed the budgets in any year.

CITY OF FRESNO GENERAL PLAN

The General Plan sets forth the following guiding and implementing policies that are relevant to air quality.

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.

Policy RC-4-a - Support Regional Efforts. Support and lead, where appropriate, regional, State and federal programs and actions for the improvement of air quality, especially the SJVAPCD's efforts to monitor and control air pollutants from both stationary and mobile sources and implement Reasonably Available Control Measures in the Ozone Attainment Plan.

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

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

Policy RC-4-d - Forward Information. Forward information regarding proposed General Plan Amendments, community plans, Specific Plans, neighborhood plans, Concept Plans, and development proposals that require air quality evaluation, and amendments to development regulations to the SJVAPCD for their review of potential air quality and health impacts.

Policy RC-4-e - Support Employer-Based Efforts. Support and promote employer implementation of staggered work hours and employee incentives to use carpools, public transit, and other measures to reduce vehicular use and traffic congestion.

Policy RC-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; and
- 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.

Policy RC-4-h - Airport Actions. Support Airport efforts to develop and maintain programs and policies to support City, State and federal efforts to achieve and maintain air quality standards.

Policy RC-4-i - Methane Capture. Continue to pursue opportunities to reduce air pollution by using methane gas from the old City landfill and the City's wastewater treatment process.

Policy RC-4-j - All Departments. Continue to develop and implement in all City departments, operational policies to reduce air pollution.

Policy RC-4-k - Electric Vehicle Charging. Develop standards to facilitate electric vehicle charging infrastructure in both new and existing public and private buildings, in order to accommodate these vehicles as the technology becomes more widespread.

4.3.4 - IMPACTS AND MITIGATION MEASURES

This section describes the methodology used in conducting the impact analysis for air quality, the thresholds of significance used in assess impacts to air quality, and the assessment of impacts to air quality. Measures to mitigate (i.e., avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion, where applicable.

Methodology

CONSTRUCTION AND OPERATIONAL EMISSIONS METHODS

Construction and operational emissions were quantified using the California Emissions Estimator Model (CalEEMod), which was developed by the California Air Pollution Control Officers Association (CAPCOA) and is approved for use in all areas of California (CAPCOA, 2016). CalEEMod quantifies emissions of NOx, SOx, CO, VOC, PM_{10}, $PM_{2.5}$, and GHGs from construction and operations activities using emission factors derived from CARB's Emission Factor (EMFAC)

and OFFROAD models, for on-highway and off-road vehicles, respectively. The model calculates vehicle emissions based on the fleet average emission rate of vehicles operating in the County for the year in which the construction activity occurs. Emission factors for fugitive dust are also included in the model.

The Project was modeled according to the land use designations detailed in the Traffic Impact Study (TIS) prepared by VRPA Technologies, Inc. Although individual future project details are unknown at this time, assumptions were made regarding individual building sizes with each land use capped at their respective maximum allowable footprints under the City's existing regulatory Ordinance and proposed ordinance. The proposed land use types were broken down and modeled accordingly:

- Cannabis Retailers/Dispensaries will be limited to a combined total of 55,000 square feet, with a potential for up to twenty-one (21) businesses of this type. Therefore, the average building size was modeled as 2,620 square feet. While the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition does contain data for a Marijuana Dispensary Land Use (Land Use 882), CalEEMod does not yet have this land use incorporated. Therefore, the CalEEMod run for dispensaries utilized the land use of "Fast Food Restaurant with Drive Thru" as it most closely mimics the vehicle trip behaviors of a dispensary, however the trip rates were modified per the ITE 10th Edition data and the trip lengths were modified per the TIS.

- Cultivation, Distribution, and Manufacturing sites will be limited to a combined total of 700,000 square feet, with a potential for up to sixteen (16) businesses of these types. Therefore, the average building size was modeled as 43,750 square feet under the "General Light Industrial" land use setting and utilized the trip rate formula and trip length assumptions provided in the TIS to overwrite the default trip values in CalEEMod.

- Testing Laboratories will be limited to a combined total of 100,000 square feet and individual labs are assumed to be approximately 20,000 square feet each. The "General Light Industrial" land use setting was used, however the trip rate formula and trip length assumptions provided in the TIS were used to overwrite the default trip values in CalEEMod.

Each land use type was modeled separately to determine emissions resulting from one sample building. The resulting emissions were then multiplied by the anticipated number of buildings for each land use type to determine total emissions for each proposed land use. For the purposes of this EIR, emissions were modeled under worst-case scenarios and assumptions. However, per the City's Development Code, existing retail and infrastructure will be utilized where possible. Therefore, actual construction and operational emissions will likely be lower than what is estimated in this analysis, though the extent of those reductions is not known at this time.

Operational vehicle trip assumptions were made according to the TIS. Table 4.3-6 show the TIS assumptions for trip rates for various cannabis operations.

Table 4.3-6
Vehicle Trip Assumptions

ITE Code	Land Use	Quantity (x)	Trip Rate	Average Daily Trips	Trips/Day/ksf (CalEEMod Input)
110	Cultivation, Distribution, and Manufacturing	43.750 ksf	T = 3.79(x) + 57.96	224	**5.1148**
110	Testing Laboratories	20.000 ksf	T = 3.79(x) + 57.96	134	**6.688**
882	Cannabis Retailers/Dispensaries	2.620 ksf	252.7(x)	632	**252.7**

In addition to the modified trip rates, the vehicle fleet mix for retail business operations were also modified to change the default value from 12.3 percent Heavy-Heavy Duty (HHD) trucks to a conservative assumption of two percent HHD trucks. It was assumed that retail businesses will receive deliveries by way of smaller, Medium-Heavy Duty trucks and will likely receive no deliveries by way of HHD trucks. However, two percent HHD trucks was used as a highly conservative estimate. The remaining 10.3 percent from the HHD category was proportionately reallocated to the three passenger vehicle categories for Light-Duty Auto and Light-Duty Trucks, as the vast majority of vehicle travel generated by Dispensaries will be from passenger vehicles.

PROJECT RELATED EMISSIONS

This document was prepared pursuant to the SJVAPCD's GAMAQI. The GAMAQI identifies separate thresholds for a project's short-term (construction) and long-term (operational) emissions.

Project emissions were estimated for the following project development stages:

Short-Term Emissions

Short-term emissions are primarily from the construction phase of a project and would have temporary impacts on air quality.

Because specific construction timelines and equipment usage schedules are not known at this time, the construction emissions were based on the default CalEEMod construction timeline and equipment list for the proposed land use types and estimated development intensity. Applying model defaults as well as a conservative analysis approach, construction emissions were estimated as if construction started in October of 2019. Based on the default CalEEMod estimates, the Project construction timing is approximately six months (per building) and operations would conservatively begin during year 2020. The dates entered into the CalEEMod program may not represent the actual dates the equipment will operate. All construction

equipment activity levels were assumed based on the specified CalEEMod default values for type and number of equipment, hours per day, and horsepower.

SJVAPCD's required measures for all projects were also applied:

Water exposed areas three times per day; and reduce vehicle speed to less than 15 miles per hour.

Table 4.3-7 presents the Project's short-term emissions.

Table 4.3-7
Project Short-term (Construction) Emissions

Emissions Source	Pollutant (tons/year)					
	ROG	**NOX**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Unmitigated						
2019	2.07	17.7	14.0	0.02	1.29	1.07
2020	7.40	12.4	9.8	0.02	0.78	0.67
Maximum Annual Emission	**7.40**	**17.7**	**14.0**	**0.02**	**1.29**	**1.07**
Mitigated						
2019	2.07	17.7	14.0	0.02	1.20	1.02
2020	7.40	12.4	9.80	0.02	0.78	0.67
Maximum Annual Emission	**7.40**	**17.7**	**14.0**	**0.02**	**1.20**	**1.02**
Significance Threshold	10	10	100	27	15	15
Is Threshold Exceeded for a Single Year After Mitigation?	NO	**YES**	NO	NO	NO	NO

As shown in Table 4.3-7, the estimated short-term construction-related emissions, as calculated by CalEEMod (see Attachment A of Appendix C), would exceed the SJVAPCD significance threshold for NOx emissions provided that all construction was completed, as modeled, within two years. Therefore, impacts from construction-related criteria pollutant emissions would be considered significant.

Long-Term Operations Emissions

Long-term emissions are caused by operational mobile, area and energy sources. Long-term emissions would consist of the following components:

FUGITIVE DUST EMISSIONS

Operation of the Project at full build-out is not expected to present a substantial source of fugitive dust (PM_{10}) emissions. The main source of PM_{10} emissions would be from vehicular traffic associated with the Project site.

PM_{10} on its own as well as in combination with other pollutants creates a health hazard. The SJVAPCD's Regulation VIII establishes required controls to reduce and minimizing fugitive dust emissions. The following SJVAPCD Rules and Regulations apply to the proposed Project (and all projects):

- Rule 4102 - Nuisance
- Regulation VIII – Fugitive PM_{10} Prohibitions
    - Rule 8011 - General Requirements
    - Rule 8021 - Construction, Demolition, Excavation, Extraction, and Other
    - Earthmoving Activities
    - Rule 8041 - Carryout and Trackout
    - Rule 8051 - Open Areas

EXHAUST EMISSIONS

Project-related transportation activities from employees, customers, and deliveries (products to retailers and mobile deliveries to customers) would generate mobile source ROG, NOx, SOx, CO, PM_{10} and $PM_{2.5}$ exhaust emissions. Exhaust emissions would vary substantially from day to day but would average out over the course of an operational year.

PROJECTED EMISSIONS

The proposed Project is expected to have long-term air quality impacts as shown in Table 4.3-7. The output from the CalEEMod runs are available in Attachment A of Appendix C). Mitigation measures were not incorporated into the analysis as those will be proposed at the individual project level.

Table 4.3-8
Project Long-term (Operational) Emissions

Emissions Source	Pollutant (tons/year)					
	ROG	**NOx**	**CO**	**SOx**	**PM_{10}**	**$PM_{2.5}$**
Unmitigated Operational Emissions	9.90	39.6	51.3	.018	11.9	3.42
Mitigated Operational Emissions	**9.90**	**39.6**	**51.3**	**0.18**	**11.9**	**3.42**
SJVAPCD Threshold	10	10	100	27	15	15
Is Threshold Exceeded After Mitigation?	NO	YES	NO	NO	NO	NO

Source: Trinity Consultants 2019

As shown in Table 4.3-8, operational-related emissions, as calculated by CalEEMod (See Attachment A of Appendix C), would exceed the SJVAPCD significance threshold for NOx emissions. Although emissions could be reduced from implementation of mitigation measures at the specific project level such as restricting the number of operations, compliance with District Rule 9510 (Indirect Source Review), compliance with City requirements, or other measures, the emission reductions achieved from such measures cannot be quantified for the Project as a

whole. Therefore, impacts from operation-related criteria pollutant emissions would be considered significant.

AMBIENT AIR QUALITY IMPACT ASSESSMENT

Ambient air quality analyses will be required for each subsequent cannabis project that exceeds 100 pounds per day of any pollutant to determine if emissions increase from each subsequent cannabis projects will cause or contribute to a violation of the ambient air quality standards.

An ambient air quality analysis was performed for the SJVAB to determine if a potential subsequent cannabis project has the potential to impact ambient air quality through a violation of the ambient air quality standards or a substantial contribution to an existing or projected air quality standard. The basis for this analysis is dispersion modeling and the Project's operational emissions. A potential individual facility of 10,000 sf of indoor cultivation was analyzed.

The maximum offsite ground level concentration of each pollutant for the 1-hour, 3-hour, 8-hour, 24-hour and annual periods was predicted using the most recent version of EPA's AMS/EPA Regulatory Model (AERMOD) dispersion software under the Lakes Environmental ISC-AERMOD View interface. CARB-approved, AERMET-processed meteorological datasets for calendar years 2013 through 2017 (CARB 2015) was input to AERMOD. These were the most recent available dataset available at the time the modeling runs were conducted. All of the regulatory default AERMOD model keyword parameters were employed. Rural dispersion parameters were used for the proposed Project. The majority of the land surrounding the Project site is considered "rural" under the Auer land use classification method (A.H. Auer, Jr., 1978). Emissions were evaluated for each pollutant on a short-term (correlating to pollutant averaging period) and long-term (annual) basis, with the exception of CO that was evaluated only for short-term exposures since there are no long-term significance thresholds for CO.

The majority of mobile emissions predicted by CalEEMod will occur beyond the Project boundary because of vehicle trips. The following methodology was used in order to determine the onsite vehicle emissions. An estimated onsite trip distance was determined by calculating the most likely onsite travel route for the majority of onsite trips. The onsite estimated trip distance for the Project was determined to be 0.06 miles. The onsite estimated trip distance was then divided by the average trip length, five miles, in order to determine the onsite to offsite mobile emissions ratio, 1.20 percent. The total mobile emissions calculated by CalEEMod were then reduced by 98.80 percent to estimate the mobile onsite emissions used for ambient air quality modeling.

A fence line coordinate grid of receptor points was constructed. The grid consisted of a 25-meter fence line spacing with two tiers of receptors. The first tier had 25-meter tier spacing extending a distance of 100 meters and the second tier had 50-meter tier spacing extending another 400 meters with initial receptors starting 25 meters from the facility boundary. The elevated terrain option was employed.

For each pollutant and averaging period modeled, a "total" concentration was estimated by adding the maximum measured background air concentration to the maximum predicted Project

impacts. The maximum measured background air concentrations used in this analysis were calculated from measured concentrations at the nearest monitoring stations. For the initial assessment (Step 1) of the ambient air quality impact analysis, the maximum background concentration for the Project area for each pollutant and averaging period combination was added to the corresponding maximum ground level concentration (GLC) from Project-related operations emissions. The sum of these values was then compared to the corresponding ambient air quality standard. If the incremental increase in concentration from Project-related sources did not cause an exceedance of an ambient air quality standard, then the analysis was complete for that source/receptor/pollutant combination. If the incremental increase in concentration from proposed Project-related sources caused an exceedance of an ambient air quality standard, then the analysis proceeded to Step 2. Step 2 was similar to a Step 1 with one major difference. For this step, the maximum GLC of each pollutant and averaging period combination were compared to its corresponding Significant Impact Level (SIL). . The SIL is used to evaluate whether the Project's operations emissions would contribute to a violation of an ambient air quality standard, where the background level is close to or exceeds an ambient air quality standard. If the maximum GLC did not exceed the corresponding SIL, then the analysis was complete for that source/receptor/pollutant combination, and no further analysis was required.

Table 4.3-9, *Operations Ambient Air Quality Impact Assessment Results*, presents a summary of the two-step process taken to determine whether operations activities associated with the proposed project would cause or contribute to ambient air quality impacts.

Table 4.3-9
Operations Ambient Air Quality Impact Assessment Results[1]

STEP 1 – Ambient Air Quality Standard Basis			
Impact Parameter	**State/Federal AAQS µg/m³**	**Operations µg/m³**	**Operations Status**
1-hour CO	22,900	2,643	PASS
	40,100	2,643	PASS
8-hour CO	10,300	2,499	PASS
	10,300	2,499	PASS
1-hour NO_2	338	149.46	PASS
	188	149.46	PASS
Annual NO_2	56	24.58	PASS
	100	24.58	PASS
24-hour PM_{10}	50	130.69	Step 2
	150	130.69	Step 2
Annual PM_{10}	20	21.79	Step 2
24-hour $PM_{2.5}$	35	97.46	Step 2
Annual $PM_{2.5}$	12	16.60	Step 2
	12	16.60	Step 2
STEP 2 – Significant Impact Level (SIL) Basis			

Impact Parameter	PSD SILs μg/m³	Construction SJVAB μg/m³	Status
24-hour PM_{10}	5	1.69	PASS
Annual PM_{10}	1	0.30	PASS
24-hour $PM_{2.5}$	5	0.56	PASS
Annual $PM_{2.5}$	1	0.10	PASS

Source: Trinity Consultants, 2019.

1. Step 1 - the AAQS basis compares the background concentrations plus project contribution to the state and federal AAQS to determine if there would be an exceedance of the respective standard. For 24-hour and annual PM_{10} and $PM_{2.5}$, background concentrations already exceed the applicable AAQS, so Step 2—the SIL basis—compares the project contributions to levels determined to cause or contribute to ambient air quality exceedances and impacts.

Odors Impact Assessment

Outdoor cultivation is the commercial cannabis activity most concerning in regard to odor impacts since it is the hardest activity to mitigate. However, outdoor cultivation is prohibited by Section 9-3312 of Article 33 of the Fresno Municipal Code. Other commercial cannabis activities can mitigate odor impacts through temperature control, proper ventilation and carbon filters.

Operational odor impacts associated with an unmitigated cannabis Project was assessed by modeling a theoretical area source because the exact location of the various activities cannot now be determined. The quantitative assessment of the potential for the project to generate odors considers the reasonably anticipated, permitted land uses identified in the City of Fresno Cannabis Ordinance and potential activity levels by activity types. Cultivation facilities are known to be the most intense and likely source of odorous compounds. As such, an assessment of typical odorous compounds associated with the cultivation of cannabis, including estimates of odor range was included in the impact analysis. An odors analysis was used to determine if Project emissions are predicted to cause or contribute to a violation of odors in a specific location to create a nuisance.

The ambient air quality odor impacts were modeled using the most recent version of EPA's AMS/EPA Regulatory Model – AERMOD (recompiled for Lakes ISC-AERMOD View 9.6.5 (interface). This dispersion model is used throughout the U.S. for health risk assessments to determine the probable area where various airborne constituents may be dispersed from a given location. In order to determine which odor constituents to model, a review of an odor analysis study (Appendix C) was conducted. The study determined that the VOCs with the four highest odor activity values (OAV) from loose cannabis were Benzaldehyde, Myrcene, Decanal, and Heptanal ((Appendix C). OAV is the calculated ratio of surrogate concentrations to odor detection thresholds (ODT) which is used to determine the VOCs with the greatest odor impact. These top four odorous constituents based on OAV from cannabis plants were reviewed and modeled.

Elevated terrain was modelled with standard meteorological conditions found within the City of Fresno. Additionally, these constituents were modeled with no mitigation or controls to provide the most conservative result and would also be indicative of what would be expected for

uncontrolled emissions from indoor grow facilities vented through a roof vent with a rain cap in the middle of a 10,000 sq. ft. building.

Each of the top four VOCs were modeled as a 43,750 square foot area sources. Emissions from one gram of loose cannabis for each VOC were calculated from the odor analysis study ((Appendix C). Based on previous cannabis odor modeling conducted in Kern County (County of Kern, 2017), 100 miles south of the City of Fresno, it was assumed that a 1-acre outdoor grow facility would yield approximately 200,000 grams of cannabis. That ratio was used to calculate that a 43,750 square foot indoor grow facility would yield approximately 200,000 grams of cannabis. Therefore, the emissions based on one gram were multiplied by 200,000 to estimate the emission rate from the whole facility. Table 4.3-10 summarizes the emission rates used in the models.

Table 4.3-10
VOC Emission Rates for Odor Analysis

VOC	1 g Emission Rate g/s	43.75K SF Grow Facility Emission Rate g/s
Benzaldehyde	2.59E-05	5.18
Myrcene	2.05E-05	4.11
Decanal	1.72E-07	0.034
Heptanal	1.64E-06	0.327

Two rings of receptors were modeled at 1,000 feet and one mile from the Project location. For each VOC, a "1-hour" concentration was estimated and converted into a "10-minute" concentration. "10-minute" concentrations are typically evaluated for odor analysis. The concentrations were then compared to the ODT for each pollutant. The ODT is defined as the concentration of a compound that may be detectable by fifty percent of the population. Nuisance levels typically occur at concentrations that are several multiples higher than the ODT. However, nuisance is subjective in that every person does not perceive odors the same. Therefore, odor nuisance varies person to person and compound to compound. Table 4.3-11 summarizes the VOC concentrations at 1,000 feet and one mile.

Table 4.3-11
Max VOC Concentrations

VOC	1,000 FT Concentrations		1 Mile Concentrations		ODT
	1-hr (PPM)	10-min (PPM)	1-hr (PPM)	10-min (PPM)	PPM
Benzaldehyde	1.17E+00	1.93E+00	1.56E-01	2.57E-01	4.17E-02
Myrcene	7.23E-01	1.19E+00	9.63E-02	1.59E-01	1.30E-02
Decanal	5.26E-03	8.68E-03	7.00E-04	1.16E-03	8.97E-04
Heptanal	6.87E-02	1.13E-01	9.14E-03	1.51E-02	4.79E-03

As demonstrated in Table 4.3-12 each of the pollutants exceeds the ODT at the 1,000 foot and one-mile distance. However, Myrcene has the highest concentration to ODT ratio at 91.80 at the 1,000-foot distance. This concentration of Myrcene has a probability of causing a nuisance and was analyzed further.

These concentrations represent the maximum concentration that will occur during the worst one-hour period over a five-year period. Therefore, further analysis was conducted to determine how often concentrations would reach this level. Table 4.3-12 summarizes the resulting concentrations for the top 10 hours over a five-year period for Myrcene and summarizes the 98th through 75th percentile concentrations at a 1,000-foot distance.

As shown in Table 4.3-12, 75 percent of the time over a five-year period the "10-minute" concentration will be slightly higher than twice the ODT at a distance of 1,000 feet for uncontrolled odor impacts. All other VOCs are assumed to have a lower affect than Myrcene.

Table 4.3-12
Myrcene Concentrations

	1,000 FT Concentrations		ODT	# of Multiples Concentration above ODT	
	1-hr (PPM)	10-min (PPM)	PPM	1-hr	10-min
1st High	7.23E-01	1.19E+00	1.30E-02	55.64	91.80
2nd High	5.57E-01	9.19E-01	1.30E-02	42.83	70.67
3rd High	5.39E-01	8.89E-01	1.30E-02	41.44	68.38
4th High	5.26E-01	8.68E-01	1.30E-02	40.47	66.78
5th High	5.21E-01	8.59E-01	1.30E-02	40.04	66.07
6th High	5.16E-01	8.51E-01	1.30E-02	39.69	65.49
7th High	5.15E-01	8.50E-01	1.30E-02	39.61	65.36
8th High	5.12E-01	8.46E-01	1.30E-02	39.42	65.04
9th High	5.12E-01	8.44E-01	1.30E-02	39.35	64.93
10th High	5.11E-01	8.43E-01	1.30E-02	39.29	64.83
98th Percentile	2.33E-01	3.84E-01	1.30E-02	17.91	29.55
97th Percentile	1.75E-01	2.89E-01	1.30E-02	13.46	22.21
96th Percentile	1.27E-01	2.10E-01	1.30E-02	9.78	16.13
95th Percentile	8.72E-02	1.44E-01	1.30E-02	6.71	11.07
94th Percentile	5.90E-02	9.74E-02	1.30E-02	4.54	7.49
93rd Percentile	5.28E-02	8.71E-02	1.30E-02	4.06	6.70
92nd Percentile	4.64E-02	7.65E-02	1.30E-02	3.57	5.88
91st Percentile	4.16E-02	6.87E-02	1.30E-02	3.20	5.29
90th Percentile	3.75E-02	6.18E-02	1.30E-02	2.88	4.76
85th Percentile	2.73E-02	4.51E-02	1.30E-02	2.10	3.47
80th Percentile	2.08E-02	3.43E-02	1.30E-02	1.60	2.64
75th Percentile	1.63E-02	2.68E-02	1.30E-02	1.25	2.06

Thresholds of Significance

In accordance with CEQA, the effects of a project are evaluated to determine if they will result in significant adverse impact on the environment. The criteria used to determine the significance of an impact to utilities and service systems are based on the Environmental Checklist in Appendix G of the State CEQA Guidelines as identified below. Accordingly, air quality impacts resulting from the proposed project are considered significant if the project 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 region 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.

Project Impacts

Impact 4.3-1: The Project Would Conflict with or Obstruct Implementation of an Applicable Air Quality Plan

Implementation of the proposed Project would result in construction and operational impacts from maximum development of cannabis cultivation, manufacturing, distribution, testing laboratories, and retails businesses. As shown above in Tables 4.3-7 and 4.3-8, full buildout of the Project (construction and operations) would exceed the SJVAPCD Significance Threshold for NOx, but would be under the thresholds for ROG, CO, SO_2, PM_{10}, and $PM_{2.5}$. The following mitigation measures have been included to reduce impacts to the greatest extent possible.

NOx criteria pollutants are mainly derived from carbon-based vehicle emissions. The majority of these emissions would be from the vehicle trips associated with retail locations and persons driving to and from these locations. A smaller amount would be generated from mobile deliveries and trips related to employees of retail, cultivation, manufacturing, distribution and testing laboratories.

It is not reasonable to require all vehicles used in Project activities to be converted from carbon-based fuels to electric fuels; however, Mitigation Measure MM 4.3-3 and MM 4.3-4 would require that all mobile deliveries be completed using hybrid or electric vehicles. These measures would reduce the overall NOx emissions. While these measures would provide some reduction in operational mobile emissions, they would not be enough to fully mitigate NOx (the exceeding pollutant) to a less than significant level. With the full buildout of the proposed Project NOx emissions would exceed the established threshold during construction and operations. Implementation of the proposed Project would significantly impact the nonattainment area

planning by the SJVAPCD for the federal ozone standard and would disrupt or hinder implementation of any plan control measures.

Mitigation Measures MM 4.3-1 and MM 4.3-2 would reduce impacts associated with construction related PM_{10} and $PM_{2.5}$ and ensure the proposed Project complies with the SJVAPCD's *Guidance for Assessing and Mitigating Air Quality Impacts* (GAMAQI).

Mitigation Measures

MM 4.3-1: Prior to issuance of a grading or building permit or conditional use permit, individual project applicants shall submit written documentation of project compliance with applicable State and federal air pollution control laws and regulations. The project applicant shall also comply with applicable rules and regulations of the San Joaquin Valley Air Pollution Control District during construction and during operations of cannabis facilities.

MM 4.3-2: Prior to any ground disturbing activities, the Project applicant shall submit a Fugitive Dust Control Plan to the San Joaquin Valley Air Pollution Control District for review and approval, per the District's Regulation VIII to reduce construction-related emissions of particulate matter that is 10 microns or less and 2.5 microns or less in diameter (PM_{10} and $PM_{2.5}$). The requirements of Regulation VIII include:

1. **Visible Dust Emissions (VDE)** may not exceed 20 percent opacity during periods when soil is being disturbed by equipment or by wind at any time. Visible Dust Emissions opacity of 20 percent means dust that would obstruct an observer's view of an object by 20 percent. District inspectors are State certified to evaluate visible emissions. Dust control may be achieved by applying water before/during earthwork and onto unpaved traffic areas, phasing work to limit dust, and setting up wind fences to limit wind-blown dust.

2. **Soil Stabilization** is required at regulated construction sites after normal working hours and on weekends and holidays. This requirement also applies to inactive construction areas such as phased projects where disturbed land is left unattended. Applying water to form a visible crust on the soil and restricting vehicle access are often effective for short-term stabilization of disturbed surface areas. Long-term methods including applying dust suppressants and establishing vegetative cover.

3. **Carryout and Trackout** occur when materials from emptied or loaded vehicles fall onto a paved surface or shoulder of a public road or when materials adhere to vehicle tires and are deposited onto a paved surface or shoulder of a public road. Should either occur, the material must be cleaned up at least daily, and immediately if it extends more than 50 feet from the exit point onto a paved road. The appropriate clean-up methods require the complete removal and cleanup of mud and dirt from the paved surface and shoulder. Using a blower device or dry sweeping with any mechanical device other than a PM_{10}-efficient street sweeper is a violation. Larger construction sites, or sites with a high amount of traffic on one or more days, must prevent carryout and trackout from occurring by installing gravel pads, grizzlies, wheel washers, paved interior roads, or a

combination thereof at each exit point from the site. In many cases, cleaning up trackout with water is also prohibited as it may lead to plugged storm drains. Prevention is the best method.

4. **Unpaved Access and Haul Roads,** as well as unpaved vehicle and equipment traffic areas at construction sites must have dust control. Speed limit signs limiting vehicle speed to 15 mph or less at construction sites must be posted every 500 feet on uncontrolled and unpaved roads.

MM 4.3-3: The Project applicant of any conditional use permit, for a cannabis related business (retail only), shall be required to make all mobile deliveries via hybrid or electric vehicles and shall submit written documentation to the City stating the retail business will ensure this mitigation measure is complied with for all mobile deliveries.

MM: 4.3-4: The Project applicant of any conditional use permit, for a cannabis related business, shall include a site plan indicating the number of electric vehicles charging stations included in the parking area. The number of electric vehicle parking stations shall be at a ratio of no less than one charging station per 20 required parking spaces.

Level of Significance After Mitigation

Impacts would be *Significant and Unavoidable*.

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

The SJVAPCD's approach to assessing cumulative impacts dictates that a project's contribution to cumulative impacts to regional air quality would be considered potentially significant if the project's impact would be individually significant (i.e., exceeds the SJVAPCD's quantitative thresholds). For a project that would not individually cause a significant impact, the project's contribution to any cumulative impact may be considered less than significant, provided that the project is consistent with all applicable regional air quality plans. Because the proposed Project at total buildout does result in a significant air quality impact, and does conflict with applicable air quality plans, it is considered to contribute to significant cumulative air quality impacts.

Although implementation of Mitigation Measures 4.3-1 through 4.3-4 are expected to reduce emissions, exact construction and operational mitigation is on an individual project basis and is unknown at this time. Since the level of exceedance of SJVAPCD's NOX threshold as shown in Tables 4.3-9 and 4.3-10 is substantial, it would be speculative to conclude emissions could be reduced to below the threshold for the total buildout of the Project. For these reasons, the proposed Project would have a significant and unavoidable cumulatively considerable contribution to increasing criteria pollutants for which the region is in nonattainment. However, it is important to note that the cumulative impacts of this Project were already incorporated into the general business growth forecast within the City's General Plan. As such, the long-term

cumulative impacts should not represent a significant impact to air quality with the exception of NOx emissions which remain significant.

Mitigation Measures

Implement Mitigation Measures MM 4.3-1 through 4.3-4.

Level of Significance After Mitigation

Impacts would be *Significant and Unavoidable.*

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

All commercial cannabis uses will be located in a commercial, industrial, or mixed-use zone in existing improved urbanized areas of the City. All commercial cannabis uses must comply with site specific development standards, design criteria, and operational requirements to ensure that the commercial cannabis uses will not expose sensitive receptors to substantial pollutant concentrations, including the following.

Retail cannabis businesses may not be located closer than 800-feet from any parcel containing a sensitive use, i.e. school, day care, or youth centers.

Commercial cannabis businesses (outside of the Cannabis Innovation Zone) may not be located closer than 1,000 feet from any parcel containing a residential zone, school, daycare, youth center, and must be constructed in a manner that prevents odors to surrounding uses.

The primary air toxic emission associated with the proposed Project is diesel particulate matter (DPM) from heavy-heavy duty (HHD) trucks. As stated in the Methodology section above, the vehicle fleet mix for retail business operations was modified to change the default value from 12.3 percent HHD trucks to a conservative assumption of two percent HHD trucks. It was assumed that retail businesses will receive deliveries by way of smaller, Medium-Heavy Duty trucks and will likely receive no deliveries by way of HHD trucks. However, two percent HHD trucks was used as a highly conservative estimate.

The Cannabis Innovation Zone consists of predominately IH (Heavy Industrial) and IL (Light Industrial) zoned parcels, with approximately 25 percent being zoned DTN (Downtown Neighborhood). This area has historically been used for light, medium, and heavy manufacturing, as well as warehousing, uses that typically generate higher levels of HHD travel compared to other land uses. As most deliveries for cannabis retail businesses will come directly from distributors, of which a maximum of eight can be located in the Cannabis Innovation Zone, it can be concluded that the proposed Project would not generate levels of HHD travel which exceeds those already associated with the existing uses. In fact, with the majority of the parcels in the Cannabis Innovation Zone developed within existing industrial uses, the overall amount of HHD trucks in the area could decrease from historic levels. For these reasons, the proposed Project would have a less than significant impacts on sensitive receptors.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be *less than significant*.

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

A detailed odor analysis was performed for the proposed Project. As stated above, the most intensive and likely sources of odor would come from cultivation facilities. Since all outdoor cultivation is prohibited in the City; indoor cultivation facilities were modeled. Further, the Regulatory Ordinance (Article 22 of Chapter 9) requires cultivation facilities to setback 1,000 feet from sensitive land uses and receptors (except within the Cannabis Innovation Zone).

Based on the odor analysis above, even with a 1,000-foot setback for indoor cultivation facilities, the results indicate that the Project would have a potentially significant impact on nuisance odors in the absence of advanced odor technology or other odor mitigation.

Additionally, commercial cannabis businesses located within the Cannabis Innovation Zone, retail businesses, and testing laboratories would not be subject to the 1,000-foot setback regulation. Although there are no residentially zoned parcels within the Cannabis Innovation Zone, there are adjacent parcels located to the east and west that are zoned for residential use, as well as potential residential uses near future retail business and testing laboratories.

Operational odor impacts associated with an unmitigated potential subsequent cannabis Project was assessed by modeling a theoretical area source. The quantitative assessment of the potential for the Project to generate odors considers the reasonably anticipated, permitted land uses identified in the City of Fresno Cannabis Ordinance and potential activity levels by activity types. The cultivation facilities are known to be a source odorous compounds. However, Section 9-3309 (j) of the Regulatory Ordinance requires that best available odor control technology and devices will be used for cannabis retail and commercial cannabis businesses. These requirements include exhaust air filtration systems that would prohibit odors generated inside a facility from being detected outside. Even without setbacks for all cannabis businesses, proper implementation of these regulations will eliminate odors from all cannabis businesses. Mitigation Measure MM 4.3-5 has been included to require an Odor Management Control Plan to be submitted to the City demonstrating the technology to be used to ensure proper control of odors. For these reasons the proposed Project would not result in other emissions, including odors, that would adversely affect substantial numbers of persons.

However, Section 9-3309 (j) of the Regulatory Ordinance requires that best available odor control technology and devices will be used for cannabis retail and commercial cannabis businesses. These requirements include exhaust air filtration systems that would prohibit odors generated

inside a facility from being detected outside. Even without setbacks for all cannabis businesses, proper implementation of these regulations will eliminate odors from all cannabis businesses. Mitigation measure MM 4.3-5 has been included to require an Odor Management Control Plan to be submitted to the City demonstrating the technology to be used to ensure proper control of odors. For these reasons the proposed Project would not result in other emissions, including odors, that would adversely affect substantial persons.

Mitigation Measures

MM 4.3-5: As part of the Conditional Use Permit Application, all commercial cannabis related businesses shall submit an Odor Management and Control Plan (OMCP), to be approved by the Fresno Planning and Development Department. The OMCP shall demonstrate compliance with the Article 33 of Chapter 9 of the Fresno Municipal Code (Section 9-3309 j) by providing details related to the type and use of best available odor control technology and devices. The OMCP shall also include exhaust air filtration systems with odor control that prevents internal odors and pollen from being emitted externally, and an air system that creates negative air pressure between the premises' interior and exterior.

Level of Significance After Mitigation

Impacts would be *less than significant with mitigation.*

Cumulative Setting Impacts and Mitigation Measures

CUMULATIVE SETTING

The study area for the analysis of cumulative impacts is the City of Fresno and the unincorporated portions of Fresno County located adjacent to the city limits, as well as portions of the City of Clovis and the County of Madera adjacent to the City of Fresno. The applicable cumulative projections include growth projections from the City of Fresno General Plan, Fresno County General Plan, Madera County General Plan, and the City of Clovis General Plan.

The City of Fresno General Plan was last adopted in the year 2014. Anticipated development within the General Plan includes 186,840 dwelling units, 66.4 million square feet (msf) of commercial/office/public facility, 100,000 square feet of mixed uses, and 72.8 msf of industrial uses. The General Plan contains approximately 11,714 acres of agricultural land, 12,288 acres of open space, and 12,522 acres of vacant land. Existing agricultural land is primarily located in the southeastern and western portions of the General Plan.

The General Plan contains two major rail lines that generally traverse in a southeast to northwest direction. These railways include the Union Pacific Railroad line that is generally located along SR-99, and the BNSF Railway that diverges from the SR-99 in the southwest and travels through the Downtown to the northwest. There are three airports located within the City of Fresno including the Fresno-Yosemite International Airport located in the eastern portion of the Planning

Area, the Fresno-Chandler Downtown Airport located west of Downtown, and Sierra Sky Park Airport that is located on the northern portion of the General Plan.

The County of Fresno General Plan was last adopted in the year 2000. The County General Plan was prepared to accommodate population growth through the year 2020, consistent with the California Department of Finance projection of 1.1 million by 2020. This represents an additional population of approximately 344,000, which includes the year 2020 projections outside the sphere of influences for cities within the East Valley area, which is located east of Interstate 5. Additional development projects are proposed northeast of the City of Fresno Project area including Friant Ranch that represents an additional population of approximately 164,693 through the year 2020.

The County of Madera General Plan was last adopted in the year 1995. The Madera County General Plan identifies population and employment growth projections through the year 2010 and includes 177,071 people and 61,866 employees. Since the adoption of Madera County's General Plan, substantial new development projects have been proposed in the southern portion of Madera County, some of which is proposed within close proximity of the City of Fresno Project area including Gateway, Gunner Ranch, Liberty Groves, North Fork Village, Tesoro Viejo, and River Ranch Estates. These projects include approximately 23,000 units, and supporting uses such as commercial, public facilities, parks, and open space.

The City of Clovis General Plan was last adopted in the year 2014. The Clovis General Plan forecasts the ultimate buildout of the entire Clovis General Plan area that is expected to occur for at least 70 years. The Clovis General Plan forecasts an additional 65,100 residential units, 179,300 population, and 38,250,000 square feet of buildings.

CUMULATIVE IMPACTS

As noted above, the SJVAB is a nonattainment area for State 1-hour O_3, 8-hour O_3, PM_{10}, and $PM_{2.5}$ standards and is a nonattainment area for National 8-hour O_3 and $PM_{2.5}$ standards. As shown above, proposed project construction and operational emissions of these pollutants would not violate NAAQS and CAAQS.

Rule 8021 applies to any construction, demolition, excavation, extraction, and other earthmoving activities, including land clearing, grubbing, scraping, travel on-site, and travel on access roads to and from the sites. In addition, any projects under concurrent construction would be subject to SJVAPCD Rule 9510, the ISR, which requires mitigation of construction and indirect exhaust emissions. The SJVAPCD recommends use of a "clean" construction fleet, with newer engines that meet CARB Tier 2 standards, to comply with Rule 9510.

With overlapping construction schedules, there is the potential for cumulative air quality impacts from these projects. The proposed project together with all possible planned projects would result in potentially significant cumulative impacts during construction.

As stated in Impact 4.3-1, implementation of the proposed Project would result in construction and operational impacts from the maximum development of Cannabis Indoor Cultivation, Manufacturing, Distribution, Testing Laboratories, and retail locations. As shown above in Tables 4.3-7 and 4.3-8, full buildout of the Project would exceed the SJVAPCD Significance Threshold for NOx. Because the full buildout of the proposed Project would exceed the NOx threshold during construction and operations, implementation of the proposed Project would significantly impact the nonattainment area planning by the SJVAPCD for the federal ozone standard and would disrupt or hinder implementation of any plan control measures.

As stated in Impact 4.3-2, SJVAPCD's approach to assessing cumulative impacts dictates that a project's contribution to cumulative impacts to regional air quality would be considered potentially significant if the project's impact would be individually significant (i.e., exceeds the SJVAPCD's quantitative thresholds). For a project that would not individually cause a significant impact, the project's contribution to any cumulative impact may be considered less than significant, provided that the project is consistent with all applicable regional air quality plans. Because the proposed Project at total buildout does result in a significant air quality impact, and does conflict with applicable air quality plans, it is considered to contribute to significant cumulative air quality impacts.

Although implementation of Mitigation Measures 4.3-1 through 4.3-4 are expected to reduce emissions, the level of exceedance of SJVAPCD's NOx threshold is substantial, it would be speculative to conclude emissions could be reduced to below the threshold for the total buildout of the Project. For these reasons, the proposed Project would have a significant and unavoidable cumulatively considerable contribution to increasing criteria pollutants for which the region is in nonattainment.

Odor impacts are assessed in Impact 4.3-5. Operational odor impacts associated with an unmitigated potential subsequent cannabis. The cultivation facilities are known to be a source odorous compounds. However, requirements that include the installation exhaust air filtration systems that would prohibit odors generated inside a facility from being detected outside would reduce potential impacts. Even without setbacks for all cannabis businesses, proper implementation of these regulations will eliminate odors from all cannabis businesses. With implementation of Mitigation Measure MM 4.3-5 requiring an Odor Management Control Plan to be submitted to the City, the Project would not result in other emissions, including odors, that would adversely affect substantial persons. Therefore, it is anticipated that the Project would not result in a cumulatively considerable contribution to odors, and cumulative impacts would be less than significant.

Mitigation Measures

Implement Mitigation Measures 4.3-1 through 4.3-5.

Cumulative Level of Significance After Mitigation

Cumulative impacts would be *significant and unavoidable.*

4.4 - Biological Resources

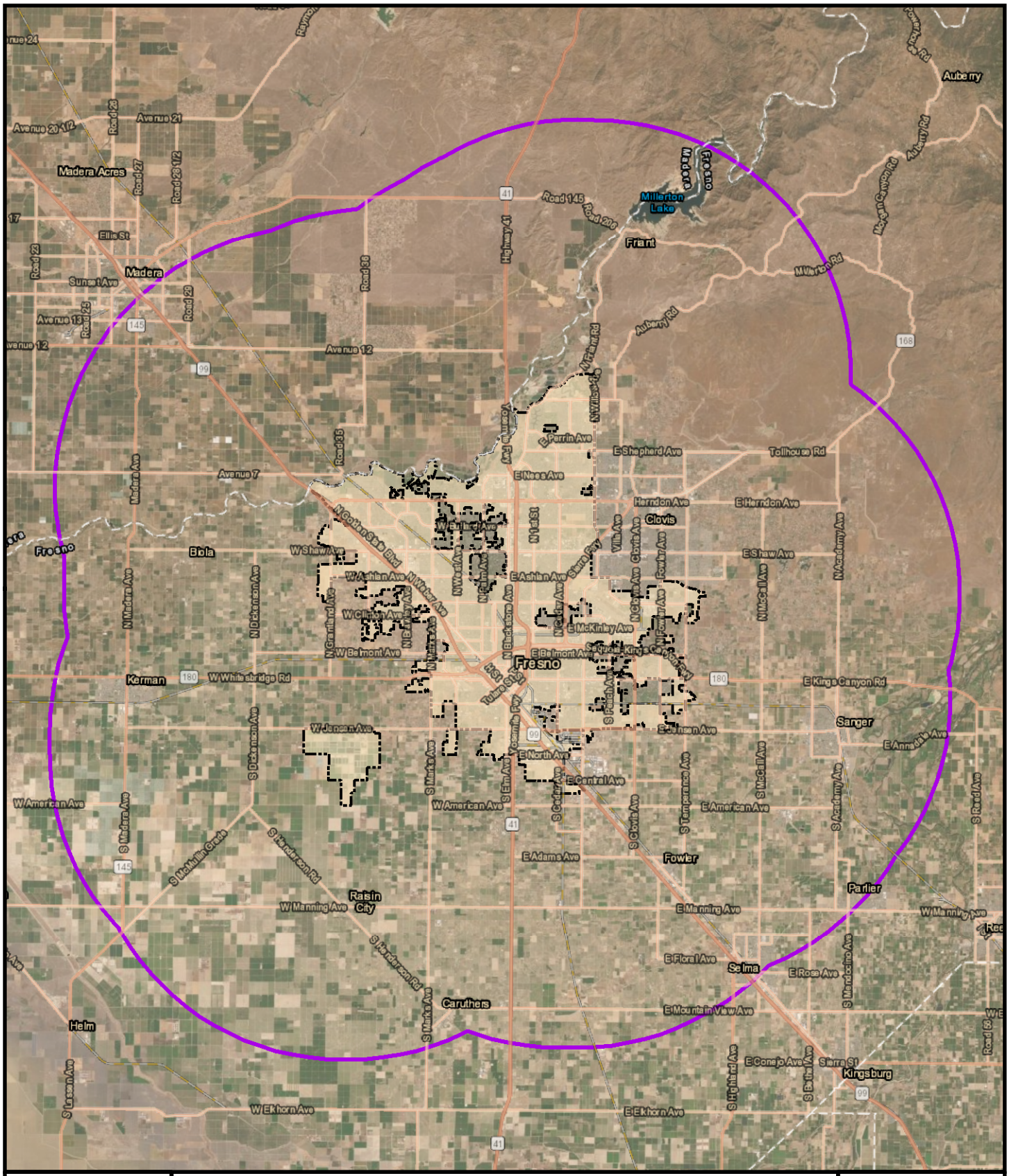
4.4.1 - INTRODUCTION

This section of the EIR describes impacts to biological resources that would result from implementation of the Proposed Regulation and Permitting of Commercial Cannabis Activities (Project). The following discussion addresses existing environmental conditions in the affected area, identifies and analyzes environmental impacts for the Project in the context of CEQA and other laws and regulations applicable to biological and aquatic resources, and recommends measures to avoid and minimize significant impacts anticipated from Project implementation.

Study Area for Project

The Biological Study Area (BSA) for the Project includes the City of Fresno plus an approximately 10-mile buffer (Figure 4.4-1). Literature and database reviews were conducted to determine which sensitive biological resources have been recorded within the BSA. The following sources were reviewed for information on special-status biological resources in the Project vicinity:

- California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (California Department of Fish and Wildlife, 2018)(CNDDB; (California Department of Fish and Wildlife, 2019b);
- CDFW's Biogeographic Information and Observation System (BIOS) (California Department of Fish and Wildlife, 2019a); (California Department of Fish and Wildlife, 2019b);
- CDFW's California Wildlife Habitat Relationships (CWHR) (Zeiner, 1988) System Guide to Wildlife Habitats (Mayer, 1988);
- California Native Plant Society (CNPS) (California Native Plant Society , 2019) Inventory of Rare and Endangered Plants of California (California Native Plant Society);
- U.S. Fish and Wildlife Service's (U.S. Fish and Wildlife Service, 2019);
- USFWS Critical Habitat Mapper (U.S. Fish and Wildlife Service, 2017);
- USFWS National Wetlands Inventory (NWI) (U.S. Fish and Wildlife Service, 2019c); (California Department of Fish and Wildlife, 2019);
- U.S. Geological Survey (USGS) (U.S. Geologic Survey, 2019) National Hydrography Dataset (NHD) ; U.S. Geologic Survey (USGS);
- Federal Emergency Management Agency (FEMA) (Federal Emergency Management Agency, 2019) flood zone maps (Federal Emergency Management Agency, 2019);



Project Area with 10 Mile Buffer

10 Mile Buffer City Limits

N

0 3 Miles

QK Sources: ESRI Esri, HERE, Garmin, (c)

Figure 4.4-1

- U.S. Department of Agriculture (USDA) (United States Department of Agriculture, 2009), Natural Resources Conservation Service (NRCS) Web Soil Survey (United States Department of Agriculture, 2009);

- Current and historical aerial imagery (Google LLC. 2019 Google Earth Pro); and

- Western Regional Climate Center (WRCC, 2019) (Western Regional Climate Center, 2019).

For the CNDDB, a standard 10-mile search radius was used. For the other data sources, the search was focused on the nine California USGS 7.5-minute quadrangles that the BSA falls within including Fresno North, Fresno South, Kearney Park, Herndon, Gregg, Lanes Bridge, Friant, Clovis, and Malaga.

The CNDDB provides element-specific spatial information on individually documented occurrences of special-status species and sensitive natural communities. Some of the information available for review in the CNDDB is still undergoing review by the CDFW; these records are identified as unprocessed data. The CNPS database provides similar information but at a much lower spatial resolution. Much of the information in these databases is obtained opportunistically and is often focused on protected lands or on lands where development has been proposed. Neither database represents a comprehensive survey for special-status resources in the region. Accordingly, the absence of recorded occurrences in these databases at any specific location does not preclude the possibility that a special-status resource could be present.

Reviews of the NWI (U.S. Fish and Wildlife Service, 2019c) and National Hydrography Dataset (U.S. Geologic Survey, 2019) were conducted to identify whether wetlands had previously been documented on or adjacent to the Project site. The NWI, which is operated by the USFWS, is a collection of wetland and riparian maps that depicts graphic representations of the type, size, and location of wetland, deep water, and riparian habitats in the United States; however, much of the data in the NWI has been derived from interpretation of aerial imagery with no on-the-ground confirmation. In addition to these sources, regional hydrologic information was obtained from the USGS to evaluate the potential occurrence of perennial, intermittent, and ephemeral streams (depicted as blueline features) within the Project site.

Soils data were obtained from Web Soil Survey (United States Department of Agriculture, 2009). Weather and precipitation data were obtained from the Western Regional Climate Center (Western Regional Climate Center, 2019), and land use information was obtained from available aerial imagery. Information about flood-prone areas was obtained from the Federal Emergency Management Agency, Department of Homeland Security (Federal Emergency Management Agency, 2019).

The results of the database inquiries were reviewed to develop a list of sensitive biological resources and species that may be present within the vicinity of the Project. This list was then evaluated against aerial imagery, soils data, CNDDB recorded occurrences, and other databases referenced above to determine which sensitive biological resources occur or have the potential

to occur within the BSA. The resulting list of resources was then analyzed to determine the potential for impacts to those resources to occur as a result of implementation of the Project.

For the purposes of this assessment, special-status species are defined as plants or animals that include:

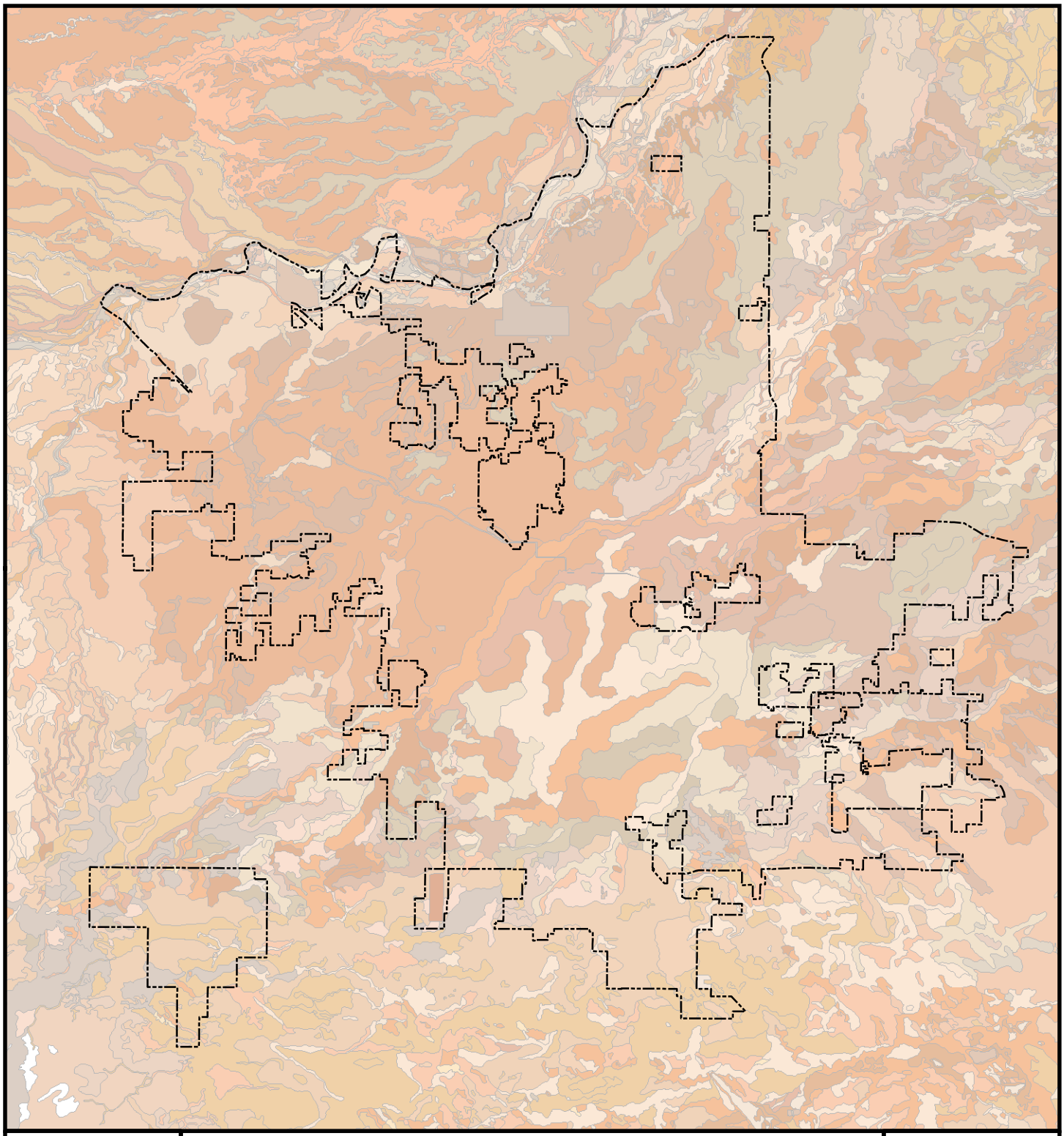
- Species listed as threatened or endangered under the Federal Endangered Species Act (FESA) (California Native Plant Society, Rare Plant Program, 2019); species that are under review may be included if there is a reasonable expectation of listing within the life of the Project;
- Species listed as candidate, threatened, or endangered under the California Endangered Species Act (CESA);
- Species designated as Fully Protected, Species of Special Concern, or Watch List by the CDFW;
- Other species included on the CDFW's Special Animals List;
- Plant species with a California Rare Plant Rank (CRPR) (California Native Plant Society, Rare Plant Program, 2019)in categories 1 or 2; and
- Species designated as locally important by the local agency and/or otherwise protected through ordinance or local policy.

4.4.2 - ENVIRONMENTAL SETTING

The BSA is situated in the San Joaquin Valley within the Fresno city limits and is composed primarily of residential, commercial, and industrial development with limited agricultural lands on the periphery. Natural habitats occur in very small areas within the BSA, usually in association with waterways, parks, and scattered undeveloped lots within the city limits. See Chapter 3 of this EIR for a detailed description of the regional and local environment for the Project.

Soils

According to the Web Soil Survey (United States Department of Agriculture, 2009), numerous soil types underlay the City of Fresno (Figure 4.4-2). Types that are most common beneath areas proposed for development include San Joaquin sandy loam, San Joaquin loam, Borden loam, Exeter loam, Exeter sandy loam, Tujunga loamy sand, Hanford fine sandy loam, Hanford (ripperdan) fine sandy loam, Hanford sandy loam, Delhi sandy loam, and Delhi sand. Refer to Section 4.7, *Geology and Soils* of this EIR for further discussion of soils.



SSURGO Soils

100: Millerton fine sandy loam
101: Atwater sandy loam
102: Hanford (ripperdan) fine sandy loam
103: Cajon loamy sand
104: Los Robles loam
105: Blasingame loam
106: Pollasky-Rocklin sandy loams
107: Madera loam
108: Academy loam
109: Hanford sandy loam
110: Ahwahnee and Vista rocky coarse sandy loams
110: Montpellier coarse sandy loam
111: Hanford gravelly sandy loam
112: Keyes cobbly clay loam
113: Fresno sandy loam
114: Vista coarse sandy loam
115: Yokohl gravelly loam
116: Centerville clay
117: Cibo clay
118: Blasingame clay loam
119: Nord loam
11: Trigo fine sandy loam
120: Dinuba-El Peco fine sandy loams
121: Basic igneous rock land
122: Traver fine sandy loam
123: Merced clay
12: Water
13: San Joaquin-Whitney sandy loams
14: Cometa-San Joaquin sandy loams
15: Whitney sandy loam
16: El Peco fine sandy loam
17: Exeter sandy loam
18: Pollasky sandy loam
19: Visalia loam
1: Fallbrook sandy loam
20: Redding gravelly loam
21: Atwater loamy sand
22: Grangeville soils
23: Greenfield sandy loam
24: Yokohl loam
25: Wunjey very fine sandy loam
26: Dello loamy sand
27: Hildreth clay
28: Hornitos gravelly sandy loam
29: Spillway
2: Tujunga sand
30: Hesperia sandy loam
31: Visalia fine sandy loam
32: Hesperia fine sandy loam
33: Friant fine sandy loam
34: Chino loam
35: Sesame sandy loam
36: Chino sandy loam
37: Honcut fine sandy loam
38: Cajon loamy coarse sand
39: Porterville clay
3: Miscellaneous water
40: Pollasky fine sandy loam
41: Ramona loam
42: Cometa sandy loam
43: Greenfield fine sandy loam
44: Los Robles clay loam
45: Rockland
46: Fresno fine sandy loam
47: Grangeville sandy loam
48: Cometa loam
49: Whitney and Rocklin sandy loams
4: Fallbrook very rocky sandy loam
50: Redding gravelly sandy loam
51: Tujunga cobbly loamy sand
52: Pachappa loam
53: Hesperia fine sandy loam moderately deep
54: Gravel pits
55: Dello sandy loam
56: Borden loam
57: Riverwash
58: Hanford coarse sandy loam
59: Mt. Olive clay
5: Vista very rocky coarse sandy loam
60: Tujunga soils
61: Yokohl clay loam
62: Ramona sandy loam
63: San Joaquin loam
64: Grangeville fine sandy loam
65: Tivy loam
66: Delhi loamy sand
67: Tujunga loamy sand
68: Visalia sandy loam
69: Hornitos very rocky sandy loam
6: Exeter loam
70: Whitney fine sandy loam
71: Delhi sand
72: Alamo clay
73: Whitney and Rocklin gravelly sandy loams
74: Millerton very rocky fine sandy loam
75: Toomes extremely cobbly loam
76: Sesame loam
77: Redding-Raynor complex
78: Madera clay loam
79: Pollasky-Montpellier complex
7: Denied access
80: San Joaquin sandy loam
81: Pits
82: Cometa gravelly sandy loam
83: Dumps
84: Corning gravelly loam
85: Foster loam
86: Ahwahnee and Vista very rocky coarse sandy loams
87: Centerville cobbly clay
88: San Joaquin-Alamo complex
89: Los Robles sandy loam
8: Greenfield coarse sandy loam
90: Terrace escarpments
91: Positas gravelly loam
92: Rocklin sandy loam
93: Millerton rocky fine sandy loam
94: Cometa sandy loams
95: Pozo loam
96: Bear Creek loam
97: Hanford fine sandy loam
98: Calhi loamy sand
99: Madera sandy loam
9: Tujunga and Hanford soils
City of Fresno Boundary

N

0 Miles 2

QK Sources: USGS SSURGO Soil Survey

Figure 4.4-2

Hydrology

According to the NWI and NHD, there are numerous streams that intersect the City of Fresno, most of which are artificial waterways such as canals used for irrigation or flood control (United States Fish and Wildlife Service, 2011) and (U.S. Geologic Survey, 2019); Figure 4.4-3). The San Joaquin River runs westwards along the northern border of the City of Fresno and is designated as a regulatory floodway by FEMA (Federal Emergency Management Agency, 2019); Figure 4.4-4). There are several wetland areas associated with the river including freshwater emergent wetlands, freshwater forested/shrub wetlands, and freshwater ponds. There are various artificial freshwater ponds scattered within city limits, most associated with public parks or other recreational facilities such as golf courses. Southwest of the borders of the City of Fresno, portions of the Fresno-Clovis Regional Wastewater Treatment Facility are classified as lakes by NHD (U.S. Geologic Survey, 2019); Figure 4.4-2). See Section 4.10, *Hydrology and Water Quality* of this EIR for further detail on hydrologic features in the BSA.

The northwestern half of the City is within a minimal flood hazard zone, while the southeastern half is within a 0.02 percent annual chance flood hazard zone in many areas (Federal Emergency Management Agency, 2019). Near the border between Fresno and Clovis, and near the southwestern border of Fresno, there are smaller areas that fall within a one percent annual chance flood hazard zone (Figure 4.4-4).

Vegetation and Other Land Cover

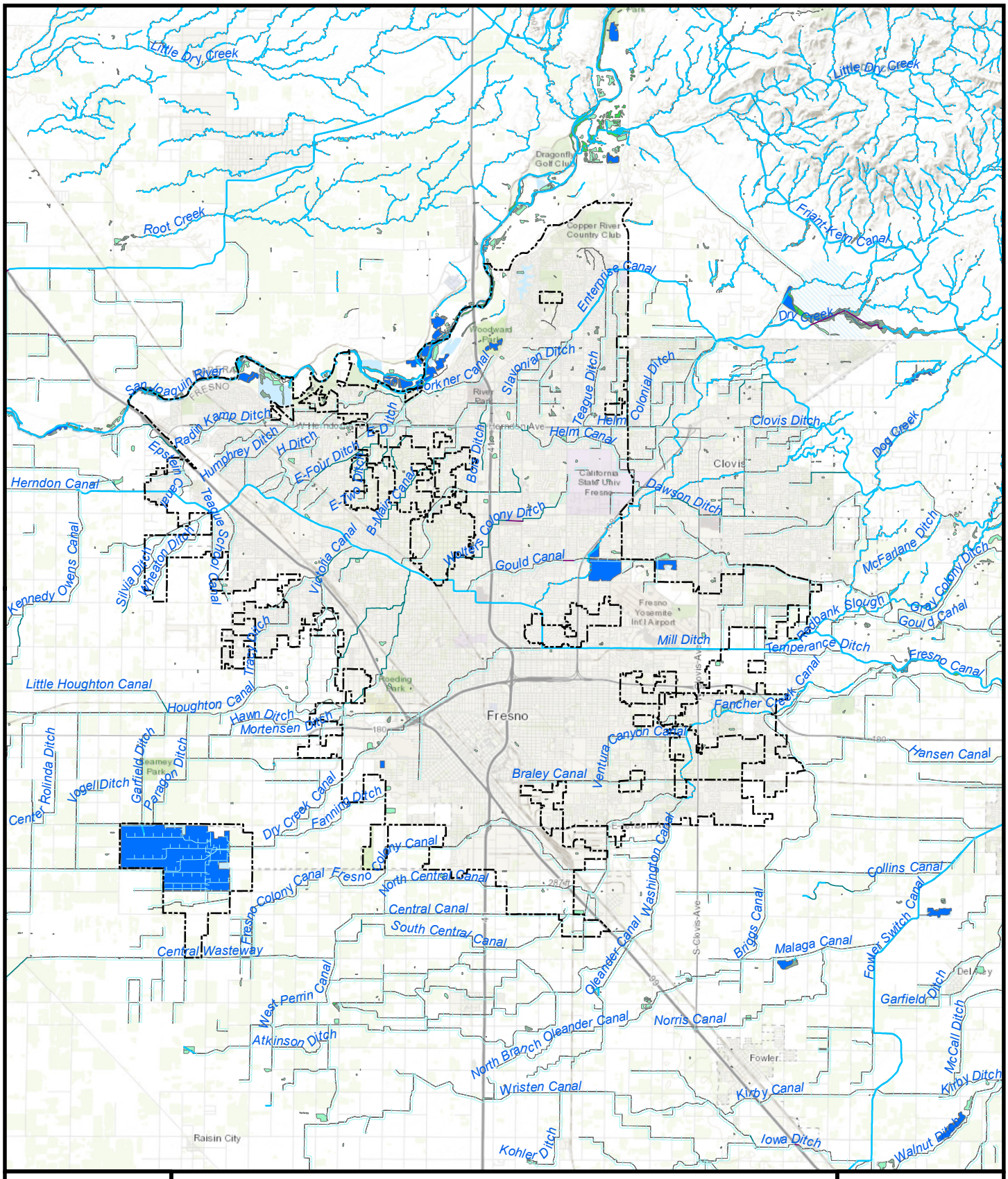
The habitats observed via aerial imagery were characterized using the CWHR *A Guide to Wildlife Habitats of California* (Mayer, 1988). Six habitat types were determined to occur within the BSA: Annual Grassland, Barren, Urban (tree groves, grass lawns, and street strips), Riverine and Valley Foothill Riparian located along the San Joaquin River and other streams where vegetation has been allowed to grow, and Deciduous Orchard located in the northwest corner of the City of Fresno limits.

Annual Grassland

Annual Grassland is described by CWHR as open grasslands composed primarily of annual plant species (Mayer, 1988). Structure is dependent largely on weather patterns, human disturbance, and large quantities of dead material can be found in summer months. Plant species include introduced annual grasses such as red brome (*Bromus madritensis* ssp. *rubens*), Mediterranean grass (*Schismus barbatus*), and wild oats (*Avena fatua*), and forbs such as red-stemmed filaree (*Erodium cicutarium*) and turkey mullein (*Croton setigerus*).

Barren

CWHR describes a habitat as Barren if less than two percent is covered with vegetation (Mayer, 1988). This includes habitats in which there are large stretches of bare ground between plant specimens, typically ruderal species, as well as graded and paved areas.



NHD/NWI Features

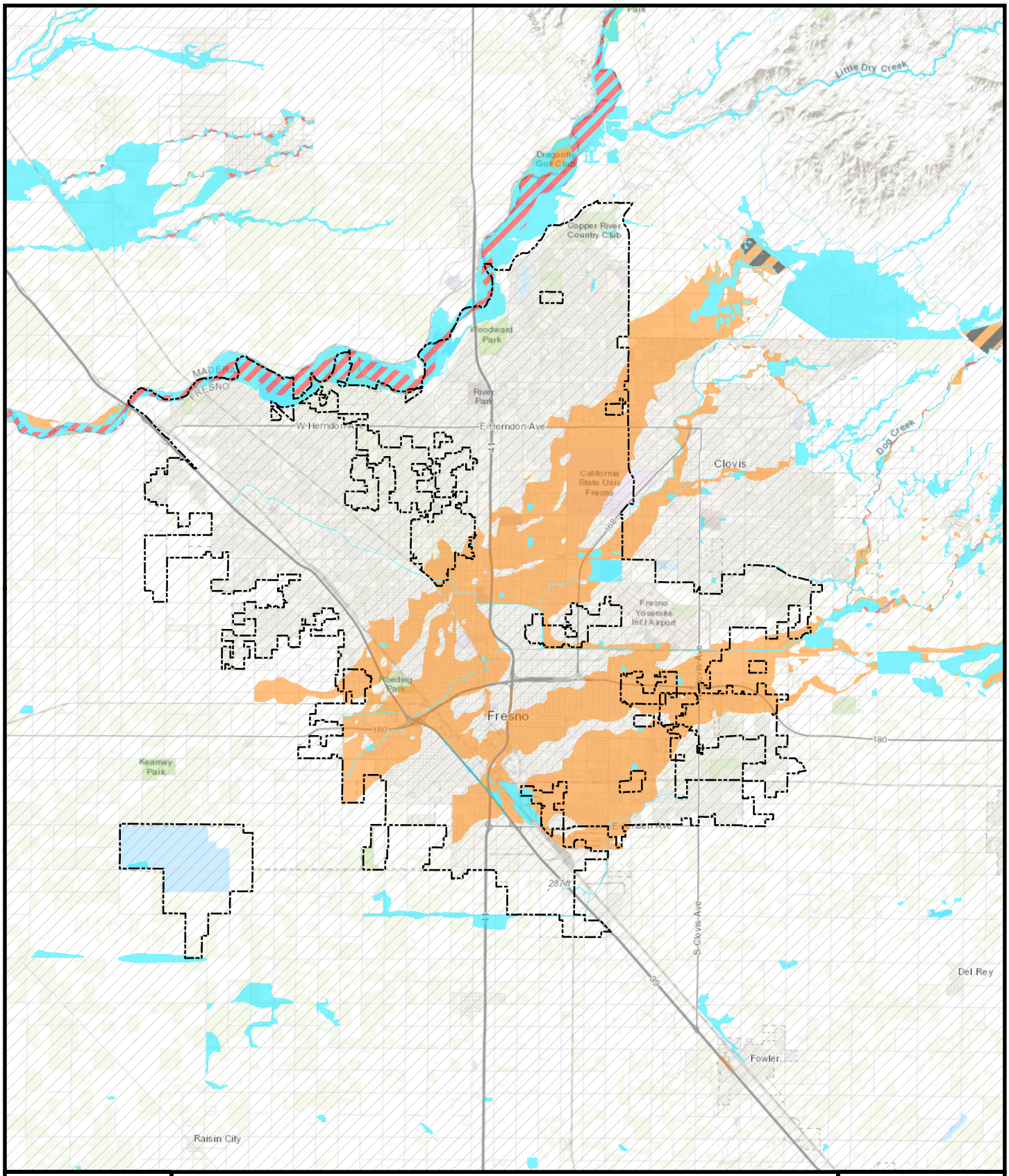
- Artificial Path
- Canal Ditch
- Connector
- Pipeline
- Stream River - Intermittent
- Underground Conduit
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine
- City Limits

N

0 3 Miles

QK Sources: USGS National Hydrologic Dataset

Figure 4.4-3



FEMA Flood Hazards

- 1% Annual Chance Flood Hazard
- Regulatory Floodway
- 0.2% Annual Chance Flood Hazard
- Area with Reduced Risk Due to Levee
- Area of Minimal Flood Hazard
- City Limits

N

0 3 Miles

QK Sources: FEMA NHFL Dataset

Figure 4.4-4

RIVERINE

CWHR describes waterways as Riverine if there is an intermittent or continual running (perennial) flow of water present (Mayer, 1988). Indicator vegetation for riverine include riparian habitats that may be found adjacent to rivers or streams. Plant species often include a variety of emergent plants species and aquatic plants such as duckweed (*Lemna* sp.) and algae, depending on water velocities, depths, and temperatures.

VALLEY FOOTHILL RIPARIAN

Valley Foothill Riparian habitat generally consists of complex composition of trees, shrubs and herbaceous plants found along streams and rivers (Mayer, 1988). Dominant tree species are mostly winter deciduous and include sycamores (*Platanus racemosa*), cottonwoods (*Populus* sp.), and valley oaks (*Quercus lobata*). The shrub layer typically includes California blackberry (*Rubus ursinus*), blue elderberry (*Sambucus nigra*), poison oak (*Toxicodendron diversilobum*), and willows (*Salix* sp.). Herbaceous species may include sedges (*Carex* sp.), rushes (*Juncus* sp.), poison-hemlock (*Conium maculatum*), miner's lettuce (*Claytonia parviflora*), and hoary nettle (*Urtica dioica*). Density of shrub and herbaceous layers can vary dependent on the successional stage of the canopy layer.

DECIDUOUS ORCHARD

Deciduous Orchard is classified by CWHR as an open single species tree dominated habitat (Mayer, 1988)Typically, the tree species are low, bushy trees with an open understory. Deciduous orchards can include almonds, apples, apricots, cherries, figs, nectarines, peaches, pears, pecan, pistachios, plums, pomegranates, prunes, and walnuts. The understory may consist of low-growing grasses, legumes, and other herbaceous plant species or may be barren. Typically, this habitat is intensively maintained and has a constant available water source for irrigation.

URBAN

CWHR classifies Urban into five different categories: tree grove, street strip, shade tree/lawn, lawn, and shrub cover, each usually dominated by non-native ornamental species (Mayer, 1988). Based on aerial imagery, each of these five categories is present within the BSA. Tree groves include city parks, green belts, and cemeteries that have a continuous canopy but can vary in height, tree spacing, and understory conditions. Street tree strips have a variation in the tree spacing depending on the species planted and the design. Shade tree/lawn and lawn are typically residential areas and areas that are typical of Southern and Central California. The final category, shrub cover, is a more limited distribution with the use of hedges. Based on the hedge species, planting design, and maintenance control there can be a wide diversity of density and structure.

Wildlife

Wildlife species in the San Joaquin Valley are adapted to endure harsh climatic conditions, including extreme aridity, summer heat, and winter cold temperatures. The City of Fresno

provides an urban oasis in the context of these conditions, with manmade water sources, vegetation, food sources, and shelter, and may support a more diverse array of wildlife species than the natural habitat surrounding it. The BSA has the potential to support a variety of avian, reptile, and mammal species. Common species known to occur in the BSA include house finch (*Haemorphous mexicanus*), common raven (*Corvus corax*), California ground squirrel (*Otospermophilus beecheyi*), western fence lizard (*Sceloporus occidentalis*), and domestic cats (*Felis catus*) and dogs (*Canis lupus familiaris*). Based on known current habitat and aerial imagery, the BSA may support a limited number of special-status species.

Special-Status Biological Resources

A comprehensive list of special-status plant and animal species known or with potential to occur within the Project vicinity and evaluated for this Project is presented in Appendix I. Table 4.4-1 focuses on those species that were determined to have potential to occur within the BSA based on existing conditions and identifies if the Project may affect the species and threaten the viability of the continued survival of the species population. Each species potentially affected by the Project is further discussed in the subsections below.

Table 4.4-1
Special-Status Species with Potential to Occur Onsite

Scientific Name Common Name	Status Fed/State ESA CDFW	Potentially Affected by Project? Yes/No	Viability Threat? Yes/No
Amphibians			
Ambystoma californiense California tiger salamander	FT/ST --	No	No
Birds			
Ardea alba Great egret	-/- SS	Yes	No
Athene cunicularia Burrowing owl	-/- SSC	Yes	No
Buteo swainsoni Swainson's hawk	-/ST -/-	Yes	No
Egretta thula Snowy egret	-/- SS	Yes	No
Eremophila alpestris actia California horned lark	-/- WL	Yes	No
Nycticorax nycticorax Black-crowned night heron	-/- SS	Yes	No

Scientific Name Common Name	Status Fed/State ESA CDFW	Potentially Affected by Project? Yes/No	Viability Threat? Yes/No
Mammals			
Antrozus pallidus Pallid bat	-/- SSC	Yes	No
Eumops perotis californicus Western mastiff bat	-/- SSC	Yes	No
Lasiurus cinerus Hoary bat	-/- SS	Yes	No
Taxidea taxus American badger	-/- SSC	Yes	No
Vulpes macrotis mutica San Joaquin kit fox	FE/ST -/-	Yes	No

FE Federally Endangered
FT Federally Threatened
ST State Threatened
SS State Sensitive
SSC State Species of Special Concern

Special-status Plant Species

The literature and database review identified 15 special-status plant species that are known or have a potential to occur within the vicinity of the BSA (Appendix I). Based on an ecological review of those 15 special-status plant species it was determined that none have the potential to occur within the BSA.

Special-status Animal Species

The literature review identified 36 special-status animal species that are known to occur or with potential to occur in the vicinity of the Project (Appendix I). Of those, 12 were determined to have the potential to occur within the BSA based on their ecological needs (see Table 4.4-1). The life history of these 12 species, that have the potential to occur, are presented below.

CALIFORNIA TIGER SALAMANDER

Ambystoma californiense

Status: Federally and State Threatened

The California tiger salamander is a large, stocky salamander, with a broad, rounded snout and small black eyes that protrude from its head (Department of Fish and Game, 2014). It has permeable skin and requires a moist environment. California tiger salamander is only found in California and primarily inhabits grasslands and low foothills of the Central Valley and grassland/oak savannah plant communities of the Sierra Nevada foothills up to elevations of

1,640 feet and Coast Range elevations up to 3,940 feet (Department of Fish and Game, 2014); (U.S. Fish and Wildlife Service, 2017). They spend most of their life on land living in underground burrows made by squirrels and other small burrowing mammals (U.S. Fish and Wildlife, 2014). Optimum breeding habitat is ephemeral and should dry down for at least 30 days before the rains begin in the fall (around August or September), which prevents bullfrogs (*Rana catesbeiana*) or non-native fish species from establishing breeding populations (U.S. Fish and Wildlife Service, 2017). California tiger salamanders can be found in permanent ponds; permanent ponds used by California tiger salamanders are usually free of predatory fish or breeding bullfrog populations. California tiger salamanders are carnivorous, both as larvae and metamorphosed individuals, feeding on zooplankton, aquatic invertebrates, snails, and tadpoles (Department of Fish and Game, 2014).

Most of the BSA is developed and suitable aquatic habitat is lacking. One occurrence (EONDX 108190) was recorded in 2017 at an apartment complex near the intersection of West Ashlan Avenue and State Route 99 (U.S. Fish and Wildlife Service, 2019). The record identifies the species as presumed extant but notes that the individual is likely a remnant of a population that is no longer viable due to habitat loss. The proposed Project is limited to very specific locations within the city limits, most of which have already been developed and where the species is unlikely to occur.

BURROWING OWL

Athene cunicularia

Status: State Species of Special Concern

Burrowing owls are found throughout much of California, primarily in arid and semi-arid habitats, including deserts (Poulin, 2011); (Zeiner, 1988). Burrowing owls are the only species of owl in North America that use subterranean burrows for nesting and shelter. They prefer open habitats with few scattered shrubs or trees. Burrows used by this species are created by other fossorial mammals, especially California ground squirrels, although burrowing owls have been known to inhabit manmade structures such as open pipes, culverts, and storm drains. They are also the most diurnally active owl in North America, with peak activity levels during the crepuscular periods (dawn and dusk). Burrowing owls are known to occur in developed habitats, including urban and agricultural habitats, provided there are burrows available in relatively undisturbed areas (e.g., canals, drainage basins, abandoned railroad tracks). They consume primarily small rodents and insects, with rodents being particularly important during the breeding season. Primary threats to burrowing owls include habitat loss, degradation, and fragmentation, particularly where burrows are present. Use of pesticides to reduce rodent and insect populations may threaten burrowing owls in urban and agricultural habitats caused by secondary poisoning transferred through their prey.

Within the BSA, suitable burrowing owl habitat is present in the Annual Grassland, Urban, and Barren portions of the city limits. This species is known to use manmade structures as burrows

or as temporary shelters from predators and has been found along 3s and channelized drainages in other heavily developed areas of the State. Larger tracts of grassland habitat, such as undeveloped parcels and airports, can also support this species. The nearest recorded occurrences were observed in the 1980s near Fresno Yosemite Airport and at Redbank Slough in southeast Clovis (EONDX 103145 and 103146; (U.S. Fish and Wildlife Service, 2019). The species was not observed at either location during statewide surveys conducted between 1991 and 1993, but they are still presumed extant.

SWAINSON'S HAWK

Buteo swainsoni

Status: State Threatened

Swainson's hawks occur in grassland, desert, and agricultural landscapes throughout the Central Valley and Antelope Valley (Bechard, 2010); (Zeiner, 1988). Some hawks may be resident, especially in the southern portion of their range, while others may migrate between winter and breeding habitats. They prefer larger isolated trees or small woodlots for nesting, usually with grassland or dry-land grain fields nearby for foraging but have been known to nest in large eucalyptus trees along heavily traveled freeway corridors. Swainson's hawks forage in grassland, open scrub, pasture, and dryland grain agricultural habitats, primarily for rodents. Swainson's hawks do exhibit a moderate to high nest site fidelity for successful nest sites.

Within the BSA, suitable nesting Swainson's hawk habitat is present in areas with isolated trees and large shrubs and in tall tree groves. Such habitats are associated with rural residences on county islands and on the perimeter of the City, older neighborhoods, in Riverine and Valley Foothill Riparian habitats along rivers and streams, and near large tracts of Annual Grassland habitat. Foraging habitat can be found in large tracts of Annual Grassland like those found at airfields and grain production fields, including those as far as 10 miles from nest sites. According to the CNDDB, the nearest occurrence of an active nest was recorded in 2016 adjacent to railroad tracks near the intersection of East Malaga Avenue and South Cedar Avenue in southeast Fresno (EONDX 106840). One nestling successfully fledge from this nest and the species is presumed extant in the area.

CALIFORNIA HORNED LARK

Eremophila aspestris actia

Status: State Watch List

The California horned lark is a year-round resident throughout most of the State (Zeiner, 1988). This species can be found in a variety of locations including beaches, stubble fields, short-grass prairies, extensive lawns (i.e. golf courses or airports), plowed fields, and high mountains (Kaufman, 2001). In the winter season, they can be found in desert lowlands where other wintering migratory birds may be located (Zeiner, 1988).

The horned lark occurs in areas that are barren or open habitats with short grass species present (Beason, 1995). In agricultural areas the horned lark occurs in fields of row crops, waste grains or heavily grazed areas. The breeding season is from March to July, typically with peak activity observed in May (Zeiner, 1988). The nest site is built on the open ground typically in a slight depression and is lined with grasses, weeds, or rootlets (Kaufman, 2001).

Suitable foraging and nesting habitat are found within larger tracts of Annual Grassland habitat within the city limits, which may include fallow agricultural lands, large vacant tracts and airfields. The nearest occurrence was 1992 of a group of >30 males on a large ranch property in northwest Fresno (EONDX 12425; (California Department of Fish and Wildlife, 2019b) The location was not precise, and the property may have been developed, but the species is presumed extant in that area.

PALLID BAT

Antrozous pallidus

Status: State Species of Special Concern

Pallid bats occur throughout California in a wide variety of natural habitats from sea level up through mixed conifer forests (Zeiner, 1988). They are most often found in open, dry habitats with rocky areas for roosting. Day roosts typically consist of caves, crevices, mines, and occasionally hollow trees, buildings, and bridges, so long as the roost can protect them from high temperatures. Night roots usually consist of more open sites. Pallid bats feed mainly on insects and arachnids, and they need access to water. Maternity season is from early April to as late as August. This species is very sensitive to disturbance at its roosts.

Within the BSA, water availability is consistent and roost options for pallid bat may include taller trees and buildings and bridge structures, but roost options appear to be limited and most likely concentrated in Downtown Fresno and older neighborhoods such as the Fig Garden area. According to the CNDDB, the nearest occurrence was recorded in 1909 and is presumed extant (EONDX 66606) (California Department of Fish and Wildlife, 2019b). The location was not specific.

WESTERN MASTIFF BAT

Eumops perotis californicus

Status: State Species of Special Concern

The western mastiff bat is the largest bat in North America and is a State Species of Special Concern. This species occurs in the southeastern San Joaquin Valley and Coastal Ranges from Monterey County southwards through Southern California (Zeiner, 1988); (Western Bat Working Group, 2005). It occurs in many open, semi-arid habitats, including forests, coastal scrub, grasslands, chaparral, and urban areas (Zeiner, 1988)Roosts typically include cliff faces, high buildings, trees, and tunnels. Maternity colonies are formed within tight crevices in rock or

buildings, and typically contain 30 to 100 individuals. Maternity season begins in March and generally ends in September.

Foraging takes place at night over dry desert washes, flood plains, chaparral, grassland, and agricultural areas (Zeiner, 1988). Insects are taken in flight; prey items include moths, beetles, crickets, and katydids (Zeiner, 1988); (Western Bat Working Group, 2005). Individuals forage year-round, although they will remain in roosts overnight if temperatures drop below 41°F (Zeiner, 1988).

Within the BSA, buildings, trees, and bridge structures may offer roost options for western mastiff bat, and foraging habitat is abundant. Two occurrences were recorded in Fresno in 1991 (EONDX 66289 and 66290; (California Department of Fish and Wildlife, 2019b). One was at Washington Grammar School, most likely Washington Colony Elementary School near the intersection of Lincoln Avenue and SR-41. The other was near the intersection of Brawley Avenue and Belmont Avenue. The species is presumed extant in the area.

HOARY BAT

Lasiurus cinereus

Status: None; included on State Special Animals List

Hoary bats can be found anywhere in California from sea level to 13,200 feet (Zeiner, 1988). They winter on the Coast and in Southern California and breed inland north of their winter range. Hoary bats roosts in dense foliage on medium to large trees, usually along habitat edges or in habitat mosaics. A water sources is required. Their maternity season is from May through July, with nursery roosts occurring in woodlands and forests. They often forage with other bat species.

Within the BSA, suitable roost habitat is present where taller trees are present along the San Joaquin River and in older neighborhoods such as the Fig Garden area. The nearest occurrence was recorded in 1915 near the intersections of California Avenue and Valentine Street in south Fresno (EONDX 68782; (California Department of Fish and Wildlife, 2019b). Despite the age of the record, the species is presumed extant in the area.

AMERICAN BADGER

Taxidea taxus

Status: State Species of Special Concern

American badgers occur most often in open, drier stages of grasslands, shrub, and forest habitats where friable soils are present (Zeiner, 1988). They dig burrows for cover and reproduction and can dig a new burrow every night. American badgers are nocturnally active and feed mostly on fossorial rodents, such as gophers and ground squirrels. Litters are born in March or April. They are somewhat tolerant of human activities but avoid cultivated agricultural habitats.

Within the BSA, suitable American badger denning habitat may be present in larger tracts of Annual Grassland habitat, such as those associated with airfields or fallowed agricultural fields waiting for urban development. They may also be found in more open areas along the San Joaquin River. They are most likely to be found around the perimeter of the City where large areas of grassland habitat are available. They are not likely to be found in the more densely developed portions of the City, even if small patches of Annual Grassland and Barren habitats exist. The nearest occurrence was recorded in 1988 of a roadkill found near the intersection of Herndon Avenue and the Union Pacific Railroad (EONDX 56599; (California Department of Fish and Wildlife, 2019b). The species is presumed extant in the area.

SAN JOAQUIN KIT FOX

Vulpes macrotis mutica

Status: Federally Endangered and State Threatened

San Joaquin kit foxes are a subspecies of kit fox that is endemic to the Central Valley of California (U.S. Fish and Wildlife Service (USFWS), 1998)(Sacramento Fish and Wildlife Office, 2010). They are found primarily in the San Joaquin Valley, Carrizo Plain, and Cuyama Valley, as well as other small valleys in the western foothills of the Central Valley. They are only found west of the Sierra Nevada crest. They occupy arid to semi-arid grasslands, open shrublands, savannahs, and grazed lands with loose-textured soils. San Joaquin kit foxes are well-established in some urban areas and are highly adaptable to human-altered landscapes. They generally avoid intensively maintained agricultural land uses. San Joaquin kit foxes use subterranean dens year-round for shelter and pup-rearing. They are nocturnally active but may be visible above ground near their dens during the day, particularly in the spring. They feed primarily on small mammals, but will consume a variety of prey, and will scavenge for human food.

Within the BSA, suitable San Joaquin kit fox habitat exists in the Urban, Annual Grassland, and Barren portions, most likely in the southern and eastern portions of the City closer to the valley floor. The nearest occurrence was recorded in 1993 as a roadkill on State Route 99 near Grantland Avenue in the Herndon area (EONDX 53873; (California Department of Fish and Wildlife, 2019b). The species is presumed extant in the area.

NESTING BIRDS

Habitat conditions within the BSA could support a wide variety of nesting bird species, including common species such as house finch, California scrub-jay (*Aphelocoma californica*), American crow (*Corvus brachyrhynchos*), cliff swallow (*Petrochelidon pyrrhonota*), and raptors such as red-tailed hawk (*Buteo jamaicensis*) and great-horned owl (*Bubo virginianus*). Many of the drainage basins and parks within the BSA have become attractive to waterfowl, including breeding Canada geese (*Branta canadensis*). Raptors typically nest in trees but will also utilize anthropogenic structures such as electrical transmission towers and tall buildings. Smaller songbirds often nest in trees and shrubs, although some species will nest on the ground or in anthropogenic

structures, such as the eaves of homes and beneath bridges. The San Joaquin River and parks throughout Fresno can also support nesting birds.

Sensitive Natural Communities

SENSITIVE PLANT COMMUNITIES

No sensitive plant communities are documented in CNDDB within the BSA; however, several sensitive communities are located north and northeast of the Project, including Great Valley Mixed Riparian Forest, Northern Claypan Vernal Pool, Northern Hardpan Vernal Pool, and Sycamore Alluvial Woodland (California Department of Fish and Wildlife, 2019b). Fragments of riparian and wetland habitats are scattered throughout the BSA in association with streams and drainage basins.

CRITICAL HABITATS

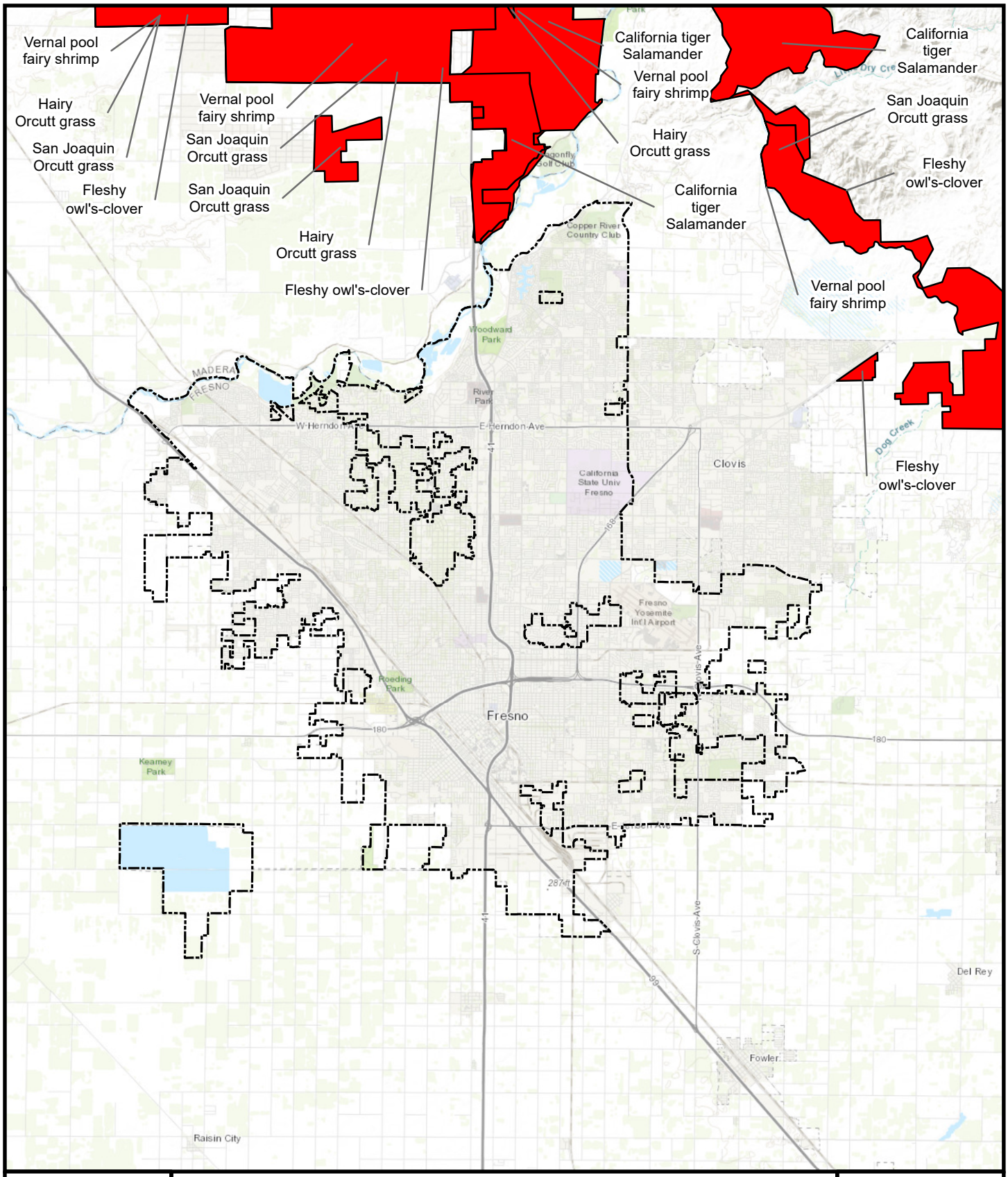
The BSA does not overlap any federally designated or proposed critical habitats (California Department of Fish and Wildlife, 2019a); Figure 4.4-5).

JURISDICTIONAL AQUATIC RESOURCES

Based on review of NWI, NHD and aerial imagery, there are numerous federal and State jurisdictional aquatic features within the City of Fresno (Google LLC. 2019 Google Earth Pro); (U.S. Fish and Wildlife Service, 2019c); (U.S. Geologic Survey, 2019); Figure 4.4-2). Many of these aquatic features are artificial paths or ditches designed for irrigation or flood control measures. The San Joaquin River runs along the northern boundary of the City. Streams within the City are managed for flood control and irrigation; however, many have natural habitat that could support wildlife. Waterways with a definable bed, bank, and channel are subject to the jurisdiction of the CDFW under the Section 1600 et seq. of the California Fish and Game Code. Those features that drain into the San Joaquin River are subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE) and Regional Water Quality Control Board (RWQCB) under the Federal Clean Water Act.

WILDLIFE MOVEMENT

Wildlife movement corridors, also referred to as dispersal corridors or landscape linkages, are generally defined as linear features along which wildlife can travel from one habitat or resource area to another. Wildlife movement corridors can be large tracts of land that connect regionally important habitats that support wildlife in general, such as stop-over habitat that supports migrating birds or large contiguous natural habitats that support wildlife with very large home ranges (e.g., coyotes (*Canis latrans)*, mule deer (*Odocoileus hemionus californicus)*). They can also be small scale movement corridors, such as riparian zones, that provide connectivity and cover to support movement at a local scale.



Critical Habitat

USFWS Critical Habitat

City Limits

N

0 3 Miles

QK Sources: USFWS Critical Habitat

Figure 4.4-5

The Project site and surrounding area contain minimal areas of open habitat and there tends to be significant barriers to local wildlife movement, such as major highways, freeways, retaining walls, residential and commercial properties, and areas that lack native or undisturbed habitats. Wildlife traveling through the BSA would likely be impeded during foraging and dispersal activities. However, the creeks and streams found throughout the City may facilitate movement of wildlife through the City, though likely at a low level due to human disturbances and presence of domestic animals. The San Joaquin River provides a large wildlife movement corridor between the Sierra Nevada and the valley floor.

HABITAT CONSERVATION PLANS

One Habitat Conservation Plan (HCP) covers the City of Fresno: PG&E San Joaquin Valley Operation and Maintenance HCP (California Department of Fish and Wildlife, 2019a). This HCP covers activities performed by PG&E and does not apply to the proposed Project.

4.4.3 - REGULATORY SETTING

Noise regulations are addressed through the efforts of various federal, State, and local government agencies. The agencies responsible for regulating noise are discussed below.

Federal

FEDERAL ENDANGERED SPECIES ACT OF 1973 (USC, TITLE 16, SECTIONS 1531 - 1543)

The Federal Endangered Species Act (FESA) and subsequent amendments provide guidance for the conservation of endangered and threatened species and the ecosystems upon which they depend. The USFWS and National Marine Fisheries Service (NMFS) share responsibilities for administering the FESA. The FESA defines species as threatened or endangered and provides regulatory protection for listed species. The FESA provides a program for the conservation and recovery of threatened and endangered species as well as the protection of designated critical habitat that USFWS and NMFS determines is required for the survival and recovery of listed species.

Section 9 lists actions that are prohibited under the FESA. Although "take" of a listed species is generally prohibited, "take" can be permitted when it is incidental to an otherwise legal activity. The FESA defines "take" as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct." The definition of "harm" is defined as an act which actually kills or injures wildlife and includes certain types of significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns related to breeding, feeding, or shelter. "Harass" is defined as actions that create the likelihood of injury to listed species by disrupting normal behavioral patterns related to breeding, feeding, and shelter significantly.

Section 7 of the FESA requires federal agencies, in consultation with and assistance from the Secretary of the Interior or the Secretary of Commerce, as appropriate, to ensure that actions

they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of critical habitat for these species. Regulations governing interagency cooperation under Section 7 are found in California Code of Regulations (CCR) Title 50, Part 402. If an activity could result in "take" of a listed species as an incident of an otherwise lawful activity, then a biological opinion can be issued by the USFWS and/or National Marine Fisheries Service (NMFS) with an incidental take statement that exempts the activity from FESA's take prohibitions. The Landings Logistics Center Project lacks federal funding or any other nexus to federal jurisdiction, and Section 7 does not apply.

Section 10 provides a means whereby a nonfederal action with the potential to result in take of a listed species can be allowed under an incidental take permit. Application procedures are found at CFR Title 50, Sections 13 and 17 for species under the jurisdiction of USFWS and CFR, Title 50, Sections 217, 220, and 222 for species under the jurisdiction of NMFS. Section 10 would apply to the Project if take of a species (as defined in Section 9) were determined to occur. The incidental take permit would be part of an approved Habitat Conservation Plan.

Section 4(a)(3) and (b)(2) of the FESA requires the designation of critical habitat to the maximum extent possible and prudent based on the best available scientific data and after considering the economic impacts of any designations. Critical habitat is defined in section areas within the geographic range of a species that are occupied by individuals of that species and contain the primary constituent elements (physical and biological features) essential to the conservation of the species, thus warranting special management consideration or protection; and areas outside of the geographic range of a species at the time of listing but that are considered essential to the conservation of the species.

MIGRATORY BIRD TREATY ACT (USC, TITLE 16, SECTIONS 703 - 711)

The Migratory Bird Treaty Act (MBTA), first enacted in 1918, is a series of treaties that the United States has with Great Britain (on behalf of Canada), Mexico, Japan, and the former Soviet Union that provide for international migratory bird protection. The MBTA authorizes the Secretary of the Interior to regulate the taking of migratory birds. The act provides that it shall be unlawful, except as permitted by regulations, “to pursue, take, or kill any migratory bird, or any part, nest or egg of any such bird” (U.S. Code Title 16, Section 703). The MBTA currently includes several hundred species and includes all native birds.

BALD AND GOLDEN EAGLE PROTECTION ACT OF 1940 (USC, TITLE 16, SECTION 668)

The Bald and Golden Eagle Protection Act (BGEPA) of 1940 protects bald eagles (*Haliaeetus leucoephalus*) and golden eagle (*Aquila chrysaetos*) by prohibiting the taking, possession, and commerce of these species and established civil penalties for violation of this act. Take of bald and golden eagles includes to “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb.” To disturb means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an

eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially inferring with normal breeding, feeding, or sheltering behavior. (Federal Register (FR), Volume 72, page 31132; 50 CFR 22.3).

FEDERAL CLEAN WATER ACT (USC, TITLE 33, SECTIONS 1251 - 1376)

The Federal Clean Water Act (CWA) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. Section 402 establishes a permitting system for the discharge of any pollutant (except dredged or fill material) into waters of the U.S. Section 404 establishes a permit program administered by the United States Army Corps of Engineers (USACE) that regulates the discharge of the dredged or fill material into waters of the U.S., including wetlands. The USACE implementing regulations are found in CFR, Title 33, Sections 320 and 330. Guidelines for implementation are referred to as the Section 404(b)(1) Guidelines, which were developed by the United States Environmental Protection Agency (EPA) in conjunction with USACE (40 CFR 230). The guidelines allow the discharge of dredged or fill material into the aquatic system only if there is no practicable alternative that would have less adverse impacts. Section 401 requires that a project applicant that is pursuing a Section 404 permit obtain a State Certification of Water Quality, thereby ensuring that the discharge will comply with local State water quality requirements. The Regional Water Quality Control Board (RWQCB) administers the certification program in California.

State

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) (CALIFORNIA PUBLIC RESOURCES CODE, SECTION 21000-21178, AND TITLE 14 CCR, SECTION 753, AND CHAPTER 3, SECTIONS 15000 – 15387)

CEQA is California's broadest environmental law. CEQA helps guide the issuance of discretionary permits and approval for projects. Courts have interpreted CEQA to afford the fullest protection of the environment within the reasonable scope of the statutes. CEQA applies to all discretionary projects proposed to be conducted or approved by a State, county, or city agency, including private projects requiring discretionary government approval.

The purpose of CEQA is to disclose to the public the significant environmental effects of a proposed discretionary project; prevent or minimize damage to the environment through development of project alternatives, mitigation measures, and mitigation monitoring; disclose to the public the agency decision-making process to approve discretionary projects; enhance public participation in the environmental review process; and improve interagency coordination.

State CEQA Guidelines Section 15380(b) provides that a species not listed on the Federal or State Endangered Species lists may be considered rare or endangered for purposes of CEQA if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definition in FESA and the section of the CDFW Code dealing with rare or endangered plants or wildlife.

CALIFORNIA ENDANGERED SPECIES ACT (CALIFORNIA FISH AND GAME CODE 2050 ET SEQ.)

The California Endangered Species Act (CESA) establishes the policy of the State to conserve, protect, restore, and enhance threatened or endangered species and their habitats. The CESA mandates that State agencies should not approve projects that would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. For projects that would result in take of a species listed under the CESA, a project proponent would need to obtain a take permit under Section 2081(b). Alternatively, the CDFW has the option of issuing a Consistency Determination (Section 2080.1) for projects that would affect a species listed under both the CESA and the FESA, as long as compliance with the FESA would satisfy the "fully mitigate" standard of CESA, and other applicable conditions.

OTHER CALIFORNIA STATE FISH AND GAME CODE PROVISIONS

Sections 1600 through 1616

Under these sections of the FGC, a project operator is required to notify the CDFW prior to implementing any project that would divert, obstruct, or change the natural flow, bed, channel, or bank of any river, stream, or lake. Pursuant to the California Code of Regulations, a "stream" is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel having banks and supporting fish or other aquatic life. Altered or artificial watercourses valuable to fish and wildlife may be subject to CDFW jurisdiction. CDFW also has jurisdiction over dry washes that carry water during storm events. Preliminary notification and project review generally occur during the environmental process. When an existing fish or wildlife resource may be substantially adversely affected, CDFW is required to propose reasonable project changes to protect the resource. These modifications are formalized in a Streambed Alteration Agreement.

Sections 3503 and 3503.5

Under these sections of the California State Fish and Game Code, the project proponent is not allowed to conduct activities that would result in the taking, possessing, or destroying of any birds-of-prey, taking or possessing of any migratory non-game bird as designated in the MBTA or the taking, possessing, or needlessly destroying of the nest or eggs of any raptors or non-game birds protected by the MBTA, or the taking of any non-game bird pursuant to CDFW Code Section 3800.

Sections 3511, 4700, 5050, and 5515

Protection of fully protected species is described in Sections 3511, 4700, 5050, and 5515 of the FGC. These statues prohibit take or possession of fully protected species. CDFW is unable to authorize incidental take of fully protected species, except as allowed for in an approved Natural Communities Conservation Plan (NCCP), or through direct legislative action.

SECTIONS 1900 THROUGH 1913 - NATIVE PLANT PROTECTION ACT

California's Native Plant Protection Act (NPPA) requires all State agencies to use their authority to carry out programs to conserve endangered and rare native plants. Provision of the NPPA prohibit that taking of listed plants from the wild and require notification of CDFW at least 10 days in advance of any change in land use. This allows CDFW to salvage listed plant species that otherwise would be destroyed. A project proponent is required to conduct botanical inventories and consult with CDFW during project planning to comply with the provisions of this act and sections of CEQA that apply to rare or endangered plants.

PORTER-COLOGNE WATER QUALITY CONTROL ACT

The Regional Water Quality Control Board (RWQCB) regulates waters of the State under the authority of the Porter-Cologne Water Quality Control Act (Porter Cologne Act), including all ground and surface water within State boundaries. The RWQCB requires that projects avoid impacts to wetlands whenever feasible and requires that projects do not result in a net loss of wetland acreage or a net loss of wetland function and values. The RWQCB typically requires compensatory mitigation for impacts to wetlands and/or waters of the State. Dredging, filling, or excavation of isolated waters constitutes a discharge of waste into waters of the State, and such discharges are authorized through an Order of Waste Discharge (or waiver of discharge) from the RWQCB.

Local

CITY OF FRESNO GENERAL PLAN

The General Plan contains specific objectives and policies to protect biological resources within the Planning Area. These objectives and policies regarding native plants and wildlife are outlined in Section 5.5, *Open Space and Biological Resources*, as follows:

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

Policy POSS-5-a - Habitat Area Acquisition. Support federal, State, and local programs to acquire significant habitat areas for permanent protection and/or conjunctive educational and recreational use.

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.

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.

CITY OF FRESNO MUNICIPAL CODE

Chapter 13, Article 3

Under Chapter 13, Article 3 of the City of Fresno Municipal Code (City of Fresno, 2019), the City has the responsibility to preserve, whenever feasible, all trees within city limits, including trees where construction is being considered or will occur. If it is necessary to remove trees, a City-issued permit must be obtained, and each tree is to be replaced with a City-approved tree species, or a fee may be paid in lieu of replacement. Property owners are responsible for the regular care, including watering, of trees on their property. Any tree replacement or maintenance must be conducted under the direction of a certified arborist and completed by a City-licensed contractor. The City maintains a Special Tree List (e.g. landmark trees, trees of outstanding size, etc.) that are ineligible for removal or replacement.

4.4.4 - IMPACTS AND MITIGATION MEASURES

Methodology

Project impacts are discussed in terms of the thresholds of significance outlined below. Project activities are broken into three use categories:

- Cultivation (indoor), Distribution, and Manufacturing;
- Testing Laboratories; and
- Retail Locations.

Based on the Regulatory Ordinance and proposed text amendment, each of these uses are limited to specific locations within the City as shown in Figures 3-3, 3-4, and 3-5. The impact analysis considers the type of activity and the location of these activities when determine level of significance and applicability of avoidance and minimization measures.

Thresholds of Significance

The 2019 CEQA Guidelines and Appendix G Environmental Checklist established by the State Office of Planning and Research state that a project would have a significant impact on biological resources if it would:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by CDFW or USFWS;

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS;

c) 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;

d) 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;

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

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

Project Impacts

Impact 4.4-1: Have a Substantial Adverse Effect, Either Directly or Through Habitat Modifications, on any Species Identified as a Candidate, Sensitive, or Special-Status Species in Local or Regional Plans, Policies, or Regulations, or by the CDFW and Wildlife USFWS

SPECIAL-STATUS PLANTS

Based on the review of CNDDB records and current Project site conditions, there are no special-status plant species that have the potential to occur within the BSA. The majority of the BSA is highly disturbed and offers low-quality habitat for native plants, therefore, it is unlikely any special-status species occur on the site and no impacts are anticipated to occur. No mitigation measures for special-status plant species are warranted.

SPECIAL-STATUS WILDLIFE

Implementation of the Project would likely result in modifications to existing structures as well as construction of new buildings and infrastructure. This may lead to direct impacts to special-status species, such as mortality of individuals and destruction of nests, as well as indirect impacts such as habitat loss. These impacts are discussed in detail below.

California tiger salamander

Given the very limited locations where Project activities could occur, and the highly developed and disturbed nature of the Project site, it is highly unlikely that California tiger salamander would occur and be impacted by the Project. One CNDDB record (EONDX 108190) indicates an adult California tiger salamander was found at an apartment complex west of State Route 99 and north of West Ashlan Avenue. That observation was recorded in 2017, an exceptionally wet year. As there are no pictures in the CNDDB, the identification of the animal cannot easily be confirmed. None of the proposed Project uses would be placed in close proximity to where this animal was found. Given that it is highly unlikely that this species would be present at any of the locations where proposed Project uses could occur, no direct or indirect impacts are anticipated.

Burrowing owl

The western burrowing owl is a State Species of Special Concern that could occur within the BSA where suitable burrows are present, most likely in association with California ground squirrels. Most of the areas where the Project could be implemented within the City are already developed; but there is potential for this species to be impacted based on its high adaptability to urban environments.

Direct impacts could include injury or death of individuals or nests if occupied burrows are located on or adjacent to parcels that are developed under the proposed Project. Noise and vibration from construction of the Project, plus the presence of construction workers, could alter the normal behaviors of nesting adults, resulting in harm or death to eggs or nestlings. No indirect impacts are anticipated given the short duration of construction in any given area and loss of suitable habit is expected to be minimal.

Swainson's hawk

The Swainson's hawk is a State Threatened Species. Trees sufficient to support nesting are present along the San Joaquin River, in older neighborhoods, along transportation corridors, and along the periphery of the City. There is suitable foraging habitat within the Annual Grassland occurring within the City as well as in the periphery. However, most of the Project activities under the proposed Project would primarily occur in already developed portions of the City, thereby limiting the loss of habitat and nest trees. Impact to Swainson's hawks could occur if nest trees and/or foraging habitat are affected by the Project and if Project activities disrupt normal breeding and nesting behaviors if active nests are nearby. These impacts are most likely to occur closer to SR-99 in the Herndon area and in southern Fresno and possibly on the western edge of the City along SR-180. Testing facilities could cause impacts if new facilities are constructed along the periphery of the city limits, particularly where suitable trees are proximal to foraging habitat. Retail facilities are primarily limited to areas where lands have already been developed and would likely be situated in existing shopping centers. New retail locations on undeveloped land may cause impacts to Swainson's hawk but are expected to be few, if any.

Direct impacts to Swainson's hawk could occur. It is possible, although unlikely, that trees supporting Swainson's hawk nests could be removed for the proposed Project, if any new structures are built on currently undeveloped land. If nests are near potential developable site, noise and vibration from construction of the Project, plus the presence of construction workers, could alter the normal behaviors of nesting adults, resulting in harm or death to eggs or nestlings. No indirect impacts are anticipated given the short duration of construction in any given area and loss of suitable nesting or foraging habit is expected to be minimal.

California horned lark

The availability of large, open grassland and barren habitats is limited within the City. Such areas are even more limited in areas where Project activities would be situated under the proposed ordinance. Direct impacts could include injury or death of individuals or nests if they are located on or adjacent to parcels that are developed under the proposed ordinance. Noise and vibration from construction resulting from the proposed ordinance, plus the presence of construction workers, could alter the normal behaviors of nesting adults, resulting in harm or death to eggs or nestlings. No indirect impacts are anticipated given the short duration of construction in any given area and loss of suitable habit is expected to be minimal.

Pallid bat, Western mastiff bat and Hoary bat

The availability of roosts for these bat species are present throughout the City. Tree removal is expected to be minimal, as would modifications of buildings and other structures. However, these activities could result in impacts to bats if they are occupied by any of these species.

Direct impacts could occur if these bat species are present in any trees or structures removed or otherwise disturbed. Noise and vibration from resulting from the proposed ordinance, plus the presence of construction workers, could alter the normal behaviors of bats, resulting in harm or death to individuals and young. Some loss of roosting habitat may occur, particularly during modification of structures for cultivation, distribution, and maintenance facilities; however, these new facilities may provide roost habitats depending on how they are constructed. No indirect impacts are anticipated given the short duration of construction in any given area and loss of suitable nesting or foraging habit is expected to be minimal.

American badger

The potential for American badgers to occur within the city limits is low because of the highly developed nature of the City region, but there are some parcels containing suitable habitat, primarily along the edges of the City and at airfields. Based on the location of the facilities under the proposed ordinance, it is highly unlikely that badgers would be present and affected by the Project; however, the presence of this species cannot be ruled out completely.

If badgers are present on a Project site, they could be directly impacted if Project activities occur near an active maternity den. Noise and vibration from construction resulting from the proposed ordinance, plus the presence of construction workers, could alter the normal behaviors of

breeding adults, resulting in harm or death to young. No indirect impacts are anticipated because of the short duration of construction in any given area and loss of suitable habit would be minimal.

San Joaquin kit fox

San Joaquin kit fox are highly adaptable to human-altered landscapes and could be found in the City, particularly on undeveloped parcels and along streams and creeks. Due to their adaptability, they could potentially occur at any of the locations where Project activities may occur. They are very curious creatures that can cover large areas each night in search food. This increases the chance that they could encounter the construction area during foraging activities.

This species would most likely be directly impacted by the Project through entrapment in open excavations or pipes. Direct impacts resulting in injury or death of pups could occur if an active natal den is located near the construction area, causing the adults to alter normal behaviors. Direct impacts by vehicles is a concern for San Joaquin kit foxes in urban environments, but the proposed Project would not be expected to cause an appreciable increase in traffic at night when the species is active. No indirect impacts are anticipated because of the short duration of construction in any given area and loss of suitable habit would be minimal.

Nesting birds

The BSA contains suitable habitat that could support a wide variety of nesting bird species protected under the Migratory Bird Treaty Act and the California Fish and Game Code. While few, if any trees or shrubs are anticipated to be removed, Project activities adjacent to nesting birds could result in direct impacts to the nests from noise and vibration caused by construction activities. No indirect impacts are anticipated because habitat loss would be minimal.

Impacts Summary

The Final PEIR for CalCannabis Cultivation Licensing, completed by the California Department of Food and Agriculture (California Department of Food and Agriculture, 2017), concluded that the project would not conflict with local policies or ordinances protecting biological resources. The PEIR conclusion is based on the Medicinal and Adult-Use Cannabis Regulation and Safety Act (MAUCRSA), which requires that applicants for a commercial cannabis business license to comply with all local ordinances and regulations, including those intended to protect biological resources. The City will make determinations regarding the City's policies and ordinances. Therefore, there would be no impact.

CULTIVATION ACTIVITIES

Cultivation activities have been identified by the California State Water Resources Control Board (Water Board) as having a potential impact to wildlife due to water runoff containing pesticides and other harmful chemicals being introduced to natural water ways. The Water Board has adopted policies, in consultation with CDFW, to reduce these impacts. According to the Cannabis

Cultivation Policy document, adopted on February 5, 2019, indoor cultivation activities are conditionally exempt, if they meet the following criteria:

> *Commercial cannabis cultivation activities are classified as conditionally exempt if they occur within a structure with a permanent roof, a permanent relatively impermeable floor (e.g., concrete or asphalt paved), comply with this Policy and all applicable Requirements in Attachment A, and either: 1) discharge all industrial wastewaters generated to a permitted wastewater treatment collection system and facility that accepts cannabis cultivation wastewater; or 2) collect all industrial wastewater in an appropriate storage container to be stored and properly disposed of by a permitted wastewater hauler at a permitted wastewater treatment facility that accepts cannabis cultivation wastewater. To obtain documentation of the conditionally exempt status to obtain a CDFA commercial cannabis cultivation license, conditionally exempt commercial cannabis cultivators are required to obtain coverage under the Waiver. Refer to the Application Process and Fees section of the Cannabis Cultivation General Order for information on the Cannabis Cultivation General Order's application requirements. (California State Water Resources Control Board, 2019)*

In order to obtain exempt status, applicants are required to obtain a waiver from the Water Board website. The proposed Project only allows for indoor cultivation; therefore, with implementation of Mitigation Measure MM 4.4-1, below, impacts associated with harmful runoff are considered less than significant.

The Project and surrounding area are generally disturbed or developed and does not provide suitable habitat for any special-status plant species and no mitigation measures to protect, avoid, or minimize impacts to special-status plant species are warranted.

There is the potential for some special-status or protected wildlife species to be impacted by Project activities. Mitigation Measures MM 4.4-2 through MM 4.4-8 would protect, avoid, and minimize impacts to special-status wildlife species, as provided below. When implemented, these measures would reduce impacts to these species to below significant levels

Mitigation Measures

MM 4.4-1: Prior to commencement of operations of any cultivation facility, the Project applicant shall submit to the City of Fresno Planning and Development Department written documentation of a waiver from the California State Water Control Board Cannabis Cultivation General Order.

MM 4.4-2: For any undeveloped parcel, within 14 days and no more than 30 days prior to the start of construction activities in any specific area, a pre-construction clearance survey shall be conducted by a qualified biologist knowledgeable in the identification of these species. The surveys shall cover the Project site plus a 500-foot buffer, where feasible. Pedestrian surveys achieving 100 percent visual coverage shall be conducted. Multiple surveys may be needed, which would be phased with construction of the Project. If no evidence of these species is

detected, no further action is required. A copy of a Preconstruction Clearance Survey Report shall be submitted to The City of Fresno Planning and Development Department.

Buffer zones shall be considered Environmentally Sensitive Areas (ESAs) and no ground disturbing activities shall be allowed within a buffer area. The United States Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) shall be contacted upon the discovery within 500 feet of any SJKF individuals, natal or pupping dens is found during construction activities. CDFW staff shall be contacted at (559) 243-4014 and R4CESA@wildlifeca.gov.

Potential kit fox dens may be excavated provided that the following conditions are satisfied: (1) the den has been monitored for at least five consecutive days and is deemed unoccupied by a qualified biologist; (2) the excavation is conducted by or under the direct supervision of a qualified biologist. Den monitoring and excavation should be conducted in accordance with the Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance (U.S. Fish and Wildlife, 2011).

San Joaquin Kit Fox

- Potential Den – 50 feet
- Atypical Den – 50 feet (includes pipes and other man-made structures)
- Known Den – 100 Feet
- Natal/Pupping Den – 500 feet

Badger

- Potential Den – None
- Natal/Pupping Den – 100 feet

Burrowing Owl (active burrows)

- April 1 – October 15 – 500 feet
- October 16 – March 31 – 100 feet

If a den or burrow is located on the Project and there is no clear indication of use, and it has not been previously identified as being used by special-status species, the den/burrow may be monitored by a qualified biologist for a minimum of five consecutive nights using trail cameras and tracking medium. If after five nights there is no evidence of use by special-status species, the den/burrow may be fully excavated to the terminus of every tunnel and then backfilled, all under the direct supervision of a qualified biologist. If during the five nights of monitoring there is evidence of use by a special-status species, the den/burrow must be avoided unless removal is authorized by the USFWS and/or CDFW (based on species protection status).

MM 4.4-3: For any undeveloped parcel, the following avoidance and minimization measures shall be implemented during all construction phases of the Project to reduce the potential for impact from the Project. They are modified from the *U.S. Fish and Wildlife Service Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (U.S. Fish and Wildlife, 2011) and apply to all three species.

1. Project-related vehicles shall observe a daytime speed limit of 20-mph throughout the site in all Project areas, except on County roads and State and federal highways. Construction speed limits shall be limited to 10-mph for any work performed between dusk and 10:00 p.m.

2. Off-road traffic outside of designated Project areas shall be prohibited.

3. To prevent inadvertent entrapment of kit foxes or other animals during construction of the Project, all excavated, steep-walled holes or trenches more than two feet deep shall be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed.

4. Before holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox or other special-status species is discovered, the USFWS and the CDFW, as appropriate, shall be contacted before proceeding with the work.

5. In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the USFWS/CDFW shall be contacted for guidance.

6. All construction pipes, culverts, or similar structures with a diameter of four inches or greater that are stored at a construction site for one or more overnight periods shall be thoroughly inspected for kit foxes and burrowing owls before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox or burrowing owl is discovered inside a pipe, that section of pipe shall not be moved until the USFWS has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox or owl has escaped.

7. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from a construction or Project site.

8. No pets, such as dogs or cats, shall be permitted on the Project site.

9. Use of anti-coagulant rodenticides and herbicides in Project areas shall be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds shall observe label

and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation, as well as additional Project-related restrictions deemed necessary by the USFWS and CDFW. If rodent control must be conducted, zinc phosphide shall be used because of the proven lower risk to kit foxes.

10. A representative shall be appointed by the Project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox, burrowing owl or badger or who finds a dead, injured or entrapped kit fox, burrowing owl or badger.

11. Any Project personnel who are responsible for inadvertently killing or injuring one of these species shall immediately report the incident to their representative. This representative shall contact the CDFW/USFWS immediately in the case of a dead, injured or entrapped kit fox.

12. The Sacramento U.S. Fish and Wildlife Office and CDFW shall be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during Project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The USFWS contact is the Chief of the Division of Endangered Species, at the addresses and telephone numbers below. The CDFW contact can be reached at (559) 243-4014 and R4CESA@wildlifeca.gov.

13. New sightings of all special-status species shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the individual was observed shall also be provided to the USFWS.

14. Any Project-related information required by the USFWS or questions concerning the above conditions, or their implementation may be directed in writing to the U.S. Fish and Wildlife Service at: Endangered Species Division, 2800 Cottage Way, Suite W 2605, Sacramento, California 95825-1846, phone (916) 414-6620 or (916) 414-6600

MM 4.4-4: For any undeveloped parcel, if construction activities must occur during the nesting season (February 15 to August 31), pre-activity nesting bird surveys shall be conducted within seven days prior to the start of construction at the construction site plus a 250-foot buffer for songbirds and a 500-foot buffer for raptors (other than Swainson's hawk).

The surveys shall be phased with construction of the Project and shall include all vegetation and existing structures. If no active nests are found, no further action is required; however, note that nests may become active at any time throughout the summer, including when construction activities are occurring. If active nests are found during the survey or at any time during construction of the Project, an avoidance buffer ranging from 50 feet to 350 feet may be required, as determined by a qualified biologist. The avoidance buffer will remain in place until

the biologist has determined that the young are no longer reliant on the nest. Work may occur within the avoidance buffer under the approval and guidance of the biologist. The biologist shall have the ability to stop construction if nesting adults show sign of distress.

MM 4.4-5: For any undeveloped parcel, the Project applicant shall implement the following measures prior to and during construction:

1. If construction activities are conducted completely outside of the California horned lark breeding season (August 1 through February 28), then preconstruction surveys are not required.

2. For construction activities conducted during the California horned lark breeding season (March 1 through July 31), the applicant shall retain a qualified biologist to conduct preconstruction surveys and identify active nests on and within 300 feet of the project site to avoid, minimize, and mitigate potential impacts on California horned lark nesting within the project site. The surveys shall be conducted no more than 30 days before the beginning of construction. If no nests are found, no further mitigation will be required.

3. If active California horned lark nests are found within the nest survey area, the construction contractor shall avoid impacts on such nests by establishing a no-disturbance buffer around active nest sites identified during preconstruction surveys. The appropriate buffer size shall be determined by a qualified biologist in consultation with CDFW, based on the nature of the project activity, the extent of existing disturbance in the area, visibility of the disturbance from the nest site, and other relevant circumstances.

4. No construction activity shall occur within the buffer area of a particular nest until a qualified biologist, in consultation with CDFW, confirms that the chicks have fledged or the nesting cycle has otherwise completed. Monitoring of the nest by a qualified biologist during construction activities shall be required if the activity has the potential to adversely affect the nest. If construction activities cause the nesting bird to vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest, then the no-disturbance buffer shall be increased until the agitated behavior ceases. The exclusionary buffer will remain in place until the chicks have fledged or as otherwise determined by a qualified biologist.

MM 4.4-6: For any undeveloped parcel, if an active Swainson's hawk nest is discovered at any time within a half-mile of active construction, the Project applicant shall implement the following measures prior to and during construction:

1. If construction activities are conducted outside of the breeding season (September 1 through February 28), then preconstruction surveys are not required.

2. For construction activities conducted during the breeding season (March 1 through August 31), the applicant shall retain a qualified biologist to conduct preconstruction surveys and identify active nests on and within 0.5 mile of the project site to avoid,

minimize, and mitigate potential impacts on Swainson's hawk nesting adjacent to the project site. The surveys shall be conducted no more than 30 days before the beginning of construction. If no nests are found, no further mitigation will be required.

3. If active Swainson's hawk nests are found within the nest survey area, the construction contractor shall avoid impacts on such nests by establishing appropriate buffers around active nest sites identified during preconstruction raptor surveys. No project activity shall commence within the buffer areas until a qualified biologist has determined, in coordination with CDFW, that the young have fledged, the nest is no longer active, or reducing the buffer would not result in nest abandonment. CDFW guidelines recommend implementation of 0.5-mile-wide buffers for Swainson's hawk nests, but the size of the buffer may be decreased if a qualified biologist and the applicant, in consultation with CDFW, determine that such an adjustment would not be likely to adversely affect the nest.

4. No construction activity shall occur within the buffer area of a particular nest until a qualified biologist, in consultation with CDFW, confirms that the chicks have fledged or the nesting cycle has otherwise completed. Monitoring of the nest by a qualified biologist during construction activities shall be required if the activity has the potential to adversely affect the nest. If construction activities cause the nesting bird to vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest, then the no-disturbance buffer shall be increased until the agitated behavior ceases. The exclusionary buffer will remain in place until the chicks have fledged or as otherwise determined by a qualified biologist.

MM 4.4-7: Prior to construction activities on any undeveloped parcel, a qualified biologist shall conduct a pre-construction survey with special attention to trees and manmade structures. The survey shall be conducted within 14 days prior to the construction activities. If no suitable trees or manmade structures that can support bats is detected, no further action is required.

If bats are detected, then acoustical sampling shall be conducted to determine species. If pallid bats, western mastiff bats, or hoary bats are identified to be roosting in the trees or structures, work will not commence until:

1. Bats have been passively excluded from the tree or structure by progressively boarding up any entrances at night while bats are foraging away from the tree or structure. Relocation of bats may not be performed during the breeding season (March 1 to September 15).

2. Permanent, elevated bat houses have been installed outside of, but near the construction area, preferably in designated open space areas. Placement and height will be determined by a qualified biologist, but the height of bat house will be at least 15 feet. Bat houses will be multi-chambered. The number of bat houses required will be dependent upon the size

and number of colonies present, but at least one bat house will be installed for each pair of bats (if occurring individually) or each colony of bats found.

3. If a tree or structure containing a roost for pallid, western mastiff, or hoary bats will be removed or may lead to roost abandonment during construction, a qualified biologist will design and determine an appropriate location for an alternate roost structure.

MM 4.4-8: Prior to construction activities on any undeveloped parcel, all personnel shall attend a Worker Environmental Awareness Training (WEAT). The WEAT shall be developed and conducted by a qualified biologist.

1. The program shall include information on the life history of all of the special-status species determined herein to have potential to occur onsite, including migratory birds and raptors.

2. The program shall discuss each species' legal protection, status, the definition of "take" under the Endangered Species Act, measures the Project operator must implement to protect the species, reporting requirements, specific measures that each worker shall employ to avoid take of wildlife species, and penalties for violation of the State and Federal ESAs.

3. The program shall provide information on how and where to bring injured wildlife for treatment in the case any animals are injured on the Project site, and how to document wildlife mortalities and injuries.

4. An attendance form signed by each worker indicating that environmental training has been completed will be kept on record. A copy of the sign-in sheet shall be submitted to The City of Fresno Planning and Development Department.

Level of Significance after Mitigation

Impacts would be *less than significant with mitigation.*

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

The BSA does not overlap any federally designated Critical Habitat. There are scattered occurrences of streams and creeks throughout the City with sensitive riparian and wetland vegetation (U.S. Fish and Wildlife Service, 2019c). However, the majority of Project activities would occur on previously developed or disturbed properties, and vacant undeveloped parcels are unlikely to be occupied by sensitive vegetation communities. The permitting of cannabis commercial activity would not result in adverse changes to the streams and creeks in the Project area or their associated riparian and wetland vegetation, as all industrial and commercial development permitted as a result of the proposed Project would comply with applicable federal,

State, and local regulations pertaining to riparian habitat. Because no federally designated Critical Habitat is present in the Project area, no impacts are anticipated.

The Final PEIR for CalCannabis Cultivation Licensing, completed by the California Department of Food and Agriculture (California Department of Food and Agriculture, 2017), concluded that the project would not conflict with local policies or ordinances protecting biological resources. The PEIR conclusion is based on the fact that future cannabis businesses that may be located within an area covered by an HCP or NCCP, will be subject to the discretionary approval of a signatory to the HCP or NCCP (i.e. City of Fresno), and will be a covered activity in the HCP or NCCP (i.e. City of Fresno General Plan). Because potential conflicts with HCPs and NCCPs would be based on site-specific circumstances, and because potential conflicts with HCPs or NCCPs would need to be resolved during the local government approval process, this impact was determined to be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

No impacts would occur.

Impact 4.4-3: Have a Substantial Adverse Effect on State or Federally Protected Wetlands (Including, but not Limited to, Marsh, Vernal Pool, Coastal, etc.) Through Direct Removal, Filling, Hydrological interruption, or Other Means

Although there are scattered aquatic features throughout the City of Fresno, wetland vegetation is highly limited. As noted previously, the majority of Project activities would occur in an urban area on previously developed or disturbed properties; vacant undeveloped parcels are unlikely to include wetlands, vernal pools or other aquatic resources. The Project will be able to avoid these areas, and there will be no impacts to State or federally protected wetlands.

The Final PEIR for CalCannabis Cultivation Licensing, completed by the California Department of Food and Agriculture (California Department of Food and Agriculture, 2017), concluded that the project would have a less-than-significant impact on protected wetlands. Similar to this project EIR, the PEIR determined that most of the commercial cannabis businesses to be licensed would be conducted in developed areas, often in existing buildings in urban, suburban, and developed settings in sites that are zoned for industrial, retail, or business uses. These locations are unlikely to be in or near sensitive areas or federally protected wetlands. And the activities themselves would primarily take place indoors and would have little potential for impacts on such natural communities. Therefore, these impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance

No impacts would occur.

Impact 4.4-4: Interfere Substantially with the Movement of any Native Resident or Migratory Fish or Wildlife Species or with Established Native Resident or Migratory Wildlife Corridors, or Impede the Use of Native Wildlife Nursery Sites

There are no established or significant wildlife movement corridors within the City, although wildlife may commonly utilize canals and the San Joaquin River. The creeks and streams throughout the City may provide movement opportunities for some species, the presence of humans and domestic animals discourages wild animals from occurring and these areas are not important movement corridors. Nonetheless, the Project does not propose any activities that would impact canals or the river. Impacts would be less than significant.

The Final PEIR for CalCannabis Cultivation Licensing, completed by the California Department of Food and Agriculture (California Department of Food and Agriculture, 2017), concluded that the project would have a less than significant impact on Migratory Fish or Wildlife Species. The PEIR based its conclusion on the types of areas where commercial cannabis businesses would be located, including developed areas, often in existing buildings in urban, suburban, and developed settings in sites that are zoned for industrial, retail, or business uses. And based on MAUCRSA's requirement to comply with local zoning and ordinances, they would be unlikely to be located within a migratory corridor or native wildlife nursery site, or to involve substantial discharges to water bodies that support migrating fish and aquatic species.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be *less than significant.*

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

Businesses developed under the proposed ordinance are subject to the Fresno Municipal Code, Chapter 13, Article 3, Tree Preservation Policy, which requires property owners to obtain a refundable permit from the City to remove or maintain any trees on public property, and requires that trees that are removed be replaced by a City-approved tree, under direction of a certified arborist, or remittance of a fee in lieu of replacement. It is possible that the businesses developed under the proposed ordinance may necessitate the removal of some City trees during

construction activities, but these businesses will be required to comply with the Tree Preservation Policy to avoid impacts. Although businesses developed under the proposed ordinance may require the removal of some City trees during construction activities, the incorporation of MM 4.4-9 would reduce impacts to less than significant.

Mitigation Measures

MM 4.4-9: Prior to removal of trees, Project proponents shall consult with the City of Fresno to determine if a tree removal permit is required, and if required shall comply with Fresno Municipal Code, Chapter 13, Article 3.

Level of Significance

Impacts would be *less than significant with mitigation*.

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

The Project is within the boundary of the PG&E San Joaquin Valley Operation and Maintenance Habitat Conservation Plan (HCP). This HCP applies only to PG&E activities and the Project is not covered under this Plan. There are no other adopted habitat conservation plans, natural communities conservation plans, or other approved local, regional, or State habitat conservation plans applicable to the Project. Therefore, the Project will not conflict with any Natural Community Conservation Plans or Recovery Plans and no impacts are anticipated.

The Final PEIR for CalCannabis Cultivation Licensing, completed by the California Department of Food and Agriculture (California Department of Food and Agriculture, 2017), concluded that the project would not conflict with habitat conservation plans. The PEIR conclusion is based on the fact that future cannabis businesses that may be located within an area covered by an HCP or NCCP, will be subject to the discretionary approval of a signatory to the HCP or NCCP (i.e. City of Fresno), and will be a covered activity in the HCP or NCCP (i.e. City of Fresno General Plan). Because potential conflicts with HCPs and NCCPs would be based on site-specific circumstances, and because potential conflicts with HCPs or NCCPs would need to be resolved during the local government approval process, this impact was determined to be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance

No impacts would occur.

Cumulative Setting Impacts and Mitigation Measures

CUMULATIVE SETTING

The study area for the analysis of cumulative impacts is the City of Fresno and the unincorporated portions of Fresno County located adjacent to the city limits, as well as portions of the City of Clovis and the County of Madera adjacent to the City of Fresno. The applicable cumulative projections include growth projections from the City of Fresno General Plan, Fresno County General Plan, Madera County General Plan, and the City of Clovis General Plan.

The City of Fresno General Plan was last adopted in the year 2014. Anticipated development within the General Plan includes 186,840 dwelling units, 66.4 million square feet (msf) of commercial/office/public facility, 100,000 sf of mixed uses, and 72.8 msf of industrial uses. The General Plan contains approximately 11,714 acres of agricultural land, 12,288 acres of open space, and 12,522 acres of vacant land. Existing agricultural land is primarily located in the southeastern and western portions of the General Plan.

The General Plan contains two major rail lines that generally traverse in a southeast to northwest direction. These railways include the Union Pacific Railroad line that is generally located along SR-99, and the BNSF Railway that diverges from the SR-99 in the southwest and travels through the Downtown to the northwest. There are three airports located within the City of Fresno including the Fresno-Yosemite International Airport located in the eastern portion of the Planning Area, the Fresno-Chandler Downtown Airport located west of Downtown, and Sierra Sky Park Airport that is located on the northern portion of the General Plan.

The County of Fresno General Plan was last adopted in the year 2000. The County General Plan was prepared to accommodate population growth through the year 2020, consistent with the California Department of Finance projection of 1.1 million by 2020. This represents an additional population of approximately 344,000, which includes the year 2020 projections outside the sphere of influences for cities within the East Valley area, which is located east of Interstate 5. Additional development projects are proposed northeast of the City of Fresno Project area including Friant Ranch that represents an additional population of approximately 164,693 through the year 2020.

The County of Madera General Plan was last adopted in the year 1995. The Madera County General Plan identifies population and employment growth projections through the year 2010 and includes 177,071 people and 61,866 employees. Since the adoption of Madera County's General Plan, substantial new development projects have been proposed in the southern portion of Madera County, some of which is proposed within close proximity of the City of Fresno Project area including Gateway, Gunner Ranch, Liberty Groves, North Fork Village, Tesoro Viejo, and River Ranch Estates. These projects include approximately 23,000 units, and supporting uses such as commercial, public facilities, parks, and open space.

The City of Clovis General Plan was last adopted in the year 2014. The Clovis General Plan forecasts the ultimate buildout of the entire Clovis General Plan area that is expected to occur

for at least 70 years. The Clovis General Plan forecasts an additional 65,100 residential units, 179,300 population, and 38,250,000 square feet of buildings.

CUMULATIVE IMPACTS

CEQA Section 15130(a) states: An EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in Section 15065(a)(3). Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

As noted above, cumulative impacts associated with biological impacts would occur from development within the City of Fresno, portions of Fresno County located adjacent to the Project area as well as portions of the City of Clovis and the County of Madera that can be viewed from, and have views of, the Project area.

Impacts associated with biological resources were analyzed in the City of Fresno General Plan Update Master EIR, as well as environmental documents for the surrounding areas. It should be noted that those environmental documents concluded that cumulative significant impacts to biological resources would not occur due to continued urbanization in and around the City of Fresno. However, the proposed Project would allow for a limited number of cannabis related businesses to be developed. These businesses are limited to certain areas of the City and the majority would be proposed in existing buildings. The existing and proposed ordinance regulates the number and locations of these businesses.

A small percentage of the Project eligible sites are vacant infill lots that can support new development, all of which are located in existing commercial and industrial zones and in urbanized areas. The majority of the Project eligible sites are fully serviced industrial and commercial lots that have been improved with industrial and commercial uses and buildings. Therefore, implementation of the proposed Project may include development of new buildings and sites, and changes to occupancies of existing buildings and sites, which could result in impacts relating to biological resources.

Conversion of agricultural land to development sites reduces the availability of suitable habitat for candidate, sensitive, and special-status species, including suitable foraging habitat for raptor species. Additionally, agricultural land and open space conversion has the potential to reduce the size, extent, and/or quality of existing riparian habitats, due to habitat fragmentation of undeveloped land within the Project area. As stated above Project sites eligible for development are (1) located in existing commercial and industrial zones and in urbanized areas, and (2) will not encroach into areas adjacent to existing rivers and streams that could contain riparian habitat, affect protected wetlands or fish or wildlife movement, or result in agricultural land or open space conversion, or habitat modifications.

Implementation of development throughout the Project area could impacts trees within public and private property. Since cumulative development within the Project area includes buildout

of the General Plan, all development would be required to comply with Article 3 of Section 13 of the City of Fresno Municipal Code. Therefore, with implementation of Mitigation Measures MM 4.4-1 through MM 4.4-6, cumulative impacts to biological resources would be less than significant.

Therefore, cumulative impacts will be less than significant.

Mitigation Measures

Implementation of Mitigation Measure MM 4.4-1 through MM 4.4-6.

Cumulative Level of Significance

Cumulative impacts would be *less than significant with mitigation.*

4.5 - Cultural Resources

4.5.1 - INTRODUCTION

This section of the Environmental Impact Report (EIR) provides contextual background information on historical resources in the Project area, as defined in Chapter 3, including the area's prehistoric, ethnographic, and historical settings. This section also summarizes the results of the Cultural Resource Inventory Report of the Project area, analyzes the Project's potential impacts on cultural resources, and identifies mitigation measures to address adverse impacts.

The setting context and impact analysis in this section are based on a Cultural Resources Inventory Report and Paleontology Report prepared for the proposed Project (Applied Earthworks, Inc., 2019a). The Cultural Resources Report is included as Appendix D of this document.

The Project is subject to the California Environmental Quality Act (CEQA) statute (California Public Resources Code (PRC) Sections 21000–21189) and Guidelines (Title 14, California Code of Regulations (CCR), Sections 15000–15387), which mandate that public agencies consider the environmental effects of their actions and to avoid or mitigate those impacts, if feasible. Per the CEQA Guidelines, if a project has the potential to cause substantial adverse change in the significance of a historical resource (a cultural resource defined as significant under CEQA criteria) or unique archaeological resource through demolition, destruction, relocation, alteration, or other means, then the project is judged to have a significant effect on the environment (14 CCR 15064.5(b)). Sections 15064.5(a)(1-3) of the CEQA Guidelines state that a historical resource is: (1) listed or determined eligible for listing in the California Register of Historical Resources (CRHR); (2) included in a local register of historical resources (pursuant to PRC Section 5020.1(k)) or identified as significant in a historical resource survey per the CRHR eligibility criteria (PRC 5024.1(c)); or (3) considered eligible by a lead agency under PRC 5020.1(j) or 5024.1. The definition subsumes a variety of resources, including prehistoric and historical archaeological sites, structures, buildings, and objects (14 CCR 15064.5(a)(3) and 15064.5(c)). Unique archaeological resources are defined in PRC Section 21083.2(g). The CEQA Appendix G Checklist, Section V (a-c), requires an assessment of the Project's potential to cause a substantial adverse change in the significance of a historical resource or an archaeological resource, and to assess whether the Project would cause disturbance to any human remains, including those interred outside of dedicated cemeteries.

Cultural Resources Terminology

Below are descriptions of key cultural resources terms used in this section:

- **Artifact:** An object that has been made, modified, or used by a human being.
- **Cultural Resource:** A cultural resource is a location of human activity, occupation, or use identifiable through field inventory, historical documentation, or oral evidence. Cultural resources include archaeological resources and built environment resources (sometimes

known as historic architectural resources), and may include sites, structures, buildings, objects, artifacts, works of art, architecture, and natural features that were important in past human events. They may consist of physical remains or areas where significant human events occurred, even though evidence of the events no longer remains. Cultural resources also include places that are considered to be of traditional cultural or religious importance to social or cultural groups.

- **Ethnographic:** Relating to the study of human cultures. "Ethnographic resources" represent the heritage resource of a particular ethnic or cultural group, such as Native Americans or African, European, Latino, or Asian immigrants. They may include traditional resource-collecting areas, ceremonial sites, value-imbued landscape features, cemeteries, shrines, or ethnic neighborhoods and structures.

- **Historical Resource:** This term is used for the purposes of CEQA and is defined in the CEQA Guidelines (§15064.5) as: (1) a resource listed in, or determined to be eligible for listing in the California Register of Historical Resources (CRHR); (2) a resource included in a local register of historical resources, as defined in Public Resources Code (PRC) §5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC §5024.1(g); and (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 by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Historical resources may also include tribal cultural resources including sites, features, places, cultural landscapes, sacred places, objects, and/or archeological resources with value to a California Native American tribe per PRC §21074.

- **Holocene:** Of denoting or formed in the second and most recent epoch of the Quaternary Period, which began 10,000 years ago at the end of the Pleistocene.

- **Lithic:** Of or pertaining to stone. Specifically, in archaeology, lithic artifacts are chipped or flaked stone tools, and the stone debris resulting from their manufacture.

- **Native American Sacred Site:** An area that has been, or continues to be, of religious significance to Native American peoples, such as an area where religious ceremonies are practiced or an area that is central to their origins as a people.

- **Paleontological Resources (Fossils):** The physical remains of plants and animals preserved in soils and sedimentary rock units/formations. Paleontological resources contribute to the understanding of past environments, environmental change, and the evolution of life.

- **Pleistocene (Ice Age):** An epoch in the Quaternary Period of geologic history lasting from 1.8 million to 10,000 years ago. The Pleistocene was an epoch of multiple glaciation, during which continental glaciers covered nearly one-fifth of the Earth's land.

- **Prehistoric Period:** The era prior to 1772. The later part of the prehistoric period (post-1542) is also referred to as the Protohistoric Period in some areas, which marks a transitional period during which native populations began to be influenced by European presence resulting in gradual changes to their lifeways.

- **Unique Archaeological Resource:** This term is used for the purposes of CEQA and is defined in the CEQA Guidelines (§15064.5) as an archaeological artifact, object, or site, about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it either contains information needed to answer important scientific research questions; has a special and particular quality such as being the oldest of its type or the best available example of its type; or, is directly associated with a scientifically recognized important prehistoric or historic event or person.

4.5.2 - ENVIRONMENTAL SETTING

Natural Setting

The Project is in the San Joaquin Valley, the southern two-thirds of an elongated trough known as the Great Valley, or more commonly referred to as the Central Valley. The Central Valley is a 50-mile-wide lowland that extends approximately 400 miles south from the Cascade Range to the Tehachapi Mountains. The Central Valley is divided by two prominent hydrologic features, the Sacramento and San Joaquin Rivers, which drain into the San Francisco Bay and Pacific Ocean. Between the Mesozoic and Cenozoic eras, the Central Valley served as a shallow marine embayment containing numerous lakes, primarily within the San Joaquin Valley (Applied Earthworks, Inc., 2019a)As a result, the upper levels of the Central Valley floor are composed of thick layers of alluvium that extend up to six miles below the ground surface. Underneath alluvial strata are layers of marine and nonmarine rocks, including claystone, sandstone, shale, basalt, andesite, and serpentine. Waters began to diminish about 10 million years ago, eventually dwindling to the drainages, tributaries, and small lakes that have characterized much of the Holocene Epoch (Applied Earthworks, Inc., 2019a).

The San Joaquin Valley comprises two distinct hydrologic regions: The San Joaquin River and Tulare Basin (California Department of Water Resources, 2016). The San Joaquin hydrologic region is drained by the San Joaquin River. Before historic drainage projects and modern reclamation efforts, seasonal flooding produced extensive wetlands. Lakes, marshes, and sloughs once covered more than 5,000 square kilometers in the San Joaquin Valley (Applied Earthworks, Inc., 2019a). The Fresno Slough has historically served as the northern flood outlet of Tulare Lake and the Kings River. The Fresno Slough was also a flooded backwater swamp of the San Joaquin River.

The San Joaquin River, which bounds the north side of the Project, and its many sloughs and tributaries once provided rich habitat for plants and animals during prehistory and into the historic period. Common native plants included white, blue, and live oaks (*Quercus spp.*) as well

as walnut (*Juglans sp.*), cottonwood (*Populus fremontii*), willow (*Salix sp.*), and tule (*Schoenoplectus sp.*), especially hardstem bulrush (*Scirpus acutus*). Also prominent is cattail (*Typha sp.*) and various grasses, forbs, and sedges. A variety of animals lived in and around the Project area prior to the modern era, including mule deer (*Odocoileus hemionus*), white-tailed deer (*O. virginianus*), tule elk (*Cervus sp.*), pronghorn (*Antilocapra americana*), grizzly bears (*Ursus arctos californicus*), black bears (*U. americanus*), and mountain lions (Puma concolor) (F. W. Preston, 1981).

Mammals commonly noted today and throughout history include the valley coyote (*Canis latrans*), bobcat (*Lynx rufus*), gray fox (*Urocyon cinereoargenteus*), kit fox (*Vulpes macrotis*), and rabbit (*Leporidae*). Avian species include American osprey (*Panidon sp.*), redwing blackbird (*Agelaius phoeniceus*), marsh hawk (*Circus cyaneus*), Nuttall's woodpecker (*Dryobates nuttallii*), western meadowlark (*Sturnella neglecta*), and quail (*Odontophoridae*). The lakes, rivers, and streams throughout the vicinity provided habitat for anadromous fish, including Chinook salmon (*Oncorhynchus tshawytscha*), white sturgeon (*Acipenser transmontanus*), Sacramento perch (*Archoplites interruptus*), and rainbow trout (Oncorhynchus mykiss) (F. W. Preston, 1981). Potamodromous fish include thick-tailed chub (*Gila crassicauda*) and Sacramento sucker (*Catostomidae sp*.).

Agriculture, ranching, and damming of natural watercourses has spurred the replacement of native plants and animals with domesticated species. Urban development of the valley floor and adjacent foothill areas has further reduced available habitat for native flora and fauna. The Project area contains very few native plant and animal species because it has undergone extensive cultivation and residential development since the nineteenth century. For example, the thick-tailed chub was once a major dietary component for Native Americans in the Central Valley but is now extinct. Other native flora and fauna are extant in the Project area, albeit in exponentially smaller populations.

Cultural Setting

PREHISTORY

The Central Valley prehistoric record is among the least understood of all regions in California. Reconstruction of past cultural patterns, particularly in the southern San Joaquin Valley, has been stymied by two key factors: geomorphology and human activity (Applied Earthworks, Inc., 2019a). The valley floor that encompasses the Project area has been repeatedly inundated by thick alluvial deposits resulting from granitic and sedimentary outflow from the San Joaquin River, particularly during mass flood events. This pattern has continued for millennia and has resulted in the burial of early to middle Holocene archaeological sites, estimated to be buried as deep as 11 meters (Applied Earthworks, Inc., 2019a). Thus, compared to other regions in the State, there is a paucity of research and a related lack of data from which to build a complete understanding of past human behavior specific to Fresno County.

In addition, archaeological sites buried in shallow deposits (i.e., less than six feet below the ground surface) have been heavily impacted by agricultural, transportation, and urban development since the historic period. Development has effectively removed mounds and shallow subsurface cultural deposits that once existed in great numbers across the valley floor (Applied Earthworks, Inc., 2019a). Thus, geomorphology and recent human activity have created a challenge for archaeologists interested in gaining a clearer understanding of human behavioral change through time in the San Joaquin Valley.

Nevertheless, an increasing body of data is available for sites in valley lacustrine environs, which are helpful in broadly identifying key cultural changes in the Central San Joaquin Valley. The summary of cultural traits presented below is based on a review of San Joaquin Valley lacustrine, riverine, and valley floor site data discussed in Rosenthal et al. as well as and foothill site data summarized by Lloyd et al (Applied Earthworks, Inc., 2019a). Cultural periods and accompanying dates (given as calibrated years before present (cal B.P.)) are based various previous studies (Applied Earthworks, Inc., 2019a).

The Paleo-Indian Period (13,500–10,500 cal B.P.) is represented by ephemeral lacustrine hunting sites dominated by atlatl and spear projectile points. The earliest evidence of distinct valley and foothill cultural patterns appears during the Lower Archaic Period (10,500–7450 cal B.P.).

Valley sites of this period contain crescents and stemmed projectile points, and they indicate the consumption of freshwater fish, waterfowl, mussels, deer, and pronghorn. In contrast, foothill sites are dominated by dense ground stone and flaked stone assemblages with a diet narrowly focused on deer, bighorn sheep, and presumably nuts or seeds. The Middle Archaic (7450-2500 cal B.P.) includes the Lamont Phase (5950-3150 cal B.P.), a time when semi-permanent villages first appear along riverbanks in tandem with larger, more established lacustrine villages. An abundance of stone tools exists in later prehistory, meanwhile ground stone tool kits and long-distance trade and exchange networks emerge focused on obsidian, shell beads, and ornaments. In the foothills, lithic and dietary patterns of the Early Archaic continue.

New cultural patterns emerge during the Upper Archaic Period (2500-850 cal B.P.), especially during the Canebrake Phase (3150-1350 cal B.P.) when a distinct shift in burial practices occurs and geographic differences in site and artifact types appear. Changes in the Sawtooth Phase (1350-650 cal B.P.) are marked by the sudden presence of mound sites in the valley. Widespread proliferation of specialized technology is evident, including new types of bone tools, projectile points, and ceremonial objects such as wands and blades. The use of labor-intensive and seasonally abundant resources occurs, including acorns, pine nuts, salmon, and shellfish.

Similarly, the Emergent Period (850 cal B.P.-Historic era) is marked by continued variation in settlement and burial patterns across valley and foothill regions, coupled with the disappearance of atlatl and dart tool kits that are replaced with bow-and-arrow technology (i.e., small cornernotched and Desert Series points) at about 650 cal B.P. Fishing tool kits expand to include more efficient harpoons, bone fishhooks, and gorge hooks.

NATIVE AMERICAN ETHNOGRAPHY

The Project area is within an ethnographic transitional zone in which Northern Valley and Northern Hill Yokuts groups likely overlapped. The Yokuts are one of eight subgroups of the Penutian linguistic phylum that is present across the western coast and inland regions of North America from Canada to Mexico (Applied Earthworks, Inc., 2019a). There were many Yokuts language subgroups across the Southern and Central San Joaquin Valley and in the Sierra Nevada. Yokuts in these regions spoke a variety of dialects, and many groups could converse across dialects with relative ease (Applied Earthworks, Inc., 2019a).

The Project area is within territory typically ascribed to the Pitkachi, who populated the southern banks of the San Joaquin River, and the Gashowu, a tribelet that occupied the drainages of Big Dry Creek and Little Dry Creek. The villages Kohuou, Weshiu, and Gewachiu are associated with the Pitkachi. All three villages are eight–12 miles northwest of the Project area. Two major settlements are attributed to the Gashowu: Pohonui, below Letcher on Big Dry Creek, and Yokau, on Little Dry Creek in Auberry Valley (Applied Earthworks, Inc., 2019a). These villages appear to be central year-round settlements that were occupied more densely in the winter. However, within the Project area the Gashowu's activities were likely limited to trade and seasonal food-gathering forays onto the valley floor.

The San Joaquin River and nearby drainages were critical for sustaining the lifeways of the Northern Valley and Northern Hill Yokuts near the Project. The riparian plant communities and flow of freshwater provided humans with a source of constant food, building materials, and avenues of travel for small watercraft. Yokuts homes were constructed of tule reeds, and villages were situated near major waterways and built on low mounds to prevent spring flooding (Applied Earthworks, Inc., 2019a). Fish provided the major source of protein. Fall and spring spawning brought abundant supplies of salmon to the inhabitants along the San Joaquin River and its tributaries (Applied Earthworks, Inc., 2019a). The Yokuts diet was supplemented by various species of fowl (e.g., geese, ducks) that were attracted to the riverine environment. The Yokuts also relied on seasonally available acorns, which were harvested from groves of valley oak, processed using mortars and pestles, and then cooked as a gruel or bread. Awls from animal bone allowed the Yokuts to create a broad range of baskets that facilitated food storage and transportation.

As with other Native American groups in California, the lifeways of the Yokuts were dramatically altered as a result of contact with early Spanish explorers and missionaries, miners, ranchers, and other immigrants who entered the San Joaquin Valley after A.D. 1800. The introduction of European culture and new diseases resulted in a drastic reduction in Yokuts population size. However, there are at least 25 fluent-speaking groups of various Yokuts dialects alive today, including Chukchansi speakers, who live near the Picayune and Table Mountain rancherias northeast of Fresno. Others include the Tule-Kaweah and Yawelmani (also known as Yowlumne), who mostly reside on the Tule River Reservation near Porterville, the Choynimni (also known as Choinumne), who live throughout the Kings River region, and the Tachi, who live at the Santa Rosa Rancheria near Lemoore. Native Americans from these tribal groups have established

language and culture schools and actively participate in master-apprentice language partnerships to ensure the continuity of their cultures and languages (Applied Earthworks, Inc., 2019a).

HISTORY

Spanish soldiers and priests were the first non-Native Americans to encounter the Southern Valley Yokuts when Pedro Fages led a group of soldiers through Tejon Pass into the San Joaquin Valley in 1772 (Applied Earthworks, Inc., 2019a). Four years later, Francisco Garcés also explored the region. Other Europeans did not follow until Lieutenant Gabriel Moraga led a group of Spanish explorers into the valley in 1806 (Applied Earthworks, Inc., 2019a). This party intended to locate new lands for missions, find and return runaway neophytes, and relocate stolen livestock.

Expansion of missions in California ceased by the early 1820s as a result of Mexico's independence from Spain, thus preventing the creation of any missions in the San Joaquin Valley. The Mexican government granted several large tracts of land (ranchos) to individuals during the 1830s and 1840s. In addition, fur trappers began forays into the California interior. Jedidiah S. Smith likely entered the area during a fur trapping expedition in 1827. Smith's adventures included friendly encounters with the Southern Valley Yokuts near the Kings River and trapping and camping along the San Joaquin River (Applied Earthworks, Inc., 2019a). In 1844, John C. Fremont led an expedition to the Tulare Lake Basin; his favorable reports of the Kings River fan foreshadowed the agricultural development of the area (Applied Earthworks, Inc., 2019a).

The discovery of gold in the Sierra Nevada in 1848 and the accession of California to the Union in 1850 were watershed events in the history of the State and valley. During the late 1840s and early 1850s, prospectors from across the nation and around the world flocked to California to mine the precious ore. Many of the prospectors entered and traveled through the valley via the Stockton–Los Angeles Road, which later became the Butterfield Overland Mail Route. The road hugged the western edge of the foothills and crossed the countless rivers and streams flowing down from the highlands as well as the valley sloughs.

Demographic data from the 1860 U.S. Census suggests that the County's population was ethnically diverse, fairly transient, and mostly male. According to local historian Paul Vandor (Applied Earthworks, Inc., 2019a), 7,899 people lived in Fresno County, including 4,305 white settlers, 300 Chinese, and 3,294 Indians. A closer look at the records indicates that the census takers subsumed Californios (i.e., native Californians with both Spanish and Native American ancestry) together with Yokuts into the same racial category of "Indian." Many of the County's Native American population lived in a village near the County seat at Millerton (Applied Earthworks, Inc., 2019a), while the Californios—who are identified by their Spanish surnames—were found in San Juan, Fresno City, and Firebaugh. Much of the white population resided in Millerton, Scotsburg (which later became Centerville), and Kingston. The Chinese, whose actual population may have exceeded 300, were segregated in their own quarter of Millerton (Applied Earthworks, Inc., 2019a). Virtually all of the Chinese were listed as miners, as were a significant number of Californios. Some whites also engaged in gold prospecting, but the fact that mining

was undertaken primarily by the non-white segment of the population strongly suggests that it was not a lucrative business within the County. Throughout the California gold rush, white miners excluded Chinese and Latinos from the choice claims through various means, relegating them to the worked-over placers or poorer diggings outside the Mother Lode (like Fresno County). Census data for personal property indicate that the economic weight of the County lay in ranching. With an estimated $30,000 in livestock, Andrew M. Darwin of Scotsburg led the local industry, followed by George F. Smith of Millerton ($28,000) and Charles Lewis of Kingston ($22,000).

AGRICULTURE IN THE CENTRAL VALLEY

Although ranching had been a part of the State's economy since the Mexican period, the industry's growth accelerated as many successful prospectors and businessmen reinvested their profits from the gold rush in cattle and sheep herds. In the early days of ranching, sheep were a valued commodity because they not only could be sold for consumption but could be sheared for their wool. From 1857 to 1871 the amount of wool produced in California increased more than twenty-fold, while revenue grew at an average annual rate of 30 percent (Applied Earthworks, Inc., 2019a). Similarly, cattle provided beef and dairy products as well as hides.

By the early 1870s, however, scales began to tip in favor of agriculture. The construction of extensive irrigation systems, which are discussed in greater detail below, typically financed by developers like A. Y. Easterby and others who converted the valley's dry soils into fertile farmlands. The 1874 "no fence" law underscored the growing dominance of agricultural interests and resulted in both operation and monetary repercussions to the sheep and cattle industry:

> *The "no fence" law obligated the stock owner to herd his cattle and sheep, whereas before the stock roamed at will and was not assembled except for the annual rodeo. He was also made responsible for damage done by his beasts. The farmer was not required to fence his holdings, though . . . he occasionally did so* (Applied Earthworks, Inc., 2019a).

IRRIGATION SYSTEMS OF THE CENTRAL VALLEY

Irrigation began modestly within Fresno County when Anderson Akers and S. S. Hyde built a four-foot-wide and two-foot-deep ditch from the west bank of the Kings River in 1866 (Elliot 1882:102). Two years later, the Centerville Canal and Irrigation Company bought the ditch and expanded the channel to 20 feet wide and four feet deep. J. B. Swum built a similar ditch in 1869. Moses Church and A. Y. Easterby and their Fresno Canal and Irrigation Company constructed one of the first extensive irrigation systems in the valley, which began supplying water to their agricultural colony in 1876 (Applied Earthworks, Inc., 2019). In the coming decades, a network of canals and ditches sprouted from the banks of the Kings River to provide water to various other farming colonies (Applied Earthworks, Inc., 2019a).

For Church and other wealthy landowners, the intended effect of irrigation was to increase the value of their properties so that they could be subdivided and sold to newly arriving homesteaders at a hefty profit. While this primary purpose was certainly achieved, the advent of

intensive irrigation additionally led to a shift in both the types of crops grown and the size of the typical farm. Prior to intensive irrigation and colonization, valley pioneers initially grew wheat and other grain crops or raised cattle—both large-scale ventures requiring substantial acreage. 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.

Technological improvements in electric water pump technology allowed wells to extend even deeper into the aquifer, seriously impacting the water table in the valley. Beginning in the mid-twentieth century, water management methods became more diverse and included the development of major irrigation projects such as the Central Valley Project, the integration of local irrigation systems with these larger projects, the storage of runoff in reservoirs for hydroelectric power and flood control, and maintenance of underground water tables for such uses as irrigation and drinking water. By the 1950s, these advancements spurred further agricultural development, creating the agricultural system as it exists today.

The routes of the various interconnecting canals of the Fresno Canal system have remained essentially the same for the past 140 years (Applied Earthworks, Inc., 2019a). From the head gate at the Kings River, the Fresno Canal is the system's primary channel, flowing westerly for about 12 miles. In his report on California irrigation, Mead notes that the alignment of the old CCIC ditch formed part of the alignment of the Fresno Canal (Applied Earthworks, Inc., 2019a). As work progressed farther from the Kings River, Church took advantage of existing natural channels and portions of the canal follow the routes of natural drainages. At the terminus of the Fresno Canal, the Fancher Creek Canal continued to convey the water in a southwesterly direction for another nine miles; this canal irrigated the Easterby Rancho. By 1876, the Fancher Creek leg of the system had been expanded to reach agricultural subdivisions southwest of Fresno (Applied Earthworks, Inc., 2019a). A second leg also branches from the terminus of the Fresno Canal. From this point, the Mill Ditch flows westerly for about eight miles where it connects with the Dry Creek Canal and the 27-mile-long Herndon Canal, which irrigates northwest Fresno.

RAILROAD

After visiting Easterby's thriving wheat fields in late 1871, Southern Pacific Railroad boss Leland Stanford decided to place the local train stop and town site near the ranch (Applied Earthworks, Inc., 2019a). In the spring of 1872, the Southern Pacific Railroad rolled into Fresno County, connecting this previously remote region with the northern part of California. Shortly after the arrival of the railway, the town of Fresno was born and within two short years displaced Millerton as the County seat. Early infrastructural development within the City focused on development of the electric intra-urban railway. Between 1905 and 1910, 15.5 miles of track had been constructed within the City by the Fresno Tract Company, which were then sold to Southern Pacific Railroad (Applied Earthworks, Inc., 2019a). In 1913, 11 miles of track were added giving the City's residents access to the San Joaquin River beach, after which Southern Pacific Railroad purchased the railroad. Streetcar service was terminated in the City in 1939 following a decade of increased automobile use which truncated many track routes.

DEVELOPMENT OF FRESNO

Fresno County was established in 1856, at a time when gold seekers were flocking to the Sierra Nevada and livestock grazed freely on the valley floor. For the County's first 18 years, the seat of government lay in the mining town of Millerton, located along the San Joaquin River within what is now the Millerton Reservoir (or Millerton Lake). About 25 miles to the south was the cattle town of Centerville, situated just below the foothills and beside the well-wooded banks of the Kings River. The 1857 California State Register clearly identifies the bases of the County's economy, and much of its tax revenue came from the assessment of livestock and foreign miners' fees (Applied Earthworks, Inc., 2019a). At the time, only 2,000 acres were under cultivation. By 1860, the gold rush had lost its momentum in Fresno County and surrounding areas and was becoming less a factor in the local economy. After the Civil War, displaced southerners began to trickle into the County to graze their herds or flocks in the pastures around its two major rivers. During this time, the valley was not a particularly hospitable place for farming. Founded in 1868 just north of the San Joaquin River in present-day Madera County, the Alabama Settlement ended in disappointment after drought and free-roaming cattle had spoiled the efforts of its residents to raise grain (Applied Earthworks, Inc., 2019a). Yet it was toward the end of this decade that plans began to take shape for two interrelated infrastructures that would eventually shift the County's economy from cattle ranching to agriculture: these were the laying of a rail line through the Central Valley and construction of a wide-ranging irrigation system within Fresno County.

It is no coincidence that the town of Fresno grew alongside County agriculture. As a commercial pursuit, agriculture, particularly the cultivation of vineyards and orchards, involves much more than farming per se and requires a host of other attendant sectors, including shippers, packers, blacksmiths, hardware merchants, and (most importantly) laborers. It was primarily this economic opportunity that brought people down from the foothills and drew other newcomers to Fresno. That influx, in turn, resulted in the creation of infrastructure (education, law enforcement, fire protection, etc.) necessary to support a population which, in time, would become the largest in the Central Valley.

Statistics taken from local histories chart this growth. In November 1872, about six months after the arrival of the railroad to what was then known as the Fresno Station, the new settlement had two stores, three stables, four hotels and restaurants, and three saloons (Applied Earthworks, Inc., 2019a). By 1874, the same year the County seat moved from Millerton to Fresno, the commercial sector had expanded in size and scope. From 1876 to 1878, the town of Fresno had about 700 inhabitants and by 1880 its population was 1,112 (Applied Earthworks, Inc., 2019a).

Located a few miles from the San Joaquin and Kings rivers on the dry plain, the site of Fresno was an unlikely place to build a city. The continued existence of Fresno would not have been possible without a reliable supply of domestic water. Founded in 1876, the Fresno Water Works piped water to the town from its 23,000-gallon tank, which tapped a local aquifer via a well that was 100 feet deep (Applied Earthworks, Inc., 2019a). One year later, the utility was sold to the Fresno Water Company. The new owners added a 12,000-gallon tank in 1878, a steam pump and another

well in 1881, 17,000 feet of additional piping in 1882, and more powerful Holly duplex pumps in 1884.

Since its founding in 1872, Fresno has had its own post office, which was housed in a series of businesses during the 1870s and 1880s (Applied Earthworks, Inc., 2019a). Telegraph service also began that same year. In 1874, the *Weekly Expositor* joined the exodus of businesses and residents from the old County seat at Millerton to Fresno; its first Fresno issue came out on April 22 of that year (Applied Earthworks, Inc., 2019a).

Farms, which were the economic backbone of Fresno's economy in the late 1800s, grew smaller as urban residential areas grew larger. This trend continued well into the twentieth century Between 1900 and 1920, 45,000 new farms were established in California, of which about 85 percent were less than 50 acres (Applied Earthworks, Inc., 2019). World War I resulted in increased demand for agricultural goods, especially those resistant to damage from storage and transportation (i.e., canned fruits and vegetables, dried and preserved fruit, wine, and cotton). However, the end of World War I and the onset of Prohibition in the early 1920s, which stymied local viticulture, resulted in hard times for farmers and the local businesses that relied upon agriculture. Like much of California, the Fresno area experienced robust growth after World War II, albeit not as extreme as the periods from 1880 to 1890 and 1900 to 1920. From 1940 to 1960, the City's population climbed from 60,685 to 133,929, an average annual increase of about four percent (Applied Earthworks, Inc., 2019a). During the 1960s, the City's population had grown at a modest 2.2 percent per year, reaching 165,655 in 1970 (Applied Earthworks, Inc., 2019a). It was during that time Fresno began to resemble the sprawling metropolis that it is today.

4.5.3 - REGULATORY SETTING

Federal

SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT (NHPA)

Archaeological resources are protected through the National Historic Preservation Act (NHPA) of 1966, as amended (54 USC 300101 et seq.); and its implementing regulation, Protection of Historic Properties (36 CFR Part 800), the Archaeological and Historic Preservation Act of 1974, and the Archaeological Resources Protection Act of 1979. The NHPA authorized the expansion and maintenance of the National Register of Historic Places (NRHP), established the position of State Historic Preservation Officer (SHPO), and provided for the designation of State Review Boards, set up a mechanism to certify local governments to carry out the purposes of the NHPA, assisted Native American tribes to preserve their cultural heritage, and created the Advisory Council on Historic Preservation (ACHP). Prior to implementing an "undertaking" (e.g., issuing a federal permit), Section 106 of the NHPA requires federal agencies to consider the effects of the undertaking on historic properties and to afford the ACHP and the SHPO a reasonable opportunity to comment on any undertaking that would adversely affect properties eligible for listing in the NRHP. As indicated in Section 101(d)(6)(A) of the NHPA, properties of traditional religious and cultural importance to a tribe are eligible for inclusion in the NRHP. Under the

NHPA, a resource is considered significant if it meets the NRHP listing criteria at 36 Code of Federal Regulations (CFR) 60.4.

NATIVE AMERICAN GRAVES PROTECTION AND REPATRIATION ACT OF 1990

The Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 sets provisions for the intentional removal and inadvertent discovery of human remains and other cultural items from federal and tribal lands. It clarifies the ownership of human remains and sets forth a process for repatriation of human remains and associated funerary objects and sacred religious objects to the Native American groups claiming to be lineal descendants or culturally affiliated with the remains or objects. It requires any federally funded institution housing Native American remains or artifacts to compile an inventory of all cultural items within the museum or with its agency and to provide a summary to any Native American tribe claiming affiliation.

CERTIFIED LOCAL GOVERNMENT

The Certified Local Government Program is jointly administered by the National Park Service (NPS) and the SHPOs. The California Office of Historic Preservation manages the Certified Local Government (CLG) Program, in which the City participates. The CLG status requires that the City meet certain requirements, including a Historic Preservation Ordinance, a citizen's commission, an inventory of local historic properties, adequate public participation, and compliance with CEQA.

State

CEQA AND ASSEMBLY BILL 52 (2015)

Section 15000 et seq.) direct lead agencies to determine whether cultural resources are "historically significant." Generally, a cultural resource shall be considered "historically significant" if it is 50 years old or older; possesses integrity of location, design, setting, materials, workmanship, feeling, and association; and meets the requirements for listing on the CRHR under any one of the following criteria (14 CCR 15064.5):

- 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, or 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.

Unique archaeological resources are also protected under CEQA. Unique archaeological resources are those resources that may not meet the above criteria but can clearly demonstrate that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria (PRC Section 21082.2(g)):

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

In addition, PRC Section 21074 defines a tribal cultural resource (TCR) as "a site, feature, place, or 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." TCRs may also include "non-unique archaeological resources" that may not be scientifically significant but still hold sacred or cultural value to a consulting tribe. A TCR is considered significant if it is: (1) listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC Section 5020.1(k); or (2) a TCR determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC Section 5024.1(c). In applying these criteria applicable to TCRs, the lead agency must consider the significance of the resource to a California Native American tribe.

Under CEQA, a project with an effect that may cause a substantial adverse change in the significance of a historical resource or a TCR is a project that may have a significant effect on the environment (14 CCR 15064.5(b)). Substantial adverse change in the significance of a historical resource or TCR is defined as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings in a manner that materially impairs the significance of the resource that justifies its inclusion or eligibility to be included in the CRHR. Additionally, a project may have a substantial adverse change in the significance of a TCR if the adverse change is identified through consultation with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project (PRC Section 21084.2).

The cited statute and guidelines specify how cultural resources and TCRs are to be managed in the context of projects, such as the present Project. Briefly, archival and field surveys must be conducted, government-to-government consultation with California Native American tribes must occur and identified resources must be inventoried and evaluated in prescribed ways. Impacts on TCRs, prehistoric and historical archaeological resources, and built-environment resources such as standing structures, buildings, and objects deemed "historically significant" must be avoided or mitigated to the extent feasible (PRC Section 21081).

CALIFORNIA REGISTER OF HISTORICAL RESOURCES

According to the CEQA Guidelines, for a resource to be eligible for the CRHR, it must meet at least one of the criteria defined in Section 5024.1 of the California PRC:

- 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, or 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 history or prehistory.

In addition to these criteria, cultural resources must, except in rare circumstance, be 50 years old or older (Applied Earthworks, Inc., 2019a).

Integrity refers to the degree or extent to which a resource retains its original character. Ultimately, the question of integrity is answered by deciding whether the resource retains the identity for which it is significant. To facilitate this assessment, the OHP recognizes that the National Parks Service has identified seven aspects of integrity:

- Location is the place where the historic property was constructed or the place where the historic event occurred;
- Design is the combination of elements that create the form, plan, space, structure, and style of a property;
- Setting is the physical environment of a historic property;
- Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property;
- Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory;
- Feeling is a property's expression of the aesthetic or historic sense of a particular period of time; and
- Association is the direct link between an important historic event or person and a historic property.

Only after significance is fully established is the issue of integrity addressed. To be eligible for the CRHR, a resource must possess both significance and integrity. Thus, cultural resources that are

not significant per CRHR criteria are ineligible for inclusion in the CRHR and do not require an integrity assessment.

CALIFORNIA HISTORICAL LANDMARKS (CHLS)

California Historical Landmarks (CHLs) are buildings, structures, sites, or places that have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value and that have been determined to have statewide historical significance by meeting at least one of the criteria listed below. The resource also must be approved for designation by the County Board of Supervisors (or the city or town council in whose jurisdiction it is located); be recommended by the SHRC; and be officially designated by the Director of California State Parks.

To be eligible for designation as a landmark, a resource must meet at least one of the following criteria:

- It is the first, last, only, or most significant of its type in the State or within a large geographic region (Northern, Central, or Southern California);
- It is associated with an individual or group having a profound influence on the history of California; or
- It is a prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in a region of a pioneer architect, designer, or master builder.

CALIFORNIA POINTS OF HISTORICAL INTEREST

California Points of Historical Interest are sites, buildings, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. Points of historical interest designated after December 1997 and recommended by the SHRC are also listed in the CRHR. No historic resource may be designated as both a landmark and a point. If a point is later granted status as a landmark, the point designation will be retired. In practice, the point designation program is most often used in localities that do not have a locally enacted cultural heritage or preservation ordinance.

To be eligible for designation as a point of historical interest, a resource must meet at least one of the following criteria:

- It is the first, last, only, or most significant of its type within the local geographic region (city or county);
- It is associated with an individual or group having a profound influence on the history of the local area; or

- It is a prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in the local region of a pioneer architect, designer, or master builder.

CALIFORNIA PUBLIC RECORDS ACT

Sections 6254(r) and 6254.10 of the California Public Records Act were enacted to protect archaeological sites from unauthorized excavation, looting, or vandalism. Section 6254(r) explicitly authorizes public agencies to withhold information from the public relating to "Native American graves, cemeteries, and sacred places maintained by the Native American Heritage Commission." Section 6254.10 specifically exempts from disclosure requests for "records that relate to archaeological site information and reports, maintained by, or in the possession of the Department of Parks and Recreation, the State Historical Resources Commission, the State Lands Commission, the NAHC, another State agency, or a local agency, including the records that the agency obtains through a consultation process between a Native American tribe and a State or local agency."

CALIFORNIA HEALTH AND SAFETY CODE, SECTIONS 7050 AND 7052

Health and Safety Code, Section 7050.5, declares that, in the event of the discovery of human remains outside of a dedicated cemetery, all ground disturbance must cease, and the county coroner must be notified. Section 7052 establishes a felony penalty for mutilating, disinterring, or otherwise disturbing human remains, except by relatives.

CALIFORNIA PENAL CODE, SECTION 622.5

The California Penal Code, Section 622.5, provides misdemeanor penalties for injuring or destroying objects of historic or archaeological interest located on public or private lands, but specifically excludes the landowner.

NATIVE AMERICAN HERITAGE COMMISSION (NAHC)

PRC Section 5097.91 established the Native American Heritage Commission (NAHC), the duties of which include inventorying of places of religious or social significance to Native Americans and identifying known graves and cemeteries of Native Americans on private lands. PRC Section 5097.98 specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner.

PUBLIC RESOURCES CODE, SECTION 5097.5

PRC Section 5097.5 defines as a misdemeanor the unauthorized disturbance or removal of archaeological, historic, or paleontological resources located on public lands.

Local

CITY OF FRESNO GENERAL PLAN

The Project area is located within the City of Fresno General Plan. The Project would be subject to applicable policies and measures of the General Plan. The Yokuts were the first residents of the Fresno area, with small tribes occupying the floodplains of the Big Dry and the Little Dry Creek.

There have been 16 Native American archeological sites recorded within the Planning Area by the Southern San Joaquin Valley Information Center (SSJVIC), a depository for information on cultural resources. According to the SSJVIC the probability of finding subsurface cultural resources is considered low to moderate in most areas, with the exception of the waterways. Current and past waterways and their surrounding regions are considered especially sensitive for cultural resources, as indigenous people utilized these areas as permanent villages, temporary camps, and task specific sites.

As part of the City of Fresno's General Plan Update process, the Native American Heritage Commission (NAHC) conducted a record search of the sacred lands file. The NAHC response listed 11 local Native American tribes that may have historic ties to the Planning Area, and letters of inquiry were sent, along with follow up phone calls, to the 11 tribal representatives; however, no responses were received. Nonetheless, the NAHC has characterized the City of Fresno as being "very sensitive" for potential impacts to Native American sacred sites and prehistoric deposits.

Goal 6 - Protect, preserve, and enhance natural, historic, and cultural resources. Emphasize the continued protection of important natural, historic, and cultural resources in the future development of Fresno. This includes both designated historic structures and neighborhoods, but also "urban artifacts" and neighborhoods that create the character of Fresno.

Goal 15 - Improve Fresno's visual image and enhance its form and function through urban design strategies and effective maintenance.

Goal 17 - Recognize, respect, and plan for Fresno's cultural, social, and ethnic diversity, and foster and informed and engaged citizenry. Emphasize shared community values and genuine engagement with and across different neighborhoods, communities, institutions, businesses and sectors to solve difficult problems and achieve shared goals for the success of Fresno and all its residents.

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

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

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-2-a. 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-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. Work with local Native American tribes to protect and 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. Consider State Office of Historic Preservation guidelines when establishing CEQA mitigation measures for archeological resources.

Policy HCR-2-g - Demolition Review. Review all demolition permits to determine if the resource scheduled for demolition is potentially eligible for listing on the Local Register of Historic Resources. Consistent with the Historic Preservation Ordinance, refer potentially eligible resources to the Historic Preservation Commission and as appropriate to the City Council.

4.5.4 - IMPACTS AND MITIGATION MEASURES

Methodology

RECORDS SEARCH

On July 19, 2019, Applied Earthworks (AE) requested an expedited records search of the Project area from the Southern San Joaquin Valley Information Center (SSJVIC) at the California State University, Bakersfield. The purpose of the search was to identify previously recorded archaeological sites and prior surveys within the Project area. The SSJVIC staff responded on July 29, 2019 (Records Search No. 19-295) with GIS shapefiles and lists of sites and previous reports in the Project area. A copy of the SSJVIC findings is provided in Appendix D Cultural Resource Inventory. AE staff also reviewed the City of Fresno's General Plan and General Plan and Development Code Update Master Environmental Impact Report; City of Fresno Downtown Neighborhoods Community Plan, Fulton Corridor Specific Plan, and Downtown Development Code Draft EIR; City of Fresno North Park Survey: Historic Context and Survey Report; and Downtown Fresno (Fulton Corridor) Historic Resources Survey. In addition, an online research

was conducted to identify previously recorded built environment resources within the Project area, including searches of the:

- National Register of Historic Places;
- California Register of Historical Resources;
- California Historical Landmarks;
- California Points of Historical Interest; and
- City of Fresno's Development and Resource Management website.

The Southern San Joaquin Valley Information Center (SSJVIC) records search identified 268 prior cultural resource studies that intersect with or are within the Project area (see Appendix D). Approximately 22 percent of the Project area has been previously surveyed. No prehistoric archaeological sites have been recorded within the Project area; however, the SSJVIC identified 10 historic-era archaeological sites in the Project area. These consist of refuse scatters, privies, concrete building pads, and segments of historic-era railroad tracks, which are either ineligible or unevaluated for inclusion on NRHP or CHRH lists. However, two eligible resources, the Fresno-1 Manufactured Gas Plant and the China Alley Historic-era feature are eligible for inclusion (Table 4.5-1).

Native American Heritage Commission

On July 30, 2019, a request was submitted to the NAHC for a search of the Sacred Lands File to identify recorded sacred sites or areas of importance to local tribes within the Project area. The NAHC responded on August 20, 2019 with its findings. A copy of the NAHC response letter is attached to Appendix D the Cultural Inventory Report.

Cultural Resources Sensitivity Modeling

A prehistoric and historic archaeological site sensitivity model was developed through analysis of GIS data gathered during records searches. GIS software (i.e., ArcGIS 10.7 and Maxtent) were used to analyze key predictive factors including known site locations; proximity to water; placement within late Pleistocene and Holocene sediments; and landscape conditions such as topography, slope, and aspect. Results for the Project area were then ranked as having high, moderate, or low potential for containing archaeological deposits at or below the ground surface.

In addition, built environment spatial data from online sources pertaining to the City was compiled and a simple overlay analysis was performed to identify specific Project areas containing known historic-era buildings, structures, and objects that are listed in or recommended eligible for inclusion in the NRHP or CRHR.

Table 4.5-1
Historic-Era Archaeological Sites in the Project Area

Primary No. (P-10)	Trinomial (CA-FRE-)	Age	Description	Recommended NRHP and CHRH Eligibility
003930	003109H	1929-1930	Biola Branch Extension Railroad	Ineligible
004702	003195H	Late 19th to 20th centuries	Historic-era refuse scatter	Unevaluated
005265	Not issued	1888-1948	Fresno railroad spurs	Ineligible
006142	003617H	1880-Post 1945	Fresno Block 534 Site	Unevaluated
006143	Not issued	1918-1948	Fresno Block 1052 Concrete Pad	Unevaluated
006144	003618H	19th – 20th centuries	Fresno Chinatown Block 50	Unevaluated
006654	003824H	1939-1940s	Fresno-1 Manufactured Gas Plant	Eligible
006962	003814H	1902-1951	3 historic-era buildings	Unevaluated
006977	003817H	1870-1945	Historic-era refuse deposit	Unevaluated
007082	003846H	1848-1914	China Alley Historic-era feature	Eligible

The General Plan identifies four Historic Districts listed on the City's Local Register of Historic Resources (Local Register) within the Project area (Table 4.5-2). There are an additional 10 Historic Districts proposed for inclusion in the Local Register encompassing portions of the northwestern, northeastern, and southwestern Project area. The City of Fresno Planning and Development Department also lists numerous cultural resources potentially within the Project area, including the Fresno Sanitary Landfill, dating to 1937, which is a National Landmark, and 274 historic-era buildings, structures, or objects. Of the 274 built environment resources, 31 are listed in the NRHP and CRHR and 207 buildings are contributors to the four Historic Districts listed on the Local Register.

Table 4.5-2
City of Fresno Local Register of Historic Resources

Historic District	Description	Location	Local Register Eligibility Status
Chandler Field/Fresno Municipal Airport	Four WPA-ear buildings, including administration (terminal), administration annex, electrical control, and bathroom buildings	Approximately two miles west of the heart of Fresno, along the north side of historic Kearney Blvd.	Listed
Huntington Boulevard	Consists of 116 residential properties	East end of the boulevard at the intersection of E. Huntington Blvd and Cedar Ave.	Listed
The Porter Tract	Housing tract designed by John G. Porter consisting of 45 buildings	Boundaries are Weldon Ave. on the south; Maroa Ave. on the west; the rear property line of Yale Ave. on the north, and College Ave. on the east.	Listed
Wilson Island	Encompasses 80 properties within the larger Wilson's North Fresno Tract, which was first developed in 1908 by Rosanna C. Wilson and her son A. Polette Wilson	Bounded by N. Echo Ave. on the west, E. Carmen Ave. on the north, the northern side of E. Floradora Ave. on the south, and the back side of the commercial lots along N. Wishon Ave.	Listed
L Street	Includes 50 contributing structures out of 64 total	Irregular boundaries but generally abuts Divisadero St. on the north, Stanislaus St. on the southeast, extends to the rear property line of N St. on the northeast, and Van Ness Ave. on the southwest	Proposed
St. John's Cathedral	Composed of various structures and buildings	Composed of approximately seven city blocks, bounded on the northwest by Fresno St., on the north by Divisadero St., on the northeast by U St., on the southeast by Tulare St. and on the southwest by the Santa Fe Railroad tracks	Proposed (Determined ineligible for inclusion in NRHP)

Thresholds of Significance

The following criteria, as establish in Appendix G of the CEQA Guidelines, will be utilized to determine if a project could potentially have a significant impact:

a) Cause a substantial adverse change in the significance of 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; or

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

Section 21083.2(g) of CEQA further defines "unique archaeological resource" for purposes of determination as to whether a project may have a significant effect on archaeological resources. As used in this section "unique archaeological resource" means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

a) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;

b) Has a special and particular quality such as being the oldest of its type or the best available of its type; or

c) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

According to CEQA Guidelines, California Code of Regulations (CCR) Title 14, 15064.5, a project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment (CCR Title 14, 15064.5(b)). The CEQA Guidelines further state that a substantial adverse change in the significance of a resource means the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historic resource would be materially impaired. Actions that would materially impair the significance of a historical resource are any actions that would demolish or adversely alter those physical characteristics of a historical resource that convey its historical significance and qualify it 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).

The Final PEIR for CalCannabis Cultivation Licensing, completed by the California Department of Food and Agriculture (California Department of Food and Agriculture, 2017), concluded that it is unlikely for cultivation to result in modification or demolition of historic structures that could affect the characteristics that make the building eligible for listing in the CRHR; such impacts

would be more likely to occur as part of site development and, as a result, would be evaluated by the local agency during its approval process for site development.

Project Impacts

Impact 4.5-1: Cause a Substantial Adverse Change in the Significance of a Historical Resource Pursuant to Section 15064.5

An archival records search was conducted at the California State University, Bakersfield, Southern San Joaquin Valley Information Center (SSJVIC), by staff members to determine:

(i) if prehistoric or historical archaeological sites had previously been recorded within the Project site; (ii) if there had been surveys within the Project area by archaeologists prior to the initiation of Cultural Resource Inventory; and/or (iii) whether the Project area was known to contain archaeological sites and to thereby be archaeologically sensitive. Additionally, a search of the NAHC Sacred Lands File was conducted in order to ascertain whether traditional cultural places or cultural landscapes had been identified within the Project area. The results of this archival records search are summarized in Appendix D.

According to the SSJVIC records, AE identified 268 prior cultural resource studies have previously covered the Project area. Approximately 22 percent of the Project area has been previously surveyed. No prehistoric archaeological sites are known to exist within the Project area. Furthermore, the SSJVIC identified 10 historic-era sites within the Project area; these may contain refuse scatters, privies, concrete buildings pads, and segments of historic-era railroad tracks (see Tables 4.5-1 and 4.5-2).

A records search was also conducted at the Native American Heritage Commission (NAHC) Sacred Lands File. The NAHC search did not identify sacred sites or areas of importance to Native American tribes. However, the NAHC recommended additional outreach to local tribes. The City of Fresno has conducted government-to-government tribal consultation in compliance with AB 52.

Letters received pursuant to AB 52 (see Appendix D):

- Dumna Wo Wah Tribal Government, Robert Ledger, Chairperson;
- Table Mountain Rancheria of California, Bob Pennell, Cultural Resources Director; and
- Table Mountain Rancheria of California, Leanne Walker-Grant, Chairperson

Letters were sent out August 9, 2019. No further consultation was requested from the tribes.

No cultural or tribal resources of any kind had been previously identified within the Project area, and the survey did not result in the identification of any such resources. Development of the Project area therefore does not have the potential to result in adverse impacts to significant cultural resources, and no additional cultural resources work is required.

However, there is still a possibility that previously unknown historical materials may be exposed during construction of undeveloped parcels. Grading and trenching, as well as other ground-disturbing actions, have the potential to damage or destroy these previously unidentified and potentially significant cultural resources within the Project area, including historical resources. Disturbance of any deposits that have the potential to provide significant cultural data would be considered a significant impact under CEQA. Implementation of Mitigation Measure MM 4.5-1 would reduce potential impacts on cultural resources, including historical resources, associated with the proposed Project to less-than-significant levels. Operation of the proposed Project would not result in impacts related to the disturbance of historical resources.

The Final PEIR for CalCannabis Cultivation Licensing, completed by the California Department of Food and Agriculture (California Department of Food and Agriculture, 2017), concluded that as part of the license application process, the CEQA lead agency would consider site specific information to evaluate whether significant impacts could occur at a particular location. And that lead agency may need to develop mitigation measures, if any such resources are identified, as well as include measures to address unanticipated discoveries. This EIR, and the Final PEIR for CalCannabis Cultivation Licensing, have included these recommended mitigation measures.

Mitigation Measures

MM 4.5-1: If previously unknown historical resources are encountered before or during grading activities, construction shall stop in the immediate vicinity of the find and a qualified historical resources specialist shall be consulted to determine whether the resource requires further study. The qualified historical resources specialist 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 in accordance with Section 15064.5 of the CEQA Guidelines.

If the resources are determined to be unique historical resources as defined under Section 15064.5 of the CEQA Guidelines, measures shall be identified by the qualified historical resources specialist and recommended to the City. Appropriate 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 City approves the measures to protect these resources.

Any historical artifacts recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study.

Level of Significance after Mitigation

Impacts would be *less than significant with mitigation incorporated.*

Impact 4.5-2: Cause a Substantial Adverse Change in the Significant of an Archaeological Resource Pursuant to Section 15064.5.

As stated in Impact 4.5-1, approximately 22 percent of the Project area has been subject to archaeological and built environmental study and no prehistoric archaeological resources have been discovered and known to exist within the Project area. As depicted in Table 4.5-1, 10 possible archaeological resources have been discovered in the Project area. These resources were determined to be refuse scatters, privies, concrete building pads, and segments of historic-era railroad tracks.

According to the cultural sensitivity model, the majority of the Project area is within areas that have high sensitivity for containing buried archaeological sites, or that contain historical resources that are either listed in or proposed for listing in the NRHP, CRHR, and or the City's Local Register. This suggests that in certain areas within the Project area there is a potential for ground-disturbing activities to expose and affect previously unknown significant cultural resources, including archaeological resources at the Project area.

Grading and trenching, as well as other ground-disturbing actions, have the potential to damage or destroy these previously unidentified and potentially significant cultural resources within the Project area, including historical or archaeological resources. Disturbance of any deposits that have the potential to provide significant cultural data would be considered a significant impact under CEQA. Implementation of Mitigation Measure MM 4.5-2 would reduce potential impacts on cultural resources, including archaeological resources, associated with the proposed Project to less-than-significant levels.

The Final PEIR for CalCannabis Cultivation Licensing, completed by the California Department of Food and Agriculture (California Department of Food and Agriculture, 2017), concluded that cultivation may involve excavation within soil that has not been disturbed previously. As such, while considered unlikely, excavation could encounter buried historic or archaeological resources or human remains. Therefore, this project EIR, and the PEIR, includes mitigation measures to ensure that any unexpected discoveries of archaeological resources will not result in significant impacts.

Mitigation Measures

MM 4.5-2: If a Cannabis License application is submitted on a parcel of land that has not previously been graded, a field survey and literature search for prehistoric archaeological resources shall be conducted by a qualified historical resources specialist. The following procedures shall be followed:

1. If prehistoric resources are not found during either the field survey or literature search, excavation and/or construction activities can commence. In the event that buried prehistoric archaeological resources are discovered during excavation and/or construction activities, construction shall stop in the immediate vicinity of the find and a qualified archaeologist shall be consulted to determine whether the resource requires further study. The qualified archaeologist shall make recommendations to the developer and 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 in accordance with Section 15064.5 of the CEQA Guidelines. If the resources are determined to be unique prehistoric archaeological resources as defined under Section 15064.5 of the CEQA Guidelines, mitigation measures shall be identified by the monitor and required to the developer and City. Appropriate 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 prehistoric archaeological artifacts recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study.

2. If prehistoric resources are found during the field survey or literature review, the resources shall be inventoried using appropriate State record forms and submit the forms to the Southern San Joaquin Valley Information Center. The resources shall be evaluated for significance. If the resources are found to be significant, measures shall be identified by the qualified archaeologist. 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 an archaeological monitor. The monitoring period shall be determined by the qualified archaeologist.

3. If additional prehistoric archaeological 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 after Mitigation

Impacts would be *less than significant with mitigation incorporated*.

Impact 4.5-3: Disturb any Human Remains, Including those Interred Outside of Dedicated Cemeteries

The records searches did not indicate the presence of human remains, burials, or cemeteries located within the eligible sites. With the previously surveyed sites (approximately 22 percent of the Project area), there has been no record of human remains being discovered, and no burials or historical cemeteries are known to occur within the Project area. However, construction would involve earth-disturbing activities, and it is still possible that human remains may be discovered. Mitigation Measure MM 4.5-3 has been included in the event that human remains are found during ground-disturbing activities. Impacts would be less than significant with mitigation incorporated.

Operation of the proposed Project is not anticipated to result in impacts related to the disturbance of human remains.

Mitigation Measures

MM 4.5-3: In the event that human remains are unearthed during excavation and grading activities of any future development project, all activity shall cease immediately. Pursuant to Health and Safety Code (HSC) Section 7050.5, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code (PRC) Section 5097.98(a).

If the remains are determined to be of Native American descent, the Coroner shall within 24 hours notify the Native American Heritage Commission (NAHC). The NAHC shall then contact the most likely descendent of the deceased Native American, who shall then serve as the consultant on how to proceed with the remains. Pursuant to PRC Section 5097.98(b), upon the discovery of Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains.

Level of Significance after Mitigation

Impacts would be *less than significant with mitigation incorporated*.

Cumulative Setting Impacts and Mitigation Measures

CUMULATIVE SETTING

The study area for the analysis of cumulative impacts is the City of Fresno and the unincorporated portions of Fresno County located adjacent to the city limits, as well as portions of the City of Clovis and the County of Madera adjacent to the City of Fresno. The applicable cumulative projections include growth projections from the City of Fresno General Plan, Fresno County General Plan, Madera County General Plan, and the City of Clovis General Plan.

The City of Fresno General Plan was last adopted in the year 2014. Anticipated development within the General Plan includes 186,840 dwelling units, 66.4 million square feet (msf) of commercial/office/public facility, 100,000 sf of mixed uses, and 72.8 msf of industrial uses. The General Plan contains approximately 11,714 acres of agricultural land, 12,288 acres of open space, and 12,522 acres of vacant land. Existing agricultural land is primarily located in the southeastern and western portions of the General Plan.

The General Plan contains two major rail lines that generally traverse in a southeast to northwest direction. These railways include the Union Pacific Railroad line that is generally located along SR-99, and the BNSF Railway that diverges from the SR-99 in the southwest and travels through the Downtown to the northwest. There are three airports located within the City of Fresno including the Fresno-Yosemite International Airport located in the eastern portion of the Planning

Area, the Fresno-Chandler Downtown Airport located west of Downtown, and Sierra Sky Park Airport that is located on the northern portion of the General Plan.

The County of Fresno General Plan was last adopted in the year 2000. The County General Plan was prepared to accommodate population growth through the year 2020, consistent with the California Department of Finance projection of 1.1 million by 2020. This represents an additional population of approximately 344,000, which includes the year 2020 projections outside the sphere of influences for cities within the East Valley area, which is located east of Interstate 5. Additional development projects are proposed northeast of the City of Fresno Project area including Friant Ranch that represents an additional population of approximately 164,693 through the year 2020.

The County of Madera General Plan was last adopted in the year 1995. The Madera County General Plan identifies population and employment growth projections through the year 2010 and includes 177,071 people and 61,866 employees. Since the adoption of Madera County's General Plan, substantial new development projects have been proposed in the southern portion of Madera County, some of which is proposed within close proximity of the City of Fresno Project area including Gateway, Gunner Ranch, Liberty Groves, North Fork Village, Tesoro Viejo, and River Ranch Estates. These projects include approximately 23,000 units, and supporting uses such as commercial, public facilities, parks, and open space.

The City of Clovis General Plan was last adopted in the year 2014. The Clovis General Plan forecasts the ultimate buildout of the entire Clovis General Plan area that is expected to occur for at least 70 years. The Clovis General Plan forecasts an additional 65,100 residential units, 179,300 population, and 38,250,000 square feet of buildings.

CUMULATIVE IMPACTS

This EIR uses the projections approach and takes into account growth from the proposed Project within the Fresno City boundary and Sphere of Influence (SOI), in combination with impacts from projected growth in the rest of Fresno County and the surrounding region. Potential cumulative cultural impacts could arise from a combination of the development of the proposed Project together with future development in the immediate vicinity of the adjoining jurisdictions.

Cultural resources delineated in Tables 4.5-1 and 4.5-2, were identified in accordance with the Cultural Inventory Resource Report, Appendix D. Excavation activities associated with the proposed Project in conjunction with other projects in the area could contribute to impacting of as-yet unrecorded cultural resources, associated geological and geographic data. Although not likely, construction activities associated with the proposed Project could contribute to the cumulative loss of archaeological resources and result in adverse cumulative impacts.

CEQA Section 15130(a) states: An EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in Section 15065(a)(3). Where a lead agency is examining a project with an incremental effect that is not "cumulatively

considerable," a lead agency need not consider that effect significant but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

With implementation of Mitigation Measures MM 4.5-1, MM 4.5-2, and MM 4.5-3, the Project would not have a cumulatively considerable contribution to impacts to unique archaeological and historical resources, as these impacts would be mitigated on a site by site basis. Consequently, with implementation of these mitigation measures, cumulatively considerable impacts would be considered less than significant.

Mitigation Measures

Implement Mitigation Measures MM 4.5-1 through MM 4.5-3.

Cumulative Level of Significance

Cumulative impacts would be *less than significant with mitigation*.

4.6 - Energy

4.6.1 - INTRODUCTION

This section describes the existing energy resources that are provided to the City of Fresno Project area. Information used for the preparation of this section includes data from the Fresno General Plan, and General Plan Update Master EIR, Pacific Gas & Electric Company (PG&E), and California Department of Transportation. Potential impacts associated with energy conservation are assessed.

Information found herein, as well as other aspects of the Project's energy implications, are discussed elsewhere in this Draft EIR, including in Chapter 2, *Project Description,* Section 4.4, *Greenhouse Gas Emissions*, and Section 4.10, *Transportation* of this Draft EIR.

4.6.2 - ENVIRONMENTAL SETTING

REGIONAL CHARACTER

The City of Fresno is located in Fresno County and is situated in the central portion of the San Joaquin Valley, in the State of California. The City encompasses approximately 113 square miles. Fresno is the largest city in Fresno County and has a current estimated population of 536,683 residents (California Department of Finance, 2019). Fresno County is California's sixth largest county in land area and encompasses approximately 6,011 square miles.

ENERGY RESOURCES

As discussed in the Energy Resources Element of the Fresno General Plan, Pacific Gas and Electric (PG&E) provides almost all the energy for the City of Fresno Project area. PG&E provides electricity and natural gas services throughout its service area.

Electricity

PG&E identifies service territories for their electric transmission system. The Project area is located within the Greater Fresno area service territory. This service area interconnects to the bulk PG&E transmission system by 12 transmission circuits. They include nine 230 kV lines, three 500/230 kV electrical banks, and one 70 kV line. This transmission system connects to the Gates substation in the south, Moss Landing in the west, Los Banos in the northwest, Bellota in the northeast, and Templeton in the southwest. The Greater Fresno area generates approximately 3,987 megawatts (MW) of electricity through thermo, hydro, solar, and biomass facilities. The largest electrical generating facility is the Helms Pumped Storage Plant that pumps water up and down between two reservoirs located at different elevations. This facility produces and stores up to 1,212 MW of electricity that represents approximately 30 percent of the electricity produced in the Greater Fresno area. (City of Fresno, 2015)

Based on electrical demand factors that were provided by the California Energy Commission, the overall electrical energy consumption in Fresno County was 7651.89 GWh/year (California Energy Commission, 2018). PG&E provided the most recent electrical energy demand of the top 10 U.S. Zip Codes in the Fresno area. Table 4.6-1 shows the breakdown of the electrical energy demand based on agriculture, commercial/industrial, residential, and state governmental uses. Overall demand is approximately 2,336.7 GWh/year.

Table 4.6-1
Electrical Demand within the Top 10 Zip Codes of Fresno Planning Area

ZIP CODE	AGR	COM/IND	RES	ST GOV	Total (GWh)
93727	0.3	308.0	108.5	1.5	418.3
93706	60.7	205.9	42.9	0.1	309.5
93720	0.0	187.5	114.0	0.0	301.5
93710	0.1	122.6	66.8	75.8	265.4
93722	0.6	105.0	155.2	0.3	261.2
93711	0.4	111.1	85.4	0.0	197.0
93726	0.2	69.3	85.3	3.9	158.7
93721	1.2	145.1	9.4	2.9	158.6
93702	0.0	63.9	70.9	0.0	134.8
93703	0.0	88.4	43.3	0.0	131.7
Total	**63.5**	**1,406.8**	**781.7**	**84.5**	**2,336.7**

Sources: Pacific Gas and Electric Company

Natural Gas

PG&E's natural gas system encompasses approximately 70,000 square miles in Northern and Central California. Approximately 90 percent of the natural gas supply for PG&E is from out-of-state imports. The primary pipeline that extends through California includes Lines 400 and 401 consisting of 725 miles of 36-inch and 42-inch pipelines. These pipelines extend from the TransCanada's system that originates in Canada and extends through Malin, Oregon. In addition, there is Line 300 that consists of 1,004 miles of 34-inch pipeline that extends from four interstate pipelines through Topock, Arizona. The natural gas system includes various storage facilities and compressor stations along the transmission lines. Based on natural gas demand factors that were provided by PG&E as shown in Table 4.6-2, residential demand is approximately 138 therms per person per year and the non-residential demand is approximately 403 therms per employee per year. Based on a 2018 residential population of 530,093 and an employment population of 254,445 for the Planning Area, the residential population would result in a natural gas demand for approximately 73 million therms per year and the non-residential demand would be approximately 102 million therms per year for a total of approximately 175 million therms per year.

Table 4.6-2
Year 2018 Natural Gas Demand within the City of Fresno Planning Area

Use	Population or Employment	Demand Factor (therms/person/year)	Total (million therms/year)
Residential	530,093	138	73
Non-Residential	254,445	403	102
		Total	**175**

Source: General Plan Update Master EIR

Petroleum

According to the U.S. Energy Information Administration, California is one of the top producers of crude oil in the Nation, accounting for almost one-tenth of the production in the United States. Drilling operations are concentrated in the San Joaquin Basin in the southern half of the Central Valley and drilling occurs offshore in both State and federal waters. California ranks third in the U.S. in petroleum refining capacity and accounts for more than one-tenth of the total U.S. capacity (U.S. Energy Information Administration, 2019).

California motorists are required to use a special motor gasoline blend called California Clean Burning Gasoline. In 2004, California completed a transition from methyl tertiary butyl-ether (MBTE) to ethanol as a gasoline oxygenate additive, making California the largest ethanol fuel market in the U.S. There are four ethanol production plants in Central and Southern California, but most of California's ethanol supply is transported by rail from corn-based producers in the Midwest.

California's petroleum consumption for 2012 was approximately 620 million barrels, accounting for approximately 9.2 percent of total U.S. consumption, (motor vehicle gasoline accounted for approximately 29 million barrels or 9.4 percent of total U.S. consumption. Based on the last version of the California Motor Vehicle Stock, Travel and Fuel Forecast, which was in 2008, the total vehicle miles traveled in California in 2010, was approximately 346 billion, and the total vehicle miles traveled in the County of Fresno in 2010 was approximately 8.576 billion (Fresno County Rural Transit Agency, 2017).

According to the 2008 California Motor Vehicle Stock, Travel and Fuel Forecast, the average fuel consumption by all classes of motor vehicles was projected to be 18.2 miles per gallon in 2010 and 18.7 miles per gallon in 2030.

4.6.3 - REGULATORY SETTING

Federal and State agencies regulate energy use and consumption through various means and programs. On the federal level, the United States Department of Transportation, the United States Department of Energy, and the United States Environmental Protection Agency are three federal agencies with substantial influence over energy policies and programs. Generally, federal

agencies influence and regulate transportation energy consumption through establishment and enforcement of fuel economy standards for automobiles and light trucks, through funding of energy related research and development projects, and through funding for transportation infrastructure improvements. On the State level, the California Public Utilities Commission (CPUC) and the California Energy Commission (CEC) are two agencies with authority over different aspects of energy.

The CPUC regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies and serves the public interest by protecting consumers and ensuring the provision of safe, reliable utility service and infrastructure at reasonable rates, with a commitment to environmental enhancement and a healthy California economy (California Public Utilities Commission, 2012).

The California Energy Commission is the State's primary energy policy and planning agency. The CEC forecasts future energy needs, promotes energy efficiency, supports energy research, develops renewable energy resources and plans for/directs State response to energy emergencies (California Energy Commission, 2012). Some of the more relevant federal and State energy-related laws and plans that relevant to cannabis related businesses are discussed below.

Federal

FEDERAL ENERGY POLICY AND CONSERVATION ACT

The Energy Policy and Conservation Act of 1975 sought to ensure that all vehicles sold in the U.S. would meet certain fuel economy goals. This Act enabled Congress to establish the first fuel economy standards for on-road motor vehicles in the United States. In compliance with this Act, the National Highway Traffic and Safety Administration has the responsibility for establishing additional vehicle standards and revising existing standards. Since 1990, the fuel economy standard for new passenger cars has been 27.5 miles per gallon and since 1996, the fuel economy standard for new light trucks (gross vehicle weight of 8,500 pounds or less) has been 20.7 miles per gallon. Currently, heavy-duty vehicles (i.e., vehicles and trucks over 8,500 pounds gross vehicle weight) are not subject to fuel economy standards. Compliance with federal fuel economy standards is determined based on the basis of each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the U.S. The Corporate Average Fuel Economy (CAFE) Program, administered by U.S. EPA, was created to determine vehicle manufacturers' compliance with the fuel economy standards. The CAFE value is calculated by the U.S. EPA for each manufacturer based on city and highway fuel economy test results and vehicle sales. Using the information generated under the CAFE Program, the United States Department of Transportation has the authority to assess penalties for non-compliance (South Coast Air Quality Management District , 2012).

ENERGY POLICY ACT OF 2005

This Act addresses energy efficiency; renewable energy requirements; oil, natural gas and coal; alternative-fuel use; tribal energy, nuclear security; vehicles and vehicle fuels, hydropower and

geothermal energy, and climate change technology. The Act provides revised annual energy reduction goals (two percent per year beginning in 2006), revised renewable energy purchase goals, federal procurement of Energy Star or Federal Energy Management Program-designated products, federal green building standards, and fuel cell vehicle and hydrogen energy system research/demonstration (South Coast Air Quality Management District , 2012).

INTERMODAL SURFACE TRANSPORTATION EFFICIENCY ACT OF 1991 (ISTEA)

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) was enacted to promote the development of intermodal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contained factors that Metropolitan Planning Organizations (MPOs), such as Fresno COG, were to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values that were to guide transportation decisions in that metropolitan area. The planning process for specific projects would then address these policies. Another requirement was to consider the consistency of transportation planning with federal, State, and local energy goals. Through this requirement, energy consumption was expected to become a decision criterion, along with cost and other values that determine the best transportation solution.

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION STANDARDS

Federal standards are being set by the National Highway Traffic Safety Administration (NHTSA) and the U.S. Environmental Protection Agency to encourage and incentivize the production of clean energy vehicles with improved fuel efficiency. NHTSA sets the Corporate Average Fuel Economy (CAFE) standard, which is increasing into the future in order to improve energy security and reduce fuel consumption. The first phase of the CAFE standards (for model year 2017 to 2021) is projected to require, on an average industry fleet-wide basis, a range from 40.3 to 41.0 mpg in model year 2021. The second phase of the CAFE Program (for model years 2022 to 2025) is projected to require, on an average industry fleet-wide basis, a range from 48.7 to 49.7 mpg in model year 2025. The second phase of standards has not been finalized due to the statutory limitation that the NHTSA set average fuel economy standards not more than five model years at a time (NHTSA, 2019).

State

CALIFORNIA PUBLIC UTILITIES COMMISSION REQUIREMENTS

The California Public Utilities Commission (CPUC) is a constitutionally created State agency that came into existence through amendment in 1911. The mission of the CPUC is to regulate privately-owned utilities providing telecommunications, electric, natural gas, water, railroad, rail transit, and passenger transportation services, and in-state moving companies. The CPUC is responsible for assuring that California utility customers have safe, reliable utility services at reasonable rates, while protecting utility customers from fraud. The CPUC provides oversight of a number of regulatory programs including the planning and approval for the physical

construction of electric generation, transmission, or distribution facilities; and local natural gas distribution pipelines (California Public Utilities Commission, 2019). The CPUC 2008 Energy Efficiency Strategic Plan established goals of having all new residential construction in California meet zero net energy (ZNE) by 2020 and all new commercial construction meet ZNE by 2030.

CALIFORNIA ENERGY COMMISSION

California's primary energy policy and planning agency is The CEC which was created by the California Legislature in 1974. The CEC has five major responsibilities: (1) forecasting future energy needs and keeping historical energy data; (2) licensing thermal power plants 50 MW or larger; (3) promoting energy efficiency through appliance and building standards; (4) developing energy technologies and supporting renewable energy; and (5) planning for and directing State response to energy emergencies. Under the requirements of the California Public Resources Code, the CEC in conjunction with the California Department of Conservation (DOC) Division of Oil, Gas, and Geothermal Resources is required to assess electricity and natural gas resources on an annual basis or as necessary. The CECs integrated policy report concludes that efficiency achieved through building codes, appliance standards, and ratepayer-funded programs has had, and will continue to have, a positive impact on GHG emissions in recent years.

THE RENEWABLE PORTFOLIO STANDARD

An important State program to promote the increase of renewable energy into the State's energy grid is the Renewable Portfolio Standard (RPS). The RPS is enforced by both the CPUC and CEC. As a publicly owned utility, Sacramento Municipal Utility District (SMUD) is required to comply with this standard. Established by Senate Bill (SB) 1078 in 2002, the RPS was accelerated in 2006 by SB 107 and requires that 20 percent of electricity retail sales need to be served by renewable energy resources by 2010. In 2008, Governor Arnold Schwarzenegger signed Order S-14-08 which required electricity retailers to meet a 33 percent threshold for renewable energy by 2020; this was passed into State law by SB X1-2 in 2011. All electricity retailers, including SMUD, now have a target of 33 percent renewables by the end of 2020. A new 50 percent renewables goal has been set for 2050.

THE CLEAN ENERGY AND POLLUTION REDUCTION ACT

In 2015, the Clean Energy and Pollution Reduction Act (SB 350) was passed into law and set reduction goals for both energy and carbon for 2030 and beyond. This Act codifies the goals described in the RPS above and, along with AB 32 and other regulations is part of California's overall climate strategy. SB 350 supports the State's efforts to meet its long-term climate goal of reducing GHG emissions to 40 percent of 1990 levels by 2030 and 80 percent below 1990 levels by 2030.

TITLE 20 AND TITLE 24, CALIFORNIA CODE OF REGULATIONS

Because the Project includes new construction, it must comply with the standards contained in Title 20, Energy Building Regulations, and Title 24, Energy Conservation Standards, of the

California Code of Regulations (CCR). Part 11 of Title 24, referred to as the California Green Building Standards Code (CALGreen), sets minimum and mandatory energy efficiency and materials requirements, in order to reduce environmental impact through better planning, design and construction practices. CALGreen works along with the mandatory construction codes of Title 24 and is enforced at the City building department level (CA Department of Housing and Community Development, 2018). Title 20 contains standards ranging from power plant procedures and siting to energy efficiency standards for appliances to ensuring reliable energy sources are provided and diversified through energy efficiency and renewable energy resources. Title 24 (AB 970) contains energy efficiency standards for commercial office buildings based on a State mandate to reduce California's energy demand. Specifically, Title 24 addresses a number of energy efficiency measures that impact energy used for lighting, water heating, heating and air conditioning, including the energy impact of the building envelope such as windows, doors, skylights, wall/floor/ceiling assemblies, attics, and roofs (California Energy Commission, 2019).

Additionally, any Project-related construction would be required to comply with the Title 24 codes currently in place, including the CALGreen Code.

WARRANT-ALQUIST ENERGY RESOURCES CONSERVATION AND DEVELOPMENT ACT

The Warren-Alquist Energy Resources Conservation and Development Act (Warren-Alquist Act), initially passed in 1974 and amended since, created the CEC, the State's primary energy and planning agency. The seven responsibilities of the Commission are: forecasting future energy needs, promoting energy efficiency and conservation through setting standards, supporting energy related research, developing renewable energy resources, advancing alternative and renewable transportation fuels and technologies, certifying thermal power plants 50 megawatts or larger, and planning for and directing State response to energy emergencies. The State Energy Commission regulates energy resources by incentivizing research into energy supply and demand dynamics to reduce the rate of growth of energy consumption. Additionally, the Warren-Alquist Act acknowledges the need for renewable energy resources and encourages the Commission to explore renewable energy options that would be in line with environmental and public safety goals (California Energy Commission, 2019).

GREEN BUILDING INITIATIVE

In 2012, Governor Brown's Executive Order B-18-12 (State of California Governor Office 2012) identified the following energy efficiency improvement goals for facilities owned, funded, and leased by the State:

- All new State buildings beginning design after 2025 shall be constructed as ZNE facilities with an interim target for 50 percent of new facilities beginning design after 2020 to be ZNE. State agencies shall also take measures toward achieving ZNE for 50 percent of the square footage of existing State-owned building area by 2025.

- The State shall identify at least three buildings by January 1, 2013, to pursue ZNE as pilot projects.

- New and major renovated State buildings shall be designed and constructed to exceed the applicable version of CCR Title 24, Part 6, by 15 percent or more, and include building commissioning, for buildings authorized to begin design after July 1, 2012.

- Any proposed new or major renovation of State buildings larger than 10,000 square feet shall use clean, onsite power generation such as solar photovoltaic, solar thermal, and wind power generation, and clean backup power supplies, if economically feasible.

- New and major renovated State buildings larger than 10,000 square feet shall obtain Leadership in Energy and Environmental Design (LEED) "Silver" certification or higher.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Section 21100(b) of the California Environmental Quality Act (CEQA) Guidelines (State CEQA Guidelines) requires that an EIR include a detailed statement setting forth mitigation measures proposed to minimize a project's significant effects on the environment, including, but not limited to, measures to reduce the wasteful, inefficient, or unnecessary consumption of energy. Appendix F of the State CEQA Guidelines states that, in order to ensure that energy implications are considered in project decisions, the potential energy implications of a project shall be considered in an EIR, to the extent relevant and applicable to the project. Appendix F further states that a project's energy consumption and proposed conservation measures may be addressed, as relevant and applicable, in the Project Description, Environmental Setting and Impact Analysis portions of technical sections, as well as through mitigation measures and alternatives.

In accordance with the intent of Appendix F of the State CEQA Guidelines, which requires an EIR to include a discussion of the potential energy impacts of a proposed project with an emphasis on avoiding or reducing inefficient, wasteful, or unnecessary consumption of energy, this Draft EIR includes relevant information and analyses that address the energy implications of the Project. This section represents a summary of the Project's anticipated energy needs, impacts, and conservation measures.

STATE OF CALIFORNIA ENERGY PLAN

The California Energy Commission (CEC) is responsible for preparing the State Energy Plan, which identifies emerging related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The current plan is the 1997 California Energy Plan. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero-emission vehicles and addressing their infrastructure needs; and encouragement of urban design that reduces vehicle miles traveled (VMT) and accommodates pedestrian and bicycle access.

Local

CITY OF FRESNO GENERAL PLAN

The Project area is located within the City of Fresno 2035 General Plan and would therefore be subject to standards included in the General Plan as they relate to energy consumption and conservation. The Resource Conservation and Resilience Element contains goals, policies, and implementation measures related to energy consumption and conservation.

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-a. Continue existing beneficial energy conservation programs, including adhering to the California Energy Code in new construction and major renovations.

Policy RC-8-b. 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. Consider providing an incentive program for new buildings that exceed California Energy Code requirements by 15 percent.

Policy RC-8-e - Energy Use Disclosure. Promote compliance with State law mandating disclosure of a building's energy data and rating of the previous year to prospective buyers and lessees of the entire building or lenders financing the entire building.

RC-8-h - Solar Assistance. Identify and publicize information about financial mechanisms for private solar installations and provide over-the-counter permitting for solar installations meeting specified standards, which may include maximum size (in kV) of units that can be so approved.

FRESNO CITYWIDE DEVELOPMENT CODE

Section 11-731 – Energy Conservation

All new HVAC and new lighting systems shall comply with the current energy conservation requirements contained in Part 6 of Title 24 of the California Code of Regulations (California Energy Code). An existing building with a dwelling unit or joint living and work quarter need not comply with the building envelope requirements of the California Energy Code, if the building envelope is not altered in anyway due to compliance with other code requirements.

Section 11-108 – California Energy Code

The California Energy Code, 2016 Edition as promulgated by the California Building Standards Commission is hereby adopted by the City of Fresno and incorporated into the Code and shall be referred to as the Fresno Energy Code. One copy of the California Energy Code is on file and

available for use by the public in the Planning and Development Department, Building and Safety Services Division.

Section 11-101 – California Building Code

The California Building Code (CBC) was last amended in 2016 and 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. to the CBC, along with the City's amendments to the CBC provided in Section 11-102, are referred to as the Fresno Building Code. The CBC is currently undergoing an update, which will be adopted in December of 2019 and will become effective on January 1, 2020.

4.6.4 - IMPACTS AND MITIGATION MEASURES

Methodology

This analysis is based on publicly available information provided in part by the Fresno General Plan and General Plan Update Master EIR, Pacific Gas & Electric Company, and the California Department of Transportation.

Thresholds of Significance

The following criteria, as established in Appendix G of the CEQA Guidelines, will be utilized to determine if a project could potentially have a significant impact:

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

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

Project Impacts

Impact 4.6-1: Result in Potentially Significant Environmental Impact Due to Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources, During Project Construction or Operation

According to the U.S. Census Bureau, the 2018 population estimate for the City of Fresno is 530,093 people. The City's 2035 General Plan has projected the residential and non-residential usage of energy resources until Year 2056. The projected residential population is expected to increase to 970,000, or 77 percent. Furthermore, the projected non-residential employment population is expected to increase to 393,200 or 88 percent. The proposed Project will potentially add up to 16 cultivation, distribution, and manufacturing facilities, up to 21 total cannabis retail businesses, and an unspecified number of testing laboratories. All of which will be permitted in

commercial, employment, or Downtown districts, as detailed in Chapter 3 – *Project Description*. The Project does not propose to alter any existing land use designations, incorporated by the City of Fresno General Plan, or zoning designations.

SHORT-TERM CONSTRUCTION ENERGY USAGE

Energy usage would be required to construct a retail or commercial cannabis business, if new construction is required or tenant improvements are necessary to existing facilities. Energy expended during this phase would result from the operation of construction equipment and vehicle trips associated with commutes by construction workers and trucks transporting construction materials. The energy needs for construction is temporary and would not require additional capacity or an increase in demands for electricity and other forms of energy.

LONG-TERM OPERATIONAL ENERGY USAGE

New buildings constructed under the proposed ordinance would be required to meet the California Code of Regulations Title 20, Energy Building Regulations and Title 24, Energy Conservation Standards, for energy efficiency that are in effect at the time of construction. This would continue to improve energy efficient buildings. Furthermore, the California Green Building Standards Code (CALGreen), sets a minimum and mandatory energy efficiency and materials requirements, in order to reduce environmental impact through better planning, design, and construction practices enforced at the City level.

Operation of potential retail and commercial cannabis businesses would require the use of various processing equipment depending on the size of the operation and characteristics. Equipment associated with cannabis related business may include growing lights, ventilation and climate control systems, and water pumps. Processes may involve creating products, conducting testing on cannabis products, and operating wholesale and distribution centers.

ELECTRICITY

Cannabis retail businesses would have similar energy demands to other retail businesses, requiring lighting, HVAC, and security. Consumers at these facilities typically do not stay longer than is necessary to acquire the products being sold, and these facilities can only operate from 6:00 a.m. to 10:00 p.m. Cannabis retail businesses are not anticipated to generate electrical energy demands beyond what is currently generated for other retail businesses.

Testing laboratories would have similar energy demands to other laboratory facilities, requiring lighting, HVAC, and security. Employees at these facilities typically work eight-hour shifts and use equipment similar to that of an office building (computers, monitors and printers) and some specialized equipment, such as, microscopes, and testing equipment. Testing laboratories are not anticipated to generate electrical energy demands beyond what is currently generated by other laboratories or offices.

The majority of electrical energy demands would result from indoor cultivation facilities. California is currently the top producing cannabis cultivation State, with current indoor cultivation consuming three percent of all electricity use. Literature review of available data suggests this equates to one million average sized homes in California (Mills, 2012). Future cultivation facilities would require lighting, heating, ventilation, and air conditioning (HVAC) systems, necessary for odor control, as well as, equipment used to harvest and process cannabis products.

The Final PEIR for CalCannabis Cultivation Licensing (California Department of Food and Agriculture, 2017) and the Initial Study/Negative Declaration (IS/ND) for Commercial Cannabis Business Licensing Program (Bureau of Cannabis Control, 2017), both concluded a less-than-significant impact to energy resources. However, in these analyses it was assumed that the overall impact to electrical energy use would be reduced as unlicensed/illegal cannabis growing operations obtain licensing in counties that mandate renewable energy compliance for operations within their jurisdiction. The City of Fresno currently does not have regulations requiring indoor cultivation facilities to meet specific energy efficiency standards beyond the requirements of the California Building Code.

In order to determine the estimated electrical energy demands of the Project, calculations were made based on the total proposed new indoor cultivation facilities. To calculate the electricity demand estimates, two published resources were used. The Oregon Department of Energy's (ODOE) Indoor Cannabis Cultivator Energy Use Estimator (Oregon Department of Energy, 2019) and the Mills report (Mills, E., 2018) were used.

As a conservative estimate of energy demand for indoor cultivators and to account for the lower humidity and higher summer ambient temperatures in Fresno versus Oregon, the high energy usage factors were assumed in the ODOE model. According to the ODOE website, the high energy setting includes high wattage high intensity discharge (HID) fixtures, unvented, high light density (less than 40 sf per light), significant supplemental cooling and/or heating to grow space, high volume ventilation and air circulation (high level of air changes) that operates majority of the time, as well as multiple other energy using equipment, including dehumidification, pumping and water temperature control, and CO_2 production. The calculations assume a typical 12 to 18 hour per day light operation for vegetative and flowering phases and a continuous grow cycle.

The proposed project would permit up to 16 cultivation, distribution, and manufacturing businesses. Since all of the 16 businesses could be cultivators, and cultivation uses are considered much higher electrical energy users than manufacturing or distribution, this EIR conservatively estimated electrical energy demand for the worst-case scenario. Based on current State regulations of indoor cultivation licenses, there are four cultivation site licenses allowed (Specialty Cottage, Specialty Indoor, Small Indoor, and Medium Indoor). Medium indoor cultivation sites would allow for a maximum of 22,000 square feet. of cultivation per license. Based on the total of 16 cultivation permits authorized under the proposed project, a total of 352,000 square feet of indoor cultivation could be the maximum permitted. However, State regulations will allow for Large Indoor licenses to be issued after January 1, 2023. There is no

square feet maximum for Large Indoor Cultivation sites. In order to calculate a reasonable estimate of electrical energy demand that would be consumed by the proposed Project, it is assumed that a total of 700,000 square feet of indoor cultivation would occur.

Using the model created by the ODOE, electrical energy demand estimates for indoor cultivators would be 140 GWh/year. for the total 700,000 square feet of potential cultivation permitted under the proposed Project. The average home in California uses approximately 0.012 GWh of electricity per year (U.S. Energy Information Administration, 2019). Total power consumption from the proposed Project would equate to over 11,000 new single-family homes.

The Mills model estimated electrical usage of a 10,000 sq. ft. window-less warehouse cultivation operation to be approximately 2,903,474 kWh/year (Mills, E., 2018). Using this estimate, the total electrical use for the proposed maximum 700,000 sq. ft. of indoor cultivation would be approximately 203 GWh/year, which is higher than the ODOE estimate above. In the Mills model, lights are spaced on a four-foot grid and run 18 hours per day during the vegetation phase and 12 hours per day in the flowering phase of cannabis cultivation.

As shown in Table 4.6-1, above, electrical energy demand of the top 10 Zip Codes in the Fresno area is 2,336.7 GWh/year, with 1,406.8 GWh from commercial and industrial uses. Using the ODOE and Mills models as a range of estimated electrical demand, the proposed Project would require between 140-203 GWh/year. Based on the PG&E electrical demand for the top 10 zip codes in the Fresno area electrical energy demand from up to 700,000 square feet of cultivation would increase the overall electrical demand by six to nine percent and the overall commercial and industrial electrical demand by 10 to 14 percent.

From indoor cultivation alone, there could be a substantial drain on the capacity of energy suppliers if no conservation measures were implemented, or onsite electrical generation utilized. However, the Project requires that all applicable federal, State, and local requirements and BMPs would be incorporated into construction of new or modified structures. According to the Bureau of Cannabis Control, beginning in 2023, all State licensees will be required to comply with the average electricity greenhouse-gas-emissions intensity required by local utility providers. PG&E will establish this baseline to be used by commercial cannabis businesses in Fresno. Additionally, in 2022, licensees will be required to provide details regarding energy use and sources. CCR Title 3, Div. 8, Chapter 1, Section 8305 (Renewable Energy Requirements) states the following requirements for indoor cannabis facilities:

Beginning January 1, 2023, all indoor, tier 2 mixed-light license types of all sizes, and nurseries using indoor or tier 2 mixed-light techniques, shall ensure that electrical power used for commercial cannabis activity meets the average electricity greenhouse gas emissions intensity required by their local utility provider pursuant to the California Renewables Portfolio Standard Program, Division 1, part 1, Chapter 2.3, article 16 (commencing with Section 399.11) of the Public Utilities Code. As evidence of meeting the standard, licensees shall comply with the following:

1. If a licensee's average weighted greenhouse gas emission intensity as provided in Section 8203(g)(4) is greater than the local utility provider's greenhouse gas emission intensity, the licensee shall provide evidence of carbon offsets from any of the following sources to cover the excess in carbon emissions from the previous annual licensed period:

    a. Voluntary greenhouse gas offset credits purchased from any of the following recognized and reputable voluntary carbon registries:

        - American Carbon Registry;
        - Climate Action Reserve;
        - Verified Carbon Standard.

    b. Offsets purchased from any other source are subject to verification and approval by the Department.

2. New licensees, without a record of weighted greenhouse gas emissions intensity from the previous calendar year, shall report the average weighted greenhouse gas emissions intensity, as provided in Section 8203(g)(4), used during their licensed period at the time of license renewal. If a licensee's average weighted greenhouse gas emissions intensity is greater than the local utility provider's greenhouse gas emissions intensity for the most recent calendar year, the licensee shall provide evidence of carbon offsets or allowances to cover the excess in carbon emissions from any of the sources provided in subsection (a). (Bureau of Cannabis Control, 2019)

Generators with a horsepower rating of 50 or greater are required to comply with California Airborne Toxic Control Measures and by 2023 all generators rated below 50 horsepower will be required to meet compliance measures. CCR Title 3, Div. 8, Chapter 1, Section 8306 (Generator Requirements) states the following requirements:

1. For the purposes of this section, "generator" is defined as a stationary or portable compression ignition engine pursuant to Title 17, Division 3, Chapter 1, Subchapter 7.5, Section 93115.4 of the California Code of Regulations.

2. Licensees using generators rated at 50 horsepower and greater shall demonstrate compliance with either, as applicable, the Airborne Toxic Control Measure for stationary engines pursuant to Title 17, Division 3, Chapter 1, Subchapter 7.5, Sections 93115 through 93115.15 of the California Code of Regulations, or the Airborne Toxic Control Measure for portable engines pursuant to Title 17, Division 3, Chapter 1, Subchapter 7.5, Sections 93116 through 93116.5 of the California Code of Regulations. Compliance shall be demonstrated by providing a copy of one of the following to the department upon request:

    a. For portable engines, a Portable Equipment Registration Certificate provided by the California Air Resources Board; or

b. For portable or stationary engines, a Permit to Operate, or other proof of engine registration, obtained from the Local Air District with jurisdiction over the licensed premises.

3. Licensees using generators rated below fifty (50) horsepower shall comply with the following by 2023:

   a. Either (A) or (B):

      - Meet the "emergency" definition for portable engines in Title 17, Division 3, Chapter 1, Subchapter 7.5, Sections 93116.2(a)(12) of the California Code of Regulations, or the "emergency use" definition for stationary engines in Title 17, Division 3, Chapter 1, Subchapter 7.5, Section 93115.4(a)(30); or
      - Operate 80 hours or less in a calendar year; and

   b. Either (A) or (B):

      - Meet Tier 3 with Level 3 diesel particulate filter requirements pursuant to Title 13, Division 3, Chapter 14, Sections 2700 through 2711 of the California Code of Regulations;
      - Meet Tier 4, or current engine requirements if more stringent, pursuant to title 40, Chapter I, Subchapter U, Part 1039, Subpart B, Section 1039.101 of the Code of Federal Regulations.

4. All generators shall be equipped with non-resettable hour-meters. If a generator does not come equipped with a non-resettable hour-meter an after-market non-resettable hour-meter shall be installed. (Bureau of Cannabis Control, 2019)

The Final PEIR for CalCannabis Cultivation Licensing, completed by the California Department of Food and Agriculture (California Department of Food and Agriculture, 2017), concluded a less-than-significant impact to energy resources. The PEIR includes environmental protection measures that would limit the use of gas- or diesel-powered generators, and establish renewable energy requirements for indoor and mixed-light cultivators.

The Final PEIR conclusion of a less-than-significant impact also applies to the smaller scale cultivation activities, and states, "the conclusions summarized above would apply to the much smaller scale cultivation activities associated with microbusinesses under the Proposed Program, and these activities are not expected to amount to a substantial increase from baseline conditions. For all of these reasons, energy use and GHG emissions impacts from microbusiness-related cultivation under the Proposed Program would be less than significant." (California Department of Food and Agriculture, 2017)

Based on the findings of the PEIR for CalCannabis Cultivation Licensing, the final State regulations, and Mitigation Measures MM 4.6-1 and MM 4.6-2, as described below, electrical energy impacts from commercial cannabis businesses would be less than significant with mitigation.

NATURAL GAS

As mentioned in the environmental setting, the General Plan projects natural gas usage from 2010 to 2056 of residential and non-residential uses. There is a measurable increase due to the rise in population, similar to the increase in electricity usage over the same timeframe. Commercial cannabis related businesses, allowed under the existing and proposed ordinance regulations, are not expected to use natural gas resources beyond that of similar commercial and industrial uses. Natural gas is typically used for the heating of water-tanks for use in restrooms and kitchens, as well as, for indoor heating in winter months. The majority of cannabis related businesses that will be permitted will be located in existing buildings that currently have and use natural gas for these needs. Impacts are considered less than significant.

PETROLEUM

As mentioned in the environmental setting, the General Plan projects petroleum usage from 2010 to 2056 of vehicle miles traveled and vehicles using gasoline or diesel. There is a measurable increase due to the rise in population, similar to natural gas usage over the same timeframe. Commercial cannabis related businesses, allowed under the existing and proposed ordinance regulations, are not expected to use petroleum resources beyond that of similar commercial and industrial uses. The main use for petroleum products related to commercial cannabis is the use of gasoline and diesel in vehicles used for employees, distribution, mobile delivery, and consumers traveling to and from related businesses. Due to cannabis related businesses being distributed evenly throughout the City and cultivation, distribution and manufacturing businesses being grouped into existing industrial areas, it is not anticipated that an overall perceivable increase in petroleum products will occur.

OVERALL ENERGY IMPACTS

As discussed above, multiple types of energy sources would be required for the construction and operation of cannabis related business that would be allowed under the proposed Project. Short-term energy usage will be from construction related activities and would not represent a long-term increase in energy demand. Construction cost is highly dependent on materials consumed and time. Thus, construction would progress in an efficient matter, further reducing costs and associated fuel and energy demands.

Long-term operational energy usage would result from the potential energy consumed in order to operate a cannabis related business as permitted per the proposed ordinance. This will consist retail and commercial cannabis businesses, employee vehicular traffic, and security practices. All new operational businesses will be required to comply with any applicable energy efficient standards (Title 20, 24, CALGreen). Existing sites that apply for a permit pursuant to the proposed Project would be required to comply with all State standards mentioned above. Energy demands

would be not be wasteful or inefficient, and energy demands (construction, natural gas, and petroleum) would be less than significant for unnecessary use, electrical energy demands would be considered less than significant with the proposed mitigation measures.

Mitigation Measures

MM 4.6-1: Beginning in 2022, within 15 days of submitting an application for renewal of a cultivation license to the Bureau of Cannabis Control , the project proponent of any conditional use permit, for a cannabis related business (cultivation only), shall provide written documentation to the City of Fresno of compliance with State requirements of CCR Title 3, Div. 8, Chapter 1, Section 8203 (g). Written documentation shall include the following information:

1. Total electricity supplied by local utility provider, name of local utility provider, and greenhouse gas emission intensity per kilowatt hour reported by the utility provider under Section 398.4(c) of the Public Utilities Code for the most recent calendar year available at time of submission;

2. Total electricity supplied by a zero net energy renewable source, as set forth in Section 398.4(h)(5) of the Public Utilities Code, that is not part of a net metering or other utility benefit;

3. Total electricity supplied from other unspecified sources, as defined in 398.2(e) of the Public Utilities Code, and other on-site sources of generation not reported to the local utility provider (e.g., generators, fuel cells) and the greenhouse gas emission intensity from these sources;

4. Average weighted greenhouse gas emission intensity considering all electricity use in subsections (1), (2), and (3).

MM 4.6-2: Beginning on January 1, 2023, the project proponent of any conditional use permit, for a cannabis related business (cultivation only), shall provide written documentation to the City of Fresno of compliance with State requirements of CCR Title 3, Div. 8, Chapter 1, Section 8305 (Renewable Energy Requirements). As evidence of meeting the standard, licensees shall comply with the following:

1. If a licensee's average weighted greenhouse gas emission intensity as provided in Section 8203(g)(4) is greater than the local utility provider's greenhouse gas emission intensity, the licensee shall provide evidence of carbon offsets from any of the following sources to cover the excess in carbon emissions from the previous annual licensed period:

    a. Voluntary greenhouse gas offset credits purchased from any of the following recognized and reputable voluntary carbon registries:

        - American Carbon Registry;
        - Climate Action Reserve; (C) Verified Carbon Standard.

b. Offsets purchased from any other source are subject to verification and approval by the Department.

2. New licensees, without a record of weighted greenhouse gas emissions intensity from the previous calendar year, shall report the average weighted greenhouse gas emissions intensity, as provided in Section 8203(g)(4), used during their licensed period at the time of license renewal. If a licensee's average weighted greenhouse gas emissions intensity is greater than the local utility provider's greenhouse gas emissions intensity for the most recent calendar year, the licensee shall provide evidence of carbon offsets or allowances to cover the excess in carbon emissions from any of the sources provided in subsection (a).

Level of Significance

Impacts would be *less than significant with mitigation*.

Impact 4.6-2: Conflict with or Obstruct a State or Local Plan for Renewable Energy or Energy Efficiency

Section 4.6.3, *Regulatory Setting* above, indicates the applicable plans for renewable energy and efficiency, which includes the California Energy Code, California Building Code, and the City of Fresno General Plan. The applicable State codes have been incorporated into the City's Development Code and are implemented on a site by site basis. While most regulations apply to the construction and habitation of residential developments, there are several applicable regulations that can be applied to future commercial and industrial sites and operations.

A small percentage of the Project eligible sites are vacant infill lots that can support new development, all of which are located in existing commercial, mixed-use, and industrial zones. A majority of the Project eligible sites are fully serviced industrial and commercial lots that have been improved with industrial and commercial uses and buildings. All new development of vacant sites, and new occupancies of existing sites will require compliance with the energy efficiency regulations and policies cited in this section. Implementation of mitigation measures described above, including installation of solar generation will be in accordance with State mandates for renewable energy generation, which will result in a less-than-significant impact.

Mitigation Measures

Implement of Mitigation Measures MM 4.6-1 and MM 4.6-2.

Level of Significance

Impacts would be *less than significant with mitigation.*

Cumulative Setting Impacts and Mitigation Measures

CUMULATIVE SETTING

The study area for the analysis of cumulative impacts is the City of Fresno and the unincorporated portions of Fresno County located adjacent to the city limits, as well as portions of the City of Clovis and the County of Madera adjacent to the City of Fresno. The applicable cumulative projections include growth projections from the City of Fresno General Plan, Fresno County General Plan, Madera County General Plan, and the City of Clovis General Plan.

The City of Fresno General Plan was last adopted in the year 2014. Anticipated development within the General Plan includes 186,840 dwelling units, 66.4 million square feet (msf) of commercial/office/public facility, 100,000 square feet of mixed uses, and 72.8 msf of industrial uses. The General Plan contains approximately 11,714 acres of agricultural land, 12,288 acres of open space, and 12,522 acres of vacant land. Existing agricultural land is primarily located in the southeastern and western portions of the General Plan.

The General Plan contains two major rail lines that generally traverse in a southeast to northwest direction. These railways include the Union Pacific Railroad line that is generally located along SR-99, and the BNSF Railway that diverges from the SR-99 in the southwest and travels through the Downtown to the northwest. There are three airports located within the City of Fresno including the Fresno-Yosemite International Airport located in the eastern portion of the Planning Area, the Fresno-Chandler Downtown Airport located west of Downtown, and Sierra Sky Park Airport that is located on the northern portion of the General Plan.

The County of Fresno General Plan was last adopted in the year 2000. The County General Plan was prepared to accommodate population growth through the year 2020, consistent with the California Department of Finance projection of 1.1 million by 2020. This represents an additional population of approximately 344,000, which includes the year 2020 projections outside the sphere of influences for cities within the East Valley area, which is located east of Interstate 5. Additional development projects are proposed northeast of the City of Fresno Project area including Friant Ranch that represents an additional population of approximately 164,693 through the year 2020.

The County of Madera General Plan was last adopted in the year 1995. The Madera County General Plan identifies population and employment growth projections through the year 2010 and includes 177,071 people and 61,866 employees. Since the adoption of Madera County's General Plan, substantial new development projects have been proposed in the southern portion of Madera County, some of which is proposed within close proximity of the City of Fresno Project area including Gateway, Gunner Ranch, Liberty Groves, North Fork Village, Tesoro Viejo, and River Ranch Estates. These projects include approximately 23,000 units, and supporting uses such as commercial, public facilities, parks, and open space.

The City of Clovis General Plan was last adopted in the year 2014. The Clovis General Plan forecasts the ultimate buildout of the entire Clovis General Plan area that is expected to occur

for at least 70 years. The Clovis General Plan forecasts an additional 65,100 residential units, 179,300 population, and 38,250,000 square feet of buildings.

CUMULATIVE IMPACTS

Development of cumulative projects within the PG&E service area that 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 through a variety of programs, regulations and incentives. Compliance with State Renewable Portfolio Standard Program and regulations for cannabis related businesses to comply with local utility provider average electricity greenhouse gas emissions intensity will ensure that cumulative energy impacts would be less than significant with mitigation.

Mitigation Measures

Implement Mitigation Measures MM 4.6-1 and MM 4.6-2.

Cumulative Level of Significance

Cumulative impacts would be *less than significant with mitigation.*

4.7 - Geology and Soils

4.7.1 - INTRODUCTION

This section describes the geologic and soil characteristics of the eligible project sites and the potential geology and soils impacts associated with implementation of the project. The analysis in this section is largely based on publicly available information.

A description of the environmental setting (affected environment) for geology and soils is presented below in Section 4.7.2, *Environmental Setting*, including discussion of the geologic setting (soils and geologic formations; faults and seismic history) and geologic and seismic hazards (slope stability; soil hazards; faults and seismicity; strong ground shaking; fault rupture; and, liquefaction). The regulatory setting applicable to geology and soils is presented in Section 4.7.3, *Regulatory Setting*, while the Project impacts and associated Mitigation Measures are analyzed in Section 4.7.4, *Impacts and Mitigation Measures*. Additional descriptions of erosion and sediment impacts on surface water (e.g., turbidity) and mitigation, as appropriate, are presented in Section 4.10, *Hydrology and Water Quality*.

4.7.2 - ENVIRONMENTAL SETTING

Regional Setting

The City of Fresno is located in Fresno County and is situated in the central portion of the San Joaquin Valley, in the State of California. The City encompasses approximately 113 square miles. Fresno is the largest city in Fresno County and has a current estimated population of 536,683 residents (California Department of Finance, 2019). Fresno County is California's sixth largest county in land area and encompasses approximately 6,011 square miles.

The City of Fresno is located along the eastern/central margin of the 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 five 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 Project area, with the alluvial fans formed by these rivers serving as the predominant geomorphic features in the area.

The Project 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 underlying the subject Project 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 Non-marine Sedimentary deposits). The subsurface information obtained in conjunction with previous subsurface investigations performed within 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.

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 Project 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 Project 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 Project 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 Project 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 Project 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

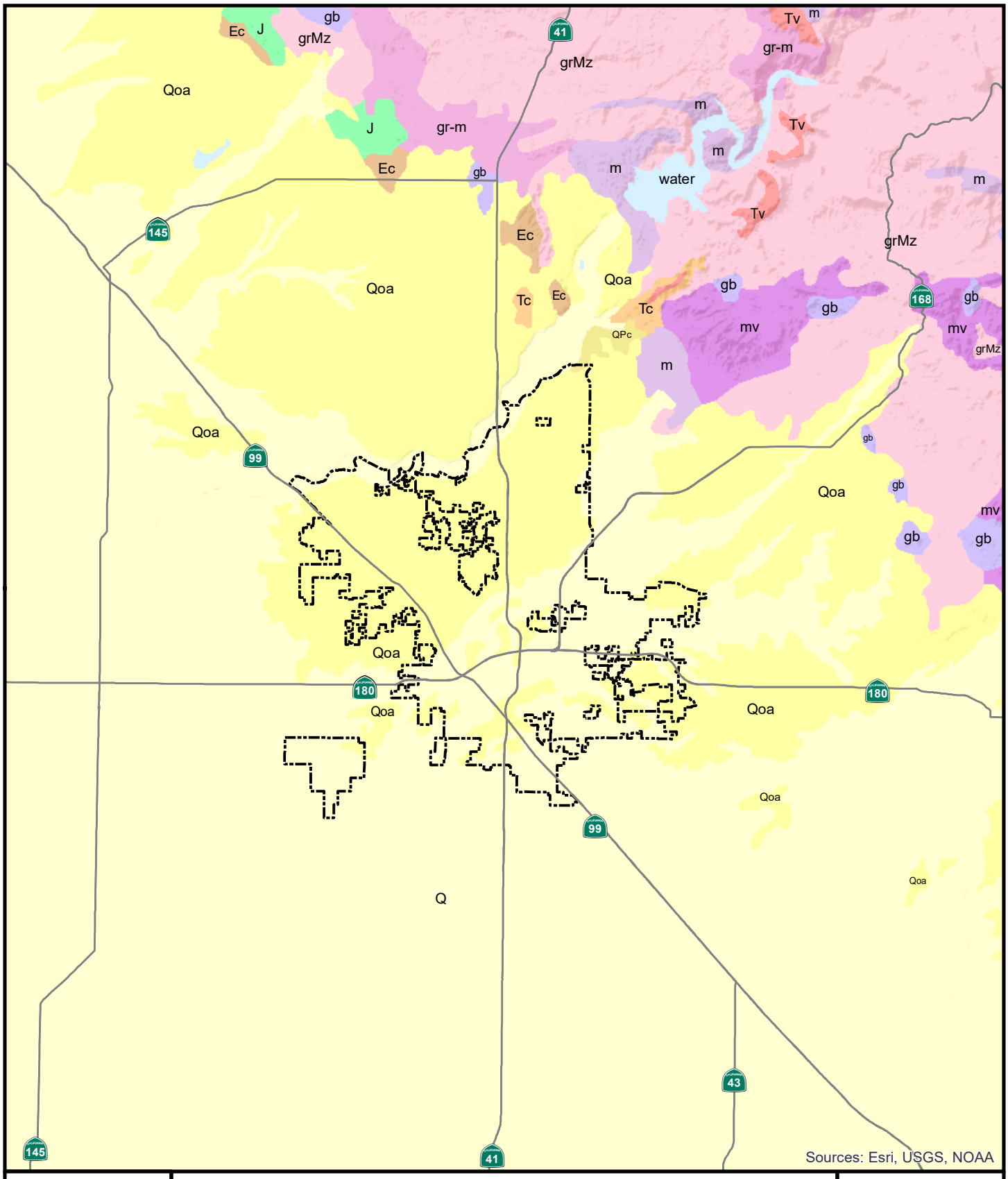
very small, geologically infrequent, incremental displacements having minor geomorphic surface expression.

In addition, the eastern border of the southern San Joaquin Valley is cut by a series of eneschelon rangefront 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 Fancher Creek approximately six miles northeast of the Project 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 Project 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. 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 Project area.

The Sierra Nevada and Owens Valley Fault Zones are located more than 90 miles east of the Project area. The Owens Valley Fault Zone branches to the east of the Sierra Nevada Fault Zone approximately two 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 approximately two miles. The Owens Valley Fault generated one of California's greatest historical earthquakes (Owens Valley Earthquake of 1872). 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 Project area.



Regional Geologic Map

Qoa
J
grMz
Water
gr-m
gb
City Limits
m

N

0 Miles 5

QK Sources: Geologic Map of California 2010

Figure 4.7-1

Project Area Setting

SUBSURFACE FEATURES

The Project 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 Project 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 from the Project area which is mostly 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 Project area have been explored by geotechnical borings drilled to depths ranging from approximately five to 150 feet below existing site grade, using a truck-mounted drill rig. Penetration tests were performed to evaluate soil consistency and to obtain information regarding engineering properties of the subsoils. 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 Project area. Generally, the upper soils consisted of approximately six 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 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 five 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 two 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 zero to 100+.

Below three to five feet, predominately clays, silts, sands, and gravels are usually encountered. Previous field and laboratory tests 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 two 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 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 maps prepared by the California Department of Water Resources dating from 1961 to 2012 indicates that depth to free groundwater in the vicinity of the site ranged from one foot to greater than 100 feet below the existing grade within the Project area.

GEOLOGICAL SUBGRADE

The general soil profile within the City of Fresno Project 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. The Site Class, per Section 16-13.3.2 of the 2013 California Building Code, is assigned to a site based upon the types of soils present and their engineering properties. Site Class D is most consistent with the soil conditions in the Project area. However, within isolated locations through the Project area, and in close proximity to water features, Site Class E conditions (soft soil profile) may be encountered.

Geologic-related Hazard Settings

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. The predominant soils anticipated to be encountered within the Project 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 Project area has been encountered at depths as shallow as zero 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 Project area, and the relatively low to moderate seismicity of the region, the City of Fresno Project 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 farmland 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 eight 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.

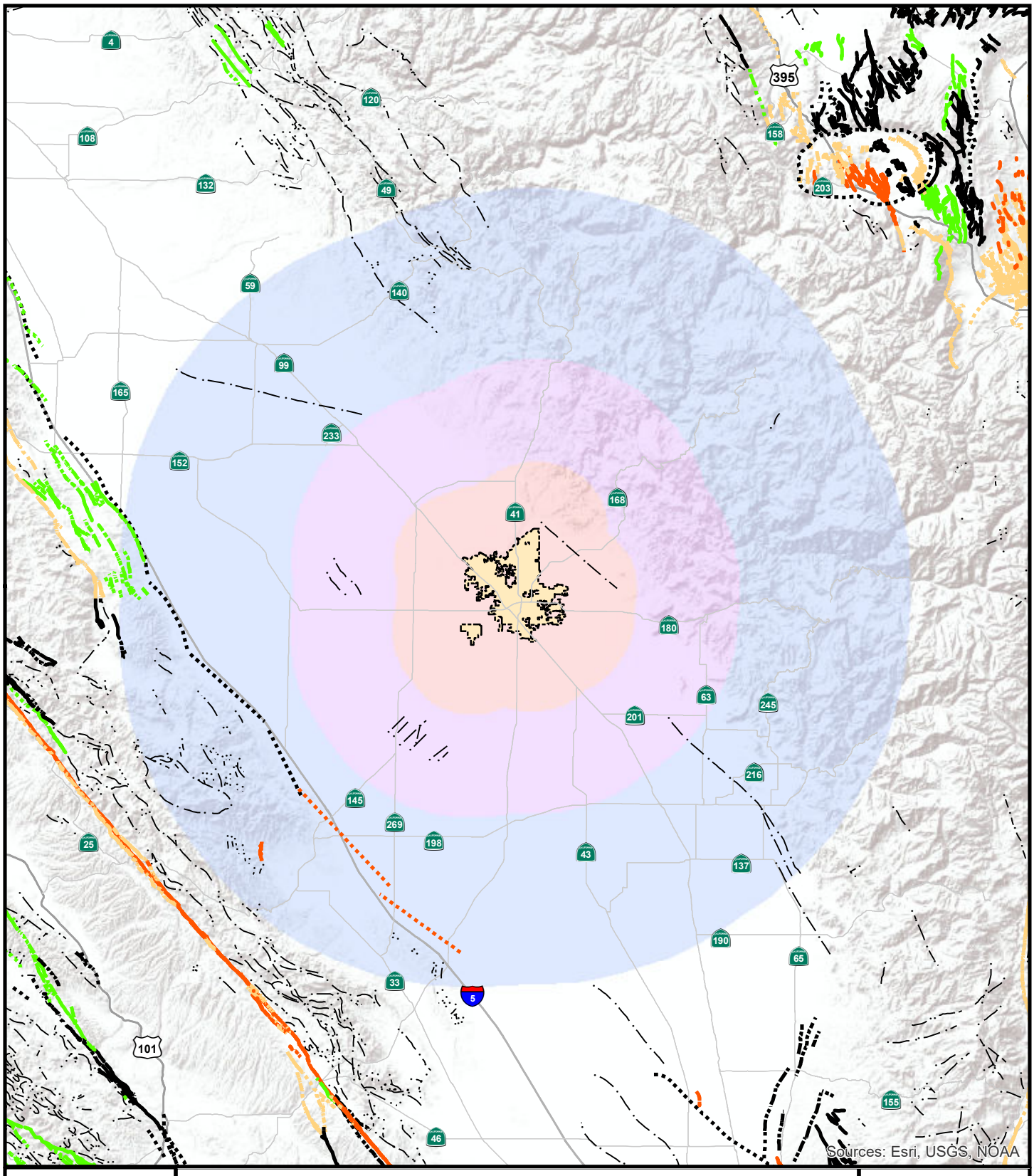


Figure 4.7-2

Regional Faults

- Undifferentiated Quaternary Well Constrained
- Undifferentiated Quaternary Moderately Constrained
- Undifferentiated Quaternary Inferred
- Latest Quaternary Well Constrained
- Latest Quaternary Moderately Constrained
- Latest Quaternary Inferred
- Late Quaternary Well Constrained
- Late Quaternary Moderately Constrained
- Late Quaternary Inferred
- Historic Well Constrained
- Historic Moderately Constrained
- Historic Inferred
- Pre Quaternary Faults
- City Limits
- 10 Mile Buffer
- 25 Mile Buffer
- 50 Mile Buffer

N

0 Miles 20

QK Sources: USGS Quaternary Faults

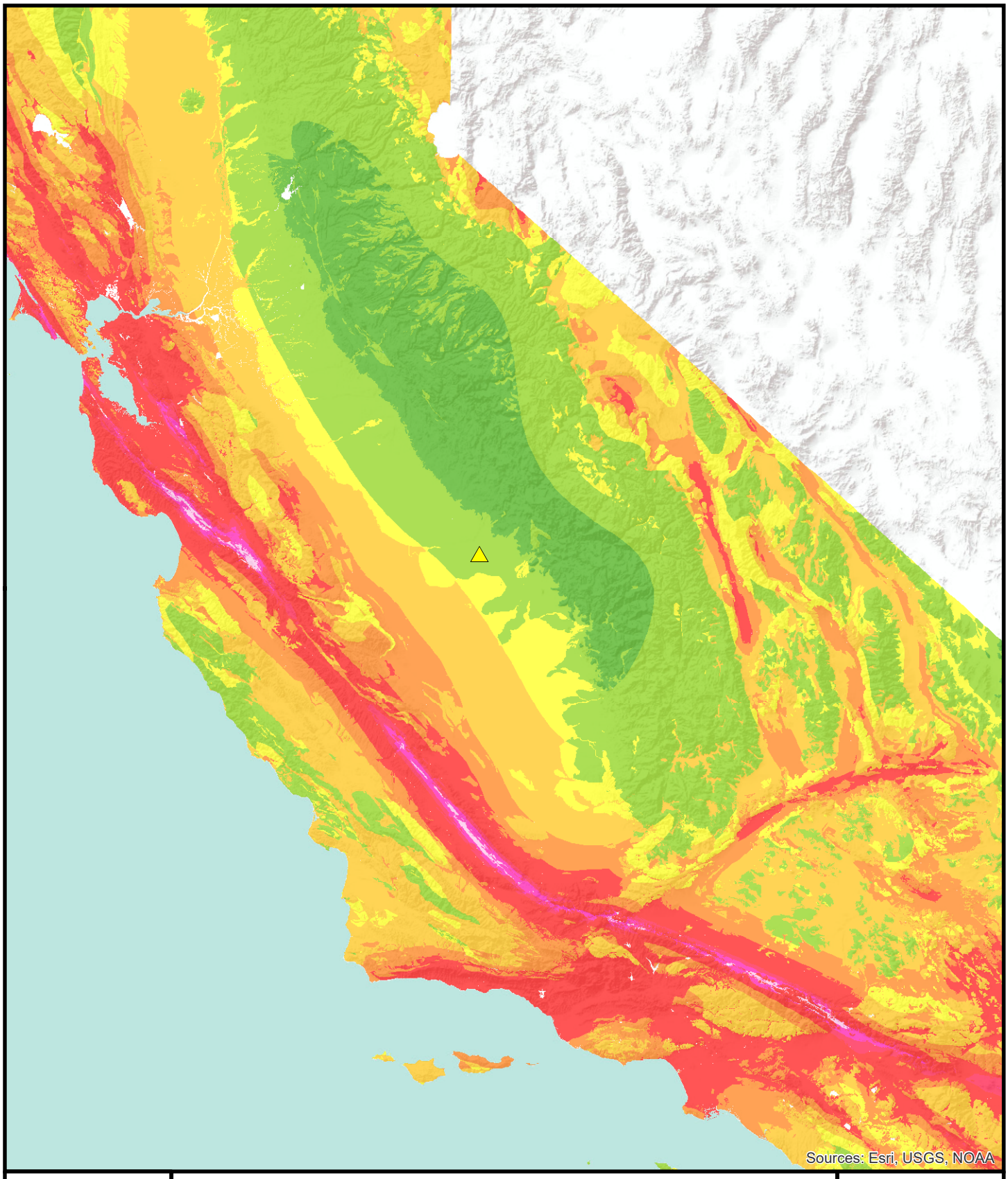


Figure 4.7-3

Earthquake Shaking Potential

Project Location

Low — High

N

0 — 50 Miles

QK Sources: California Dept. Conservation

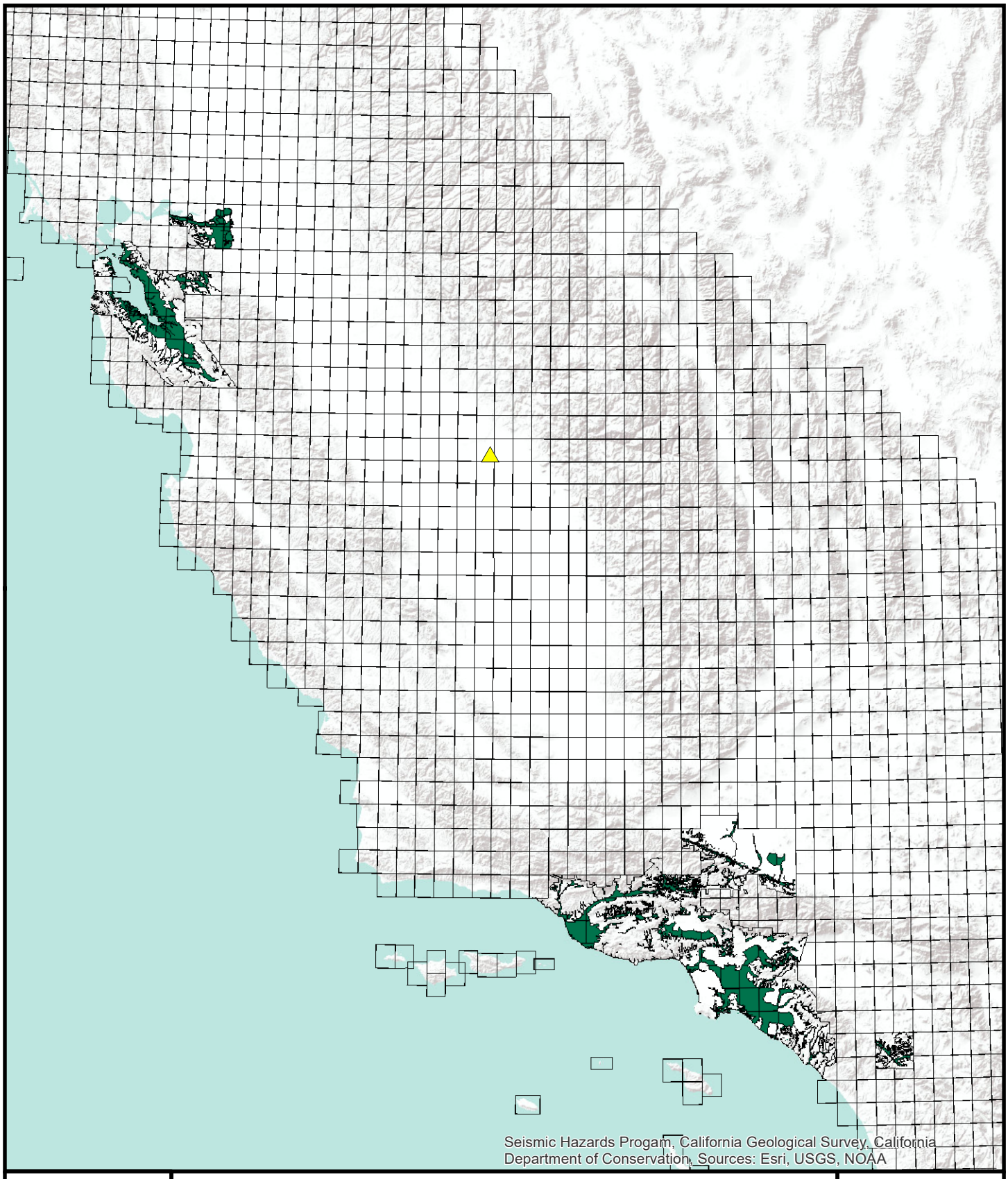


Figure 4.7-4

Seismic Hazard Areas

Project Location | Liquefaction Zones | Not Evaluated for Liquefaction

N

0 50
Miles

QK Sources: California Dept. Conservation Liquefaction Zones

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 manmade 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.

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.

4.7.3 - REGULATORY SETTING

Federal

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.

State

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 Project area because no active faults cross through the City's boundaries.

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 2016 California Buildings Standard Code, became effective on January 1, 2017. The next anticipated update (2019) will occur in January of 2020.

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; and

- 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.

Local

FRESNO GENERAL PLAN

The Fresno General Plan contains objectives and policies that address geology and soils. The following General Plan objective and policies are applicable to the proposed Project.

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 onsite 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.

Policy PU-5-a - Mandatory Septic Conversion. Continue to evaluate and pursue where determined appropriate the mandatory abatement of existing private wastewater disposal (septic) systems and mandatory connection to the public sewage collection and disposal system.

CITY OF FRESNO MUNICIPAL CODE

The California Building Code, 2016 Edition, 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 Planning and Development Department, Building and Safety Services Division.

Section 15-3302 – Form and Contents

B. Accompanying Data and Reports. Applications for Tentative Maps and Tentative Parcel Maps shall be accompanied by the following data or reports:

3. Soils Report. The City Engineer may require the preparation of a preliminary soils report. If a preliminary soils report indicates the presence of critically expansive soils or other soil problems which, if not corrected, could lead to structural defects, the soils report accompanying the Final Map shall contain an investigation of each lot within the subdivision. The City Engineer may require additional information or reject the report if it is found to be incomplete, inaccurate, or unsatisfactory. The preliminary soils report may be waived if the City Engineer determines that, due to knowledge of the soil qualities in the subdivision, no preliminary analysis is necessary.

4. Geotechnical Report. For subdivisions within the Alquist-Priolo Fault Zone or other area with geologic or seismic hazards per State Hazard Mapping Act or the General Plan, a preliminary geotechnical report that evaluates seismic hazards and recommends appropriate mitigation measures, prepared in compliance with the requirements of the State Seismic Hazard Mapping Act, shall be submitted with the Tentative Map. The report shall identify mitigation measures that will be incorporated in design of the subdivision to mitigate hazards from liquefaction and other seismic hazards. If this preliminary report identifies hazards, an engineering report on each lot in subdivision must be submitted with Final Map.

Section 15-1603 – Bluff Protection Overlay District

D. Development Standards. Development Standards shall be as required by the Base District, except as follows:

1. 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.

    b. Soils Investigation. The following types of soil evaluations shall be performed and reported:

        I. 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.

        II. 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:

            1) Evaluation of existing stability;
            2) Evaluation of post-development slope stability;
            3) Documentation of existing conditions for rock falls, block caving, creep failures, shear failures, excessive erosion and sloughing;
            4) 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 onsite sewage disposal approximate to the bluffs;
            5) Evaluation of the influence of future development and grading along the bluff toe for its effect on slope stability;
            6) Evaluation of the adverse effect of increased surface and subsurface drainage;
            7) Coordination, review, and approval of site grading and drainage plans prepared by the project civil engineer for conformance to soils and geologic reports;
            8) Laboratory tests to evaluate the soil parameters to be used in determination of slope stability;

9) Determination and establishment of the location of the bluff toe, bluff edge and of any building setbacks.

III. 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:

1) Zone III soils investigations will address the details of the configuration, location, type, and loading of the proposed structures and drainage plan;
2) The report shall provide detailed recommendations for foundations, drainage, and other items critical to bluff stability.

c. Filing. Filing of Soils Investigation and Evaluation Reports shall be required as follows:

I. 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;

II. 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.

d. Certification. The Soils Investigation and Evaluation Reports shall be certified as follows:

I. 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.

II. 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.

f. Soils Report. All applications for development shall provide a soils report. This requirement does not apply to the property between Blythe Avenue and the extension of the Nees Avenue alignment, existing as of August 1, 1979, to the bluff.

4.7.4 - IMPACTS AND MITIGATION MEASURES

This section analyzes the impacts associated with implementation of the proposed Project related to the risk of exposure to geology and soils. The impact analysis describes the methods used to determine the Project's impacts and lists the thresholds used to conclude the significance of an impact. Measures to mitigate (avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion, as appropriate.

Methodology

This analysis is based on publicly available data provided by the City of Fresno, Fresno County, and other publicly available information. Paleontological impacts were assessed through a Paleontological Technical Memorandum, prepared by Applied Earthworks (Applied Earthworks, 2019b), found in Appendix E. Baseline data was collected regarding the Project area's geologic units to assess the overall paleontological sensitivity of geologic units exposed at the ground surface of the Project area as well as those thought to be buried at unknown depths within the Project area. For purposes of this analysis, it is important to note that the Project area consists of specific and, in some cases, noncontiguous areas where cultivation, distribution, manufacturing, testing, and retail facilities for cannabis could be permitted. However, for purposes of this review, specific information for each of these areas was not obtained. Rather, a desktop review of readily available geological and paleontological information completed, including published geologic maps and cross sections, paleontological publications, and prior paleontological assessments for other projects in Fresno County and within the City. Paleontological locality records requests were not sent to museums for searches of their collections, but a 2012 search of the University of California Museum of Paleontology (UCMP) vertebrate paleontology database records conducted for another project within Fresno County was utilized and is discussed in the report found in Appendix E.

Thresholds of Significance

In accordance with CEQA, the effects of a project are evaluated to determine if they will result in significant adverse impact on the environment. The criteria used to determine the significance of an impact to geology and soils are based on the Environmental Checklist in Appendix G of the State CEQA Guidelines. Accordingly, geology and soils impacts resulting from the proposed project are considered significant if the project 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;
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 offsite landslide, lateral spreading, subsidence, liquefaction or collapse;

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property;

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; or

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Project Impacts

Impact 4.7-1: Directly or Indirectly Cause Potential Substantial Adverse Effects, Including the Risk of Loss, Injury, or Death Involving the Rupture of a Known Earthquake Fault

The eligible sites located within the City are not located within a Fault-Rupture Hazard Area. According to the California Department of Conservation's Fault Rupture Zones Map, the Project area is not located within a Fault-Rupture Hazard Area. Moreover, no active faults have been identified within the Project area. The nearest zoned fault to the Project area is a portion of the Nunez Fault, located approximately 48 miles southwest of the Project area.

Construction of the Project would be subject to applicable ordinances of the City of Fresno Municipal Code Chapter 15 (City of Fresno, 2015), the 2016 California Building Code (CBC), which would reduce any potential impacts related to the proximity of earthquake faults by requiring Project facilities to be built to withstand seismic ground shaking. As a result, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be *less than significant*.

Impact 4.7-2: Directly or Indirectly Cause Potential Substantial Adverse Effects, Including the Risk of Loss, Injury, or Death Involving Strong Seismic Ground Shaking

As with most areas within California, the City would be exposed to ground shaking from seismic events on local and regional faults. However, according to the General Plan, the Fresno area has historically experienced a low to moderate degree of seismicity. Between 1800 and 2012, 114 events have occurred with magnitudes greater than 4.0 within 60 miles of the City, and 136 events exceeded magnitude 5.0 within 100 miles of the City.

Although the City is located in an area with historically low to moderate levels of seismicity, strong ground shaking could occur within the City 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 nearby faults, could affect the eligible sites within the City through strong seismic ground shaking. This could potentially result in damage to existing or proposed projects under this Ordinance, possibly resulting in damage to facilities and interruption of service.

Proposed projects under this Ordinance would be designed to withstand strong ground shaking because all new construction projects would be required to comply with federal and State regulations, including the CBC to minimize the potential effects of ground shaking and other seismic activity. Additionally, all new projects would be required to adhere to the applicable municipal codes and General Plan objectives and policies as listed above in order to reduce the potential for seismic ground shaking impacts to a less-than-significant level.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be *less than significant*.

Impact 4.7-3: Directly or Indirectly Cause Potential Substantial Adverse Effects, Including the Risk of Loss, Injury, or Death Involving Seismic-related Ground Failure, Including Liquefaction

Liquefaction occurs when saturated, loose materials (e.g., sand or silty sand) are weakened and transformed from a solid to a near-liquid state as a result of increased pore water pressure. The increase in pressure is caused by strong ground motion from an earthquake. A site's susceptibility to liquefaction is a function of depth, density, groundwater level, and magnitude of an earthquake. For liquefaction to occur, the soil must be saturated (i.e., shallow groundwater) and relatively loose. The surface effects of liquefaction can cause structural distress or failure due to

ground settlement, lurching, loss of bearing capacity in the foundation soils, and the buoyant rise of buried structures or utilities, and development of lateral spreads.

The predominant soils within the City 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 with the City ranges from very low to moderate due to the variable density of the subsurface soils and the presence of shallow groundwater. With implementation of the applicable building and municipal codes, and General Plan objectives, policies, and development standards, potential for soil liquefaction impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be *less than significant*.

Impact 4.7-4: Directly or Indirectly Cause Potential Substantial Adverse Effects, Including the Risk of Loss, Injury, or Death Involving Landslides

As noted previously in Section 3.3, *Project Environmental Setting*, the topography of the site is relatively flat with little topographic variation. It occurs at an elevation of approximately 550 feet above mean sea level (AMSL). The surrounding land is relatively flat with a slight upwards slope towards the foothills of the Sierra Nevada Mountain Range to the east. Therefore, there is minimal risk of landslides.

Strong shaking has the potential for activating landslides on hillsides; slope failures on creek banks; and, tension cracking in areas underlain by loose, low-density soil, such as extensive fill. The Project's eligible sites are all located in areas that consist of mostly flat topography within the City of Fresno. Accordingly, there is no risk of large landslides within the City. 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 are located throughout the City. The eligible sites under the proposed Project can occur throughout the City and some may be located in relative proximity to one of these water sources. Additionally, according to Figure 3-3 in Chapter 3, *Project Description*, there are eligible sites located along the San Joaquin River, located west of Palm and Nees Avenues.

Each cannabis related business request will be required to obtain building and grading permits, prior to commencement of operations. The City building code requires site specific investigations for evaluation of potential issues such as existing slope stability; post-development slope stability; and documentation of existing conditions such as for rock falls, excessive erosion, subsurface drainage, and erosion. Compliance with these provisions of the City's municipal code,

the General Plan, and the other applicable regulations cited above would reduce any potential impacts to a less-than-significant level.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be *less than significant*.

Impact 4.7-5: Result in Substantial Soil Erosion or Loss of Topsoil

The Project includes the cultivation, distribution, manufacturing, testing, and retail sales of commercial cannabis. Certain activities in association with implementation of this Ordinance could loosen onsite soils or remove stabilizing vegetation and expose areas of loose soil. These areas, if not properly stabilized during construction, could be subject to increased soil loss and erosion by wind and storm water runoff. The surface and near-surface soils observed throughout the City of Fresno consist of varying combinations of clays, silts, sands, gravels, and cobbles. The clayey soils are considered to be slightly to moderately expansive.

Continued erosion is anticipated where Project structures are located within or adjacent to areas subject to flooding and/or surface water flow. According to the City's General Plan, the City is not susceptible to soil erosion with the exception of land within 300 feet of the toe of the San Joaquin River Bluffs, where the steep slopes and soil composition predispose it to instability and erosion. According to Figure 3-3 in Chapter 3, *Project Description*, there are Project eligible sites located along the San Joaquin River, located west of Palm and Nees Avenues.

Depending on the size and type of cannabis business proposed, a State Water Resources Control Board (SWRCB), General Construction Permit could be required, which requires implementation of Best Management Practices (BMPs) and National Pollution Discharge Elimination System (NPDES) Permit. In compliance with the Federal CWA, as well as regulations of a Stormwater Pollution Prevention Plan SWPPP, which includes site-specific BMPs for erosion and sediment control and adherence to NPDES requirements would be prepared and implemented for projects that trigger this requirement.

Additionally, specific new developments associated with implementation of this Project would be required to submit grading plans, which would be accompanied by a soils engineering report, engineering geology report, and drainage calculations, to obtain the required grading permits. Given the relatively flat nature of the Project eligible sites within the City, it is unlikely that soil erosion from runoff would occur; however, during any potential construction associated with this Project, construction vehicles could contribute to soil erosion. Furthermore, as identified above, there are Project eligible sites located near the San Joaquin River. Compliance with these and other provisions of the City's municipal code, the General Plan, and other applicable regulations cited above would reduce any potential impacts to a less-than-significant level.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be *less than significant*.

Impact 4.7-6: 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

Issues associated with liquefaction and lateral spreading are discussed in Impact 4.7-1 and the potential for landslides are discussed in Impact 4.7-4, above. The potential of liquefaction is discussed above in Impact 4.7-3. As previously discussed, impacts associated with liquefaction or collapse, lateral spreading, subsidence and landslides vary depending on the site in question, however with adherence to the applicable standards and regulations, impacts would be less than significant. According to the City's General Plan, within the San Joaquin Valley, subsidence or collapse is concentrated in the southern part of 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 City of Fresno is not subject to such subsidence or collapse hazards. Therefore, impacts associated with subsidence or collapse would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be *less than significant*.

Impact 4.7-7: Be Located on Expansive Soil, as Defined in Table 18-1-B of the Uniform Building Code (1994), Creating Substantial Direct or Indirect Risks to Life or Property

The surface and near-surface soils within the City of Fresno consist of varying combinations of clays, silts, sands, gravels, and cobbles. The clayey soils are considered to be slightly to moderately expansive. Any future construction associated with Project implementation would be required to submit preliminary soil reports in conformance with the City's Municipal Code to identify potential site-specific soil issues such as expansive soils and would be required to incorporate foundation support and grading parameters in the Project design as necessary. Any future projects would also be required to adhere to the City's applicable grading and erosion control measures per (Section 15-3102) of the City's municipal code in order to reduce any potential expansive soils impacts to a less-than-significant level.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be *less than significant*.

Impact 4.7-8: 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

Section 6-303 of the City's Municipal Code requires all new project eligible development sites to connect to the City's public sewage collection and disposal system. Also, new development on existing project eligible sites with existing septic systems will require existing septic systems to be removed and public sewage collection and disposal systems to be installed. Therefore, potential soil impacts associated with septic systems would not occur because no new septic systems would be installed, and existing septic systems will be removed. Therefore, the proposed Project would not result in impacts associated with soils that are incapable of supporting septic systems.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be *less than significant*.

Impact 4.7-9: Directly or Indirectly Destroy a Unique Paleontological Resource or Site or Unique Geologic Feature

Based on a review of existing records for the Fresno region, four rock formations, all of which have yielded significant paleontological resources outside the Project area, likely do occur at unknown depths within the Project area's boundaries—Modesto, Riverbank, Tulare, and Turlock Lake formations. Poorly described, unnamed Holocene nonmarine fan deposits likely too young to yield significant and intact fossil material may shallowly overlie the fossiliferous Modesto, Riverbank, Turlock Lake, and Tulare formations.

Sensitivity criteria was used to assess the paleontological resource potential of the Project area (Applied Earthworks, 2019b). Based on these criteria, Holocene alluvial fan deposits are considered to have Low Potential as they are not temporally or lithographically suitable for the preservation of significant fossils. The Modesto, Riverbank, Tulare, and Turlock Lake formations all have high potential for significant paleontological resources, as they have previously yielded vertebrate or significant invertebrate, plant, or trace fossils. The likelihood of encountering High

Potential geologic units will depend on the specific location of proposed commercial cannabis related businesses and the depths of ground disturbance.

The City of Fresno General Plan Master EIR contains a mitigation measure (CUL-3), that requires the completion of a site-specific Paleontological Resource Assessment (PRA) for all projects that involve ground disturbance of intact terrain and/or deposits prior to permit approval for each individual project proposed within the Project area. Mitigation below is consistent with the General Plan Master EIR and requires a PRA for all commercial cannabis related businesses that are proposed on land not previously disturbed or located within an existing building. With proposed mitigation, impacts associated with paleontological resources are considered less than significant.

Mitigation Measures

MM 4.7-1: The project applicant of a conditional use permit for any commercial cannabis related business proposed on land not previously disturbed or located within an existing building, shall submit a site-specific PRA. The PRA shall include Project-specific records searches of the UCMP and Paleobiology databases, as well as, searches at regional repositories such as the Natural History Museum of Los Angeles County.

If the Project-specific PRA indicates high potential for encountering significant paleontological resources, a Project-specific Paleontological Resource Impact Mitigation Program (PRIMP) shall be prepared prior to issuance of grading permits. The PRIMP shall be prepared by a professional paleontologist who meets or exceeds the SVP (2010) qualification standards for Project Paleontologist/Principal Investigator. The PRIMP shall specify the steps to be taken to mitigate impacts to paleontological resources. For instance, Worker's Environmental Awareness Program (WEAP) training shall be prepared prior to the start of Project-related earth-moving activities and presented in person to all field personnel to describe the types of fossils that may be found and the procedures to follow if any are encountered. The PRIMP shall also specify whether construction monitoring is required, and, if so, the frequency of required monitoring (i.e., full-time, spot-checks, etc.); provide details about fossil collection, analysis, and preparation for permanent curation at an approved repository; and describe the different reporting standards to be used—monitoring with negative findings versus monitoring resulting in fossil discoveries.

Level of Significance

Impacts would be *less than significant with mitigation*.

Cumulative Setting Impacts and Mitigation Measures

CUMULATIVE SETTING

The study area for the analysis of cumulative impacts is the City of Fresno and the unincorporated portions of Fresno County located adjacent to the city limits, as well as portions of the City of Clovis and the County of Madera adjacent to the City of Fresno. The applicable cumulative

projections include growth projections from the City of Fresno General Plan, Fresno County General Plan, Madera County General Plan, and the City of Clovis General Plan.

The City of Fresno General Plan was last adopted in the year 2014. Anticipated development within the General Plan includes 186,840 dwelling units, 66.4 million square feet (msf) of commercial/office/public facility, 100,000 sf of mixed uses, and 72.8 msf of industrial uses. The General Plan contains approximately 11,714 acres of agricultural land, 12,288 acres of open space, and 12,522 acres of vacant land. Existing agricultural land is primarily located in the southeastern and western portions of the General Plan.

The General Plan contains two major rail lines that generally traverse in a southeast to northwest direction. These railways include the Union Pacific Railroad line that is generally located along SR-99, and the BNSF Railway that diverges from the SR-99 in the southwest and travels through the Downtown to the northwest. There are three airports located within the City of Fresno including the Fresno-Yosemite International Airport located in the eastern portion of the Planning Area, the Fresno-Chandler Downtown Airport located west of Downtown, and Sierra Sky Park Airport that is located on the northern portion of the General Plan.

The County of Fresno General Plan was last adopted in the year 2000. The County General Plan was prepared to accommodate population growth through the year 2020, consistent with the California Department of Finance projection of 1.1 million by 2020. This represents an additional population of approximately 344,000, which includes the year 2020 projections outside the sphere of influences for cities within the East Valley area, which is located east of Interstate 5. Additional development projects are proposed northeast of the City of Fresno Project area including Friant Ranch that represents an additional population of approximately 164,693 through the year 2020.

The County of Madera General Plan was last adopted in the year 1995. The Madera County General Plan identifies population and employment growth projections through the year 2010 and includes 177,071 people and 61,866 employees. Since the adoption of Madera County's General Plan, substantial new development projects have been proposed in the southern portion of Madera County, some of which is proposed within close proximity of the City of Fresno Project area including Gateway, Gunner Ranch, Liberty Groves, North Fork Village, Tesoro Viejo, and River Ranch Estates. These projects include approximately 23,000 units, and supporting uses such as commercial, public facilities, parks, and open space.

The City of Clovis General Plan was last adopted in the year 2014. The Clovis General Plan forecasts the ultimate buildout of the entire Clovis General Plan area that is expected to occur for at least 70 years. The Clovis General Plan forecasts an additional 65,100 residential units, 179,300 population, and 38,250,000 square feet of buildings.

CUMULATIVE IMPACTS

This EIR uses the projections approach and takes into account growth from the proposed plan within the Fresno City boundary and Sphere of Influence (SOI), in combination with impacts from

projected growth in the surrounding region. Potential cumulative geological impacts could arise from a combination of the development of the proposed Project together with future development in the immediate vicinity of the adjoining jurisdictions.

CEQA Section 15130(a) states: An EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in Section 15065(a)(3). Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

As noted in Impacts 4.7-1 through 4.7-9, new development associated with implementation of the proposed Project under this Ordinance would be designed to withstand strong ground shaking, soil liquefaction or lateral spreading and expansive soils, because all new construction projects would be required to comply with federal and State regulations, including the CBC and the City's municipal code to minimize the potential effects of ground shaking and other seismic activity.

To minimize soil erosion, proposed cannabis projects would also be required to submit grading plans, which would be accompanied by a soils engineering report, engineering geology report, and drainage calculations, to obtain the required grading permits. Projects would also be required to comply with CWA, as well as regulations of the SWRCB and a SWPPP that includes site-specific BMPs for erosion and sediment control, would be prepared. Given the relatively flat nature of the Project eligible sites within the City, it is unlikely that soil erosion from runoff would occur. Compliance with these and other provisions of the City's municipal code, the General Plan, and other applicable regulations cited above would reduce any potential cumulative impacts to a less-than-significant level. Therefore, the Project's incremental effect to impacts on geology and soils, is not considered cumulatively significant.

Regarding paleontological resources, there are areas that have high potential for significant paleontological resources. The likelihood of encountering geologic units with a high potential to encounter paleontological resources will depend on the specific location of proposed commercial cannabis related businesses and the depths of ground disturbance. Mitigation Measure 4.7-1 is consistent with the General Plan Master EIR and requires a PRA for all commercial cannabis related businesses that are proposed on land not previously disturbed or located within an existing building. With implementation of MM 4.7-1, cumulative impacts would be less than significant.

Mitigation Measures

Implement Mitigation Measure MM 4.7-1.

Cumulative Level of Significance

Cumulative impacts would be *less than significant with mitigation*.

4.8 - Greenhouse Gas Emissions

4.8.1 - INTRODUCTION

This section describes the affected environmental and regulatory setting for greenhouse gas (GHG) emissions in the Project area. It also describes the impacts on GHG emissions that would result from implementation of the proposed Regulation and Permitting of Commercial Cannabis Activities (Project), and mitigation measures to reduce identified impacts where possible. Information in this section is based on methodologies and assumptions recommended by the San Joaquin Valley Air Pollution Control District (SJVAPCD), the San Joaquin Valley Clean Air Plan, the Fresno County General Plan Land Use Element, the Fresno Greenhouse Gas Reduction Plan, and information from recent environmental documents prepared for the City.

Information in this section is based on Chapter 3, *Project Description*, and the following emissions estimation tools: California Emissions Estimator Model (CalEEMod) version 2016.3.2 (California Air Pollution Control Officers (CAPCOA) 2017) as well as the California Environmental Quality Act (CEQA) Guidelines, SJVAPCD Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI) and City of Fresno's Municipal Code Chapter 15: Citywide Development Code, Part 5: Administration and Permits, Article 50: Common Procedures, which includes applicability of CEQA (SJVAPCD, 2015).

4.8.2 - ENVIRONMENTAL SETTING

Regional Character

The City of Fresno is located in Fresno County and is situated in the central portion of the San Joaquin Valley, in the State of California. The City encompasses approximately 113 square miles. Fresno is the largest city in Fresno County and has a current estimated population of 536,683 residents (California Department of Finance, 2019). Fresno County is California's sixth largest county in land area and encompasses approximately 6,011 square miles.

Topography and Meteorology

Fresno, California is located in the San Joaquin Valley Air Basin (SJVAB), which encompasses the bulk of the San Joaquin Valley stretching from Kern County in the south to San Joaquin County in the north. The SJVAB is bounded to the east by the Sierra Nevada Mountain Range, to the west by the Coastal Mountain Range and to the south by the Tehachapi Mountains. The Project area is located in the central portion of the Valley.

The SJVAB has an inland Mediterranean climate with warm, dry summers, relatively cool nights, and cooler winters with limited rainfall. Winters are mild with light rains and frequent heavy fog from December to January. The average temperature in the SJVAB is 61.3 degrees Fahrenheit (°F) (USA, 2019). The average maximum daily temperature in July is approximately 95°F and the average minimum daily temperature in January is 37°F. Rainfall occurs mainly in the winter

months from November to April and averages 17.1 inches per year (Western Regional Climate Center (WRCC), National Climatic Data Center, 2016)

Air quality is affected by the rate and location of pollutant emissions and by climatic and topographic conditions that influence the movement and dispersion of pollutants. Atmospheric conditions, such as wind speed, wind direction, and air temperature gradients, along with local and regional topography, mediate the relationship between air pollutant emissions and air quality. In the SJVAB, the surrounding mountains restrict air movement and impede the dispersion of pollutants out of the basin. The SJVAB also experiences temperature inversions frequently throughout the year, which restrict vertical dispersion of air pollutants; an inversion occurs when a mass of warm dry air sits over cooler air near the ground, essentially trapping the air mass below (SJVAPCD, 2015). In addition, the Valley's long, hot summers, and stagnant, foggy winters, provide ideal conditions for the formation of photochemical oxidants and reduce dispersion, respectively.

Wind speed and direction determine the dispersion of air pollutants. Marine air comes into the basin from the Sacramento River – San Joaquin River Delta, although most air movement is restricted by the surrounding mountains. Winds from the Bay Area flow northeasterly into the Sacramento Valley and southward into San Joaquin County. This results in weak winds from the north and northeast, with an average speed of seven miles per hour. During the summer, wind from the north flows south and southeasterly through the Valley, through the Tehachapi Pass and into the Southeast Desert Air Basin. Thus, emissions from the San Francisco Bay Area and the Broader Sacramento air basins are transported into San Joaquin County and the SJVAB. Emissions in the San Joaquin Valley are then transported to the Southeast Desert and Great Basin Valley Air Basins. In late fall and winter, cold air from the mountains flows into the Valley. This results in winds from the south that flow north and northwesterly. Some emissions from San Joaquin County are transported to the Broader Sacramento air basin during these times. However, the winds are relatively light, limiting the dispersion of CO and other pollutants.

In the late fall and winter, when there is little interchange of air between the Valley and the Coast, humidity is high following winter rains, and temperature inversions at ground level persist over the entire valley for several weeks, air movement is virtually absent and radiation fog, known as tule fog, forms. This is typically when peak concentrations of carbon monoxide (CO), oxides of nitrogen (NOx), and particulate matter (PM) occur.

SENSITIVE RECEPTORS

The SJVAPCD identifies a sensitive receptor as a location where human populations (especially children, senior citizens, and sick persons) are present. Additionally, a sensitive receptor location occurs where there is a reasonable expectation of continuous human exposure to pollutants, according to the averaging period for ambient air quality standards, such as 24 hours, eight hours, or one hour. Examples of sensitive receptors are residences, hospitals, and schools; industrial and commercial uses are not considered sensitive receptors.

GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

Certain gases in the Earth's atmosphere, classified as greenhouse gases (GHGs), play a critical role in determining the Earth's surface temperature. Solar radiation enters the Earth's atmosphere from space. A portion of the radiation is absorbed by the Earth's surface and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the Earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the Earth has a much lower temperature than the sun, it emits lower-frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth.

The primary GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Fluorinated gases include chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride; however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of these GHGs in excess of natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the Earth's climate, known as global climate change or global warming.

GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be pinpointed, more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms of carbon sequestration. Of the total annual human-caused CO_2 emissions, approximately 55 percent is sequestered through ocean and land uptakes every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO_2 emissions remains stored in the atmosphere (IPCC, 2019). Table 4.8-1 describes the primary GHGs attributed to global climate change, including their physical properties.

Table 4.8-1
Description of Greenhouse Gases

Greenhouse Gas	Description
Carbon Dioxide (CO_2)	CO_2 is a colorless, odorless gas that is emitted naturally and through human activities. Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic

Greenhouse Gas	Description
	sources are from burning coal, oil, natural gas, and wood. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, and industrial facilities. The atmospheric lifetime of CO_2 is variable because it is readily exchanged in the atmosphere. CO_2 is the most widely emitted GHG and is the reference gas (Global Warming Potential of 1) for determining Global Warming Potentials for other GHGs.
Nitrous Oxide (N_2O)	N_2O is largely attributable to agricultural practices and soil management. Primary human-related sources of N_2O include agricultural soil management, sewage treatment, combustion of fossil fuels, and adipic and nitric acid production. N_2O is produced from biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years. The Global Warming Potential of N_2O is 298.
Methane (CH_4)	Methane, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. Methane is the major component of natural gas, about 87 percent by volume. Human-related sources include fossil fuel production, animal husbandry, rice cultivation, biomass burning, and waste management. Natural sources of CH_4 include wetlands, gas hydrates, termites, oceans, freshwater bodies, non-wetland soils, and wildfires. The atmospheric lifetime of CH_4 is about 12 years and the Global Warming Potential is 25.
Hydrofluorocarbons (HFCs)	HFCs are typically used as refrigerants for both stationary refrigeration and mobile air conditioning. The use of HFCs for cooling and foam blowing is increasing, as the continued phase out of Chlorofluorocarbons (CFCs) and HCFCs gains momentum. The 100-year Global Warming Potential of HFCs range from 124 for HFC-152 to 14,800 for HFC-23.
Perfluorocarbons (PFCs)	PFCs have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above Earth's surface. Because of this, they have long lifetimes, between 10,000 and 50,000 years. Two main sources of PFCs are primary aluminum production and semiconductor manufacturing. Global Warming Potentials range from 6,500 to 9,200.
Carbon Dioxide (CO_2)	CO_2 is a colorless, odorless gas that is emitted naturally and through human activities. Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood. The largest source of CO_2 emissions globally is the combustion of fossil fuels such

Greenhouse Gas	Description
	as coal, oil, and gas in power plants, automobiles, and industrial facilities. The atmospheric lifetime of CO_2 is variable because it is readily exchanged in the atmosphere. CO_2 is the most widely emitted GHG and is the reference gas (Global Warming Potential of 1) for determining Global Warming Potentials for other GHGs.
Chlorofluorocarbons (CFCs)	CFCs are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. They are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the Earth's surface). CFCs were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. The Montreal Protocol on Substances that Deplete the Ozone Layer prohibited their production in 1987. Global Warming Potentials for CFCs range from 3,800 to 14,400.
Sulfur Hexafluoride (SF_6)	SF6 is an inorganic, odorless, colorless, and nontoxic, nonflammable gas. It has a lifetime of 3,200 years. This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas. The Global Warming Potential of SF_6 is 23,900.
Hydrochlorofluorocarbons (HCFCs)	HCFCs are solvents, similar in use and chemical composition to CFCs. The main uses of HCFCs are for refrigerant products and air conditioning systems. As part of the Montreal Protocol, HCFCs are subject to a consumption cap and gradual phase out. The United States is scheduled to achieve a 100 percent reduction to the cap by 2030. The 100-year Global Warming Potentials of HCFCs range from 90 for HCFC-123 to 1,800 for HCFC-142b.
Nitrogen trifluoride	Nitrogen trifluoride (NF_3) was added to Health and Safety Code Section 38505(g)(7) as a GHG of concern. This gas is used in electronics manufacture for semiconductors and liquid crystal displays. It has a high global warming potential of 17,200.

Source: Compiled from U.S. EPA, Overview of Greenhouse Gases, April 11, 2018 (US EPA, 2019); U.S. EPA, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2016, 2018; (IPCC, 2019) The Physical Science Basis, 2007 (US EPA, NSCEP, 2019)

4.8.3 - REGULATORY SETTING

In 1988, the United Nations established the Intergovernmental Panel on Climate Change (IPCC) to evaluate the impacts of global warming and to develop strategies that nations could implement to curtail global climate change. In 1992, the United Nations Framework Convention on Climate Change (UNFCCC) established an agreement with the goal of controlling GHG emissions, including CH_4. As a result, the Climate Change Action Plan was developed to address the reduction of GHGs in the United States. The plan consists of more than 50 voluntary programs. Additionally, the Montreal Protocol was originally signed in 1987 and substantially amended in 1990 and 1992. The Montreal Protocol stipulates that the production and consumption of compounds that deplete ozone in the stratosphere (chlorofluorocarbons (CFCs),

halons, carbon tetrachloride, and methyl chloroform) were phased out by 2000 (methyl chloroform was phased out by 2005).

Global warming and climate change have received substantial public attention for more than 20 years. For example, the United States Global Change Research Program was established by the Global Change Research Act of 1990 to enhance the understanding of natural and human-induced changes in the Earth's global environmental system, to monitor, understand and predict global change, and to provide a sound scientific basis for national and international decision making. Even so, analytical tools have not been developed to determine the effect on worldwide global warming from a particular increase in GHG emissions, or the resulting effects on climate change in a particular locale. The scientific tools needed to evaluate the impacts that a specific project may have on the environment are even farther in the future.

To date, no national standards have been established for nationwide GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level. Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects.

Federal

CLEAN AIR ACT

The Federal Clean Air Act (FCAA) does not specifically regulate GHG emissions; however, on April 2, 2007 the U.S. Supreme Court in *Massachusetts v. U.S. Environmental Protection Agency*, determined that GHGs are pollutants that can be regulated under the FCAA. The EPA adopted an endangerment finding and cause or contribute finding for GHGs on December 7, 2009. Under the endangerment finding, the Administrator found that the current and projected atmospheric concentrations of the six, key, well-mixed GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) threaten the public health and welfare of current and future generations. Under the cause or contribute finding, the Administrator found that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare.

Based on these findings, on April 1, 2010, the EPA finalized the light-duty vehicle rule controlling GHG emissions. This rule confirmed that January 2, 2011, is the earliest date that a 2012 model year vehicle meeting these rule requirements may be sold in the United States. On May 13, 2010, the EPA issued the final GHG Tailoring Rule. This rule set thresholds for GHG emissions that define when permits under the Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities. Implementation of the federal rules is expected to reduce the level of emissions from new motor vehicles and large stationary sources.

ENERGY INDEPENDENCE AND SECURITY ACT OF 2007

The Energy Independence and Security Act of 2007 (December 2007), among other key measures, requires the following, which would aid in the reduction of national GHG emissions:

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022;
- Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020, and direct the National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks; and
- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

FEDERAL VEHICLE STANDARDS

In response to the U.S. Supreme Court ruling discussed above, the George W. Bush Administration issued Executive Order 13432 in 2007 directing the EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011, and in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, President Barack Obama issued a memorandum directing the Department of Transportation, Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of CO_2 in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021, and NHTSA intends to set standards for model years 2022–2025 in a future rulemaking. On January 12, 2017, the EPA finalized its decision to maintain the current GHG emissions standards for model years 2022–2025 cars and light trucks.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the EPA, this regulatory program will reduce GHG

emissions and fuel consumption for the affected vehicles by six to 23 percent over the 2010 baselines.

In August 2016, the EPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. The final standards are expected to lower CO_2 emissions by approximately 1.1 billion metric tons and reduce oil consumption by up to two billion barrels over the lifetime of the vehicles sold under the program.

Clean Power Plan and New Source Performance Standards for Electric Generating Units

On October 23, 2015, the EPA published a final rule (effective December 22, 2015) establishing the carbon pollution emission guidelines for existing stationary sources: electric utility generating units (80 FR 64510–64660), also known as the Clean Power Plan. These guidelines prescribe how states must develop plans to reduce GHG emissions from existing fossil-fuel-fired electric generating units. The guidelines establish CO_2 emission performance rates representing the best system of emission reduction for two subcategories of existing fossil-fuel-fired electric generating units: (1) fossil-fuel-fired electric utility steam-generating units and (2) stationary combustion turbines. Concurrently, the EPA published a final rule (effective October 23, 2015) establishing standards of performance for GHG emissions from new, modified, and reconstructed stationary sources: electric utility generating units (80 FR 64661–65120). The rule prescribes CO_2 emission standards for newly constructed, modified, and reconstructed affected fossil-fuel-fired electric utility generating units. The U.S. Supreme Court stayed implementation of the Clean Power Plan pending resolution of several lawsuits. Additionally, in March 2017, President Trump directed the EPA Administrator to review the Clean Power Plan in order to determine whether it is consistent with current executive policies concerning GHG emissions, climate change, and energy.

Presidential Executive Order 13693

Presidential Executive Order 13693, Planning for Federal Sustainability in the Next Decade, signed in 2015, seeks to maintain federal leadership in sustainability and greenhouse gas emission reductions. Its goal is to reduce agency Scope 1 and 2 GHG emissions by at least 40 percent by 2025, foster innovation, reduce spending, and strengthen communities through increased efficiency and improved environmental performance. Sustainability goals are set for building efficiency and management, energy portfolio, water use efficiency, fleet efficiency, sustainable acquisition and supply chain greenhouse gas management, pollution prevention, and electronic stewardship.

PRESIDENTIAL EXECUTIVE ORDER 13783

Presidential Executive Order 13783, Promoting Energy Independence and Economic Growth (March 28, 2017), orders all federal agencies to apply cost-benefit analyses to regulations of GHG emissions and evaluations of the social cost of carbon, nitrous oxide, and methane.

State

CALIFORNIA AIR RESOURCES BOARD

CARB is responsible for the coordination and oversight of State and local air pollution control programs in California. The CAAQS were established in 1969 pursuant to the Mulford-Carrell Act. These standards, included with the NAAQS, are generally more stringent and apply to more pollutants than the NAAQS. In addition to the criteria pollutants, CAAQS have been established for visibility-reducing particulates, hydrogen sulfide and sulfates.

The State of California Legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation, such as the landmark AB 32 California Global Warming Solutions Act of 2006, was specifically enacted to address GHG emissions. Other legislation, such as Title 24 building efficiency standards and Title 20 appliance energy standards, were originally adopted for other purposes such as energy and water conservation, but also provide GHG reductions. This section describes the major provisions of the legislation.

CARB Scoping Plan

CARB adopted the Scoping Plan to achieve the goals of AB 32. The Scoping Plan establishes an overall framework for the measures that would be adopted to reduce California's GHG emissions. CARB determined that achieving the 1990 emissions level would require a reduction of GHG emissions of approximately 29 percent below what would otherwise occur in 2020 in the absence of new laws and regulations (referred to as "business-as-usual"). The Scoping Plan evaluates opportunities for sector-specific reductions; integrates early actions by CARB and the State's Climate Action Team and additional GHG reduction measures by both entities; identifies additional measures to be pursued as regulations; and outlines the adopted role of a cap-and-trade program. Additional development of these measures and adoption of the appropriate regulations occurred through the end of 2013. Key elements of the Scoping Plan include:

- Expanding and strengthening existing energy efficiency programs, as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent by 2020;
- Developing a California cap-and-trade program that links with other programs to create a regional market system and caps sources contributing 85 percent of California's GHG emissions (adopted in 2011);

- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets (several Sustainable Communities Strategies have been adopted);

- Adopting and implementing measures pursuant to existing State laws and policies, including California's Clean Car Standards, heavy-duty truck measures, the Low Carbon Fuel Standard (amendments to the Pavley Standard adopted 2009; Advanced Clean Car Standard adopted 2012), goods movement measures, and the Low Carbon Fuel Standard (adopted 2009); and

- Creating targeted fees, including a public goods charge on water use, fees on gasses with high global warming potential, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation (CARB, 2008).

In 2012, CARB released revised estimates of the expected 2020 emissions reductions. The revised analysis relied on emissions projections updated in light of current economic forecasts that accounted for the economic downturn since 2008, reduction measures already approved and put in place relating to future fuel and energy demand, and other factors. This update reduced the projected 2020 emissions from 596 million metric tons of CO_2e ($MMTCO_2e$) to 545 $MMTCO_2e$. The reduction in forecasted 2020 emissions means that the revised business-as-usual reduction necessary to achieve AB 32's goal of reaching 1990 levels by 2020 is now 21.7 percent, down from 29 percent. CARB also provided a lower 2020 inventory forecast that incorporated State-led GHG emissions reduction measures already in place. When this lower forecast is considered, the necessary reduction from business-as-usual needed to achieve the goals of AB 32 is approximately 16 percent.

CARB adopted the first major update to the Scoping Plan on May 22, 2014. The updated Scoping Plan summarizes the most recent science related to climate change, including anticipated impacts to California and the levels of GHG emissions reductions necessary to likely avoid risking irreparable damage. It identifies the actions California has already taken to reduce GHG emissions and focuses on areas where further reductions could be achieved to help meet the 2020 target established by AB 32.

In 2016, the Legislature passed SB 32, which codifies a 2030 GHG emissions reduction target of 40 percent below 1990 levels. With SB 32, the Legislature passed companion legislation, AB 197, which provides additional direction for developing the Scoping Plan. On December 14, 2017 CARB adopted a second update to the Scoping Plan. The 2017 Scoping Plan details how the State will reduce GHG emissions to meet the 2030 target set by Executive Order B-30-15 and codified by SB 32. Other objectives listed in the 2017 Scoping Plan are to provide direct GHG emissions reductions; support climate investment in disadvantaged communities; and, support the Clean Power Plan and other Federal actions.

ASSEMBLY BILL 32 (CALIFORNIA GLOBAL WARMING SOLUTIONS ACT)

Assembly Bill (AB) 32 instructs CARB to develop and enforce regulations for the reporting and verification of statewide GHG emissions. AB 32 directed CARB to set a GHG emissions limit based on 1990 levels, to be achieved by 2020. It set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner.

SENATE BILL 32 (CALIFORNIA GLOBAL WARMING SOLUTIONS ACT OF 2006: EMISSIONS LIMIT)

Signed into law in September 2016, Senate Bill (SB) 32 codifies the 2030 GHG reduction target in Executive Order B-30-15 (40 percent below 1990 levels by 2030). The bill authorizes CARB to adopt an interim GHG emissions level target to be achieved by 2030. CARB also must adopt rules and regulations in an open public process to achieve the maximum, technologically feasible, and cost-effective GHG reductions.

SB 375 (THE SUSTAINABLE COMMUNITIES AND CLIMATE PROTECTION ACT OF 2008)

Signed into law on September 30, 2008, SB 375 provides a process to coordinate land use planning, regional transportation plans, and funding priorities to help California meet the GHG reduction goals established by AB 32. SB 375 requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, aligns planning for transportation and housing, and creates specified incentives for the implementation of the strategies.

AB 1493 (PAVLEY REGULATIONS AND FUEL EFFICIENCY STANDARDS)

California AB 1493, enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the U.S. EPA's denial of an implementation waiver. The U.S. EPA subsequently granted the requested waiver in 2009, which was upheld by the by the U.S. District Court for the District of Columbia in 2011. The regulations establish one set of emission standards for model years 2009–2016 and a second set of emissions standards for model years 2017 to 2025. By 2025, when all rules will be fully implemented, new automobiles will emit 34 percent fewer CO_2e emissions and 75 percent fewer smog-forming emissions.

SB 1368 (EMISSION PERFORMANCE STANDARDS)

SB 1368 is the companion bill of AB 32, which directs the California Public Utilities Commission to adopt a performance standard for GHG emissions for the future power purchases of California utilities. SB 1368 limits carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than five years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant. The new law effectively prevents California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the State. The California Public

Utilities Commission adopted the regulations required by SB 1368 on August 29, 2007. The regulations implementing SB 1368 establish a standard for baseload generation owned by, or under long-term contract to publicly owned utilities, of 1,100 lbs. CO_2 per megawatt-hour (MWh).

SB 1078 AND SBX1-2 (RENEWABLE ELECTRICITY STANDARDS)

SB 1078 requires California to generate 20 percent of its electricity from renewable energy by 2017. SB 107 changed the due date to 2010 instead of 2017. On November 17, 2008, Governor Arnold Schwarzenegger signed Executive Order S-14-08, which established a Renewable Portfolio Standard target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. Executive Order S-21-09 also directed CARB to adopt a regulation by July 31, 2010, requiring the State's load serving entities to meet a 33 percent renewable energy target by 2020. CARB approved the Renewable Electricity Standard on September 23, 2010 by Resolution 10-23. SBX1-2, which codified the 33 percent by 2020 goal.

SB 350 (CLEAN ENERGY AND POLLUTION REDUCTION ACT OF 2015)

Signed into law on October 7, 2015, SB 350 implements the goals of Executive Order B-30-15. The objectives of SB 350 are to increase the procurement of electricity from renewable sources from 33 percent to 50 percent (with interim targets of 40 percent by 2024, and 25 percent by 2027) and to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation. SB 350 also reorganizes the Independent System Operator (ISO) to develop more regional electricity transmission markets and improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States.

Executive Orders Related to GHG Emissions

California's Executive Branch has taken several actions to reduce GHGs through the use of executive orders. Although not regulatory, they set the tone for the State and guide the actions of State agencies.

EXECUTIVE ORDER S-3-05

Executive Order S-3-05 was issued on June 1, 2005, which established the following GHG emissions reduction targets:

- By 2010, reduce greenhouse gas emissions to 2000 levels;
- By 2020, reduce greenhouse gas emissions to 1990 levels; and
- By 2050, reduce greenhouse gas emissions to 80 percent below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an executive order, the goals are not legally enforceable for local governments or the private sector.

EXECUTIVE ORDER S-01-07

Issued on January 18, 2007, Executive Order S-01-07 mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. In particular, the executive order established a Low Carbon Fuel Standard (LCFS) and directed the Secretary for Environmental Protection to coordinate the actions of the California Energy Commission, CARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. CARB adopted the Low Carbon Fuel Standard on April 23, 2009.

EXECUTIVE ORDER S-13-08

Issued on November 14, 2008, Executive Order S-13-08 facilitated the California Natural Resources Agency development of the 2009 California Climate Adaptation Strategy. Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

EXECUTIVE ORDER S-14-08

Issued on November 17, 2008, Executive Order S-14-08 expands the State's Renewable Energy Standard to 33 percent renewable power by 2020. Additionally, Executive Order S-21-09 (signed on September 15, 2009) directs CARB to adopt regulations requiring 33 percent of electricity sold in the State come from renewable energy by 2020. CARB adopted the "Renewable Electricity Standard" on September 23, 2010, which requires 33 percent renewable energy by 2020 for most publicly owned electricity retailers.

EXECUTIVE ORDER S-21-09

Issued on July 17, 2009, Executive Order S-21-09 directs CARB to adopt regulations to increase California's Renewable Portfolio Standard (RPS) to 33 percent by 2020. This builds upon SB 1078 (2002), which established the California RPS Program, requiring 20 percent renewable energy by 2017, and SB 107 (2006), which advanced the 20 percent deadline to 2010, a goal which was expanded to 33 percent by 2020 in the 2005 Energy Action Plan II.

EXECUTIVE Order B-30-15

Issued on April 29, 2015, Executive Order B-30-15 established a California GHG reduction target of 40 percent below 1990 levels by 2030 and directs CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of $MMCO_2e$. The 2030 target acts as an interim goal on the way to achieving reductions of 80 percent below 1990 levels by 2050, a goal set by Executive Order S-3-05. The executive order also requires the State's Climate Adaptation Plan to be updated every three years and for the State to continue its climate change research program, among other provisions. With the enactment of SB 32 in 2016, the Legislature codified the goal of reducing GHG emissions by 2030 to 40 percent below 1990 levels.

California Regulations and Building Codes

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California's energy consumption relatively flat even with rapid population growth.

TITLE 20 APPLIANCE EFFICIENCY REGULATIONS

The appliance efficiency regulations (California Code of Regulations Title 20, Sections 1601-1608) include standards for new appliances. Twenty-three categories of appliances are included in the scope of these regulations. These standards include minimum levels of operating efficiency, and other cost-effective measures, to promote the use of energy- and water-efficient appliances.

TITLE 24 BUILDING ENERGY EFFICIENCY STANDARDS

California's Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations Title 24, Part 6), was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The 2016 Building Energy Efficiency Standards approved on January 19, 2016 went into effect on January 1, 2017. The 2019 Building Energy Efficiency Standards were adopted on May 9, 2018 and take effect on January 1, 2020. Under the 2019 standards, homes will use about 53 percent less energy and nonresidential buildings will use about 30 percent less energy than buildings under the 2016 standards.

TITLE 24 CALIFORNIA GREEN BUILDING STANDARDS CODE

The California Green Building Standards Code (California Code of Regulations Title 24, Part 11 code) commonly referred to as the CALGreen Code, is a statewide mandatory construction code developed and adopted by the California Building Standards Commission and the Department of Housing and Community Development. The CALGreen standards require new residential and commercial buildings to comply with mandatory measures under the topics of planning and design, energy efficiency, water efficiency/conservation, material conservation and resource efficiency, and environmental quality. CALGreen also provides voluntary tiers and measures that local governments may adopt that encourage or require additional measures in the five green building topics. The most recent update to the CALGreen Code went into effect January 1, 2017.

Local

SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT

San Joaquin Valley Air Pollution Control District (SJVAPCD) is the primary agency responsible for addressing air quality concerns in Fresno County—its role is discussed further in Section 4.3, *Air*

Quality. SJVAPCD recommends methods for analyzing project generated GHGs in CEQA analyses and offers multiple potential GHG reduction measures for land use development projects. SJVAPCD has developed thresholds of significance to provide a uniform scale to measure the significance of GHG emissions from land use and stationary source projects in compliance with CEQA and AB 32. SJVAPCD's goals in developing GHG thresholds include ease of implementation; use of standard analysis tools; and emissions mitigation consistent with AB 32.

CITY OF FRESNO GENERAL PLAN

The General Plan sets forth the following guiding and implementing policies that are relevant to greenhouse gas 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.

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-b - Greenhouse Gas Reduction Plan. As is consistent with State law, prepare and adopt a Greenhouse Gas Reduction Plan as part of the Master Environmental Impact Report to be concurrently approved with the Fresno General Plan in order to achieve compliance with State mandates, assist development by streamlining the approval process, and focus on feasible actions the City can take to minimize the adverse impacts of growth and development on global climate change. The Greenhouse Gas Reduction Plan shall include, but not be limited to:

- A baseline inventory of all known or reasonably discoverable sources of GHGs that currently exist in the City and sources that existed in 1990;
- A projected inventory of the GHGs that can reasonably be expected to be emitted from those sources in the year 2035 with implementation of this General Plan and foreseeable communitywide and municipal operations;
- A target for the reduction of emissions from those identified sources;
- A list of feasible GHG reduction measures to meet the reduction target, including energy conservation and "green building" requirements in municipal buildings and private development; and

- Periodically update municipal and community-wide GHG emissions inventories to determine the efficacy of adopted measures and to guide future policy formulation needed to achieve and maintain GHG emissions reduction targets.

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 onsite 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; and

- 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 affect 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 projects' design, conditions of approval, and mitigation measures.

Policy RC-5-f - Toolkit. Provide residents and project applicants with a "toolkit" of generally feasible measures that can be used to reduce GHG emissions, including educational materials on energy-efficient and "climate-friendly" products.

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.

4.8.4 - Impacts and Mitigation Measures

Methodology

On December 17, 2009, SJVAPCD adopted Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA (SJVAPCD, 2009); which outlined the SJVAPCD's methodology for assessing a project's significance for GHGs under CEQA. The following criteria was outlined in the document to determine whether a project could have a significant impact:

- Projects determined to be exempt from the requirements of CEQA would be determined to have a less-than-significant individual and cumulative impact for GHG emissions and would not require further environmental review, including analysis of project specific GHG emissions. Projects exempt under CEQA would be evaluated consistent with established rules and regulations governing project approval and would not be required to implement BPS.

- Projects complying with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the project is located would be determined to have a less-than-significant individual and cumulative impact for GHG emissions. Such plans or programs must be specified in law or approved by the lead agency with jurisdiction over the affected resource and supported by a CEQA compliant environmental review document adopted by the lead agency. Projects complying with an approved GHG emission reduction plan or GHG mitigation program would not be required to implement Best Performance Standards (BPS).

- Projects implementing Best Performance Standards would not require quantification of project specific GHG emissions. Consistent with CEQA Guidelines, such projects would be determined to have a less-than-significant individual and cumulative impact for GHG emissions.

- Projects not implementing Best Performance Standards would require quantification of project specific GHG emissions and demonstration that project specific GHG emissions would be reduced or mitigated by at least 29 percent, compared to Business-as-Usual (BAU*), including GHG emission reductions achieved since the 2005 baseline year.

Projects achieving at least a 29 percent GHG emission reduction compared to BAU would be determined to have a less-than-significant individual and cumulative impact for GHG.

- Notwithstanding any of the above provisions, projects requiring preparation of an Environmental Impact Report for any other reason would require quantification of project specific GHG emissions. Projects implementing BPS or achieving at least a 29 percent GHG emission reduction compared to BAU would be determined to have a less-than-significant individual and cumulative impact for GHG.

Thresholds of Significance

In accordance with CEQA, the effects of a project are evaluated to determine if they will result in significant adverse impact on the environment. The criteria used to determine the significance of an impact to utilities and service systems are based on the Environmental Checklist in Appendix G of the State CEQA Guidelines as identified below. Accordingly, greenhouse gas impacts resulting from the proposed Project are considered significant if the Project would:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact of the environment; or

b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

Project Impacts

Impact 4.8-1: Generate Greenhouse Gas Emissions, Either Directly or Indirectly, That May Have a Significant Impact on the Environment

As noted in Section 4.3, *Air Quality*, construction and operational emissions were quantified using the California Emissions Estimator Model (CalEEMod), which was developed by the California Air Pollution Control Officers Association (CAPCOA) and is approved for use in all areas of California (CAPCOA, 2016). CalEEMod quantifies emissions of GHGs from construction and operations activities using emission factors derived from CARB's Emission Factor (EMFAC) and OFFROAD models, for on-highway and off-road vehicles, respectively. The model calculates vehicle emissions based on the fleet average emission rate of vehicles operating in the County for the year in which the construction activity occurs.

The Project was modeled according to the land use designations detailed in the Traffic Impact Study (TIS) prepared by VRPA Technologies, Inc. (see Appendix G of this DEIR). Although individual future Project details are unknown at this time, assumptions were made regarding individual building sizes with each land use capped at their respective maximum allowable footprints under the City's Regulatory Ordinance. The proposed land use types were broken down and modeled accordingly:

- Cannabis Retailers/Dispensaries will be limited to a combined total of 55,000 square feet, with a potential for up to 21 businesses of this type. Therefore, the average building size was modeled as 2,620 square feet. While the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition does contain data for a Marijuana Dispensary Land Use (Land Use 882), CalEEMod does not yet have this land use incorporated. Therefore, the CalEEMod run for dispensaries utilized the land use of "Fast Food Restaurant with Drive Thru" as it most closely mimics the vehicle trip behaviors of a dispensary, however the trip rates were modified per the ITE 10th Edition data and the trip lengths were modified per the TIS.

- Cultivation, Distribution, and Manufacturing sites will be limited to a combined total of 700,000 square feet, with a potential for up to 16 businesses of these types. Therefore, the average building size was modeled as 43,750 square feet under the "General Light Industrial" land use setting and utilized the trip rate formula and trip length assumptions provided in the TIS to overwrite the default trip values in CalEEMod.

- Testing Laboratories will be limited to a combined total of 100,000 square feet and individual labs are assumed to be approximately 20,000 square feet each. The "General Light Industrial" land use setting was used, however the trip rate formula and trip length assumptions provided in the TIS were used to overwrite the default trip values in CalEEMod.

Each land use type was modeled as an individual site in order to determine emissions resulting from a single site. The resulting emissions were then multiplied by the anticipated number of sites for each land use type to determine total emissions for each proposed land use. For the purposes of this EIR, emissions were modeled under worst-case scenarios and assumptions. Per the City's Regulatory Ordinance, existing retail and infrastructure will be utilized where possible. Therefore, actual construction and operational emissions will likely be lower than what is estimated in this analysis, though the extent of those reductions is not known at this time.

Operational vehicle trip assumptions were made according to the TIS. Table 4.8-2 shows TIS assumes for trip rates for various cannabis operations based on land use codes.

Table 4.8-2
Vehicle Trip Assumptions

ITE Code	Land Use	Quantity (x)	Trip Rate	Average Daily Trips	Trips/Day/ksf (CalEEMod Input)
110	Cultivation, Distribution, and Manufacturing	43.750 ksf	T = 3.79(x) + 57.96	224	**5.1148**
110	Testing Laboratories	20.000 ksf	T = 3.79(x) + 57.96	134	**6.688**
882	Cannabis Retailers/Dispensaries	2.620 ksf	252.7(x)	632	**252.7**

In addition to the modified trip rates, the vehicle fleet mix for retail operations were also modified to change the default value from 12.3 percent Heavy-Heavy Duty (HHD) trucks to a conservative assumption of two percent HHD trucks. It was assumed that retail operations will receive deliveries by way of smaller, Medium-Heavy Duty trucks and will likely receive no deliveries by way of HHD trucks. However, two percent HHD trucks was used as a highly conservative estimate. The remaining 10.3 percent from the HHD category was proportionately reallocated to the three passenger vehicle categories for Light-Duty Auto and Light-Duty Trucks, as the vast majority of vehicle travel generated by retail operations will be from passenger vehicles.

SHORT-TERM EMISSIONS

Because specific construction timelines and equipment usage schedules are not known at this time, the construction emissions were based on the default CalEEMod construction timeline and equipment list for the proposed land use types and estimated development intensity. Applying model defaults as well as a conservative analysis approach, construction emissions were estimated as if construction started in October of 2019. Based on the default CalEEMod estimates, the Project construction timing is approximately six months (per building) and operations would conservatively begin during year 2020. The dates entered into the CalEEMod program may not represent the actual dates the equipment will operate. All construction equipment activity levels were assumed based on the specified CalEEMod default values for type and number of equipment, hours per day, and horsepower.

LONG-TERM OPERATIONS EMISSIONS

Long-term emissions are caused by operational mobile, area and energy sources. The Project would comply with applicable SJVAPCD Rules and Regulations, the local zoning codes, and additional emissions reduction measures.

OVERALL GHG EMISSIONS

In order to determine if the proposed Project would generate greenhouse gas emissions that would directly or indirectly cause a significant impact on the environmental, the proposed Project's construction and operational (i.e. vehicle emissions, energy consumption, etc.) GHG emissions were estimated using the CalEEMod program (version 2016.3.2). These emissions are summarized in Table 4.8-3. In order for the Project to conform with the goals of AB 32, at least a 29 percent reduction of GHG emissions from Business-as-Usual (BAU) must be achieved by 2020. The mitigated emissions were calculated using updated emission factors from CalEEMod. The unmitigated and mitigated GHG emissions are summarized in Table 4.8-4.

Table 4.8-3
Estimated Annual GHG Emissions (MT/Year)

Source	CO2	CH4	N2O	CO2e
Construction Emissions				
2019 Construction Emissions	2,039	0.4762	0.000	2,050
2020 Construction Emissions	1,579	0.3711	0.000	1,588
Mitigated Operational Emissions				
Area Emissions	0.0153	0.000	0.000	0.0162
Energy Emissions	4,025	0.1427	0.0512	4,044
Mobile Emissions	16,156	1.4007	0.000	16,191
Waste Emissions	330.0	19.5	0.000	817.6
Water Emissions	382.7	6.587	0.1576	594.4
Total Project Operational Emissions	***20,893***	***27.63***	***0.2093***	***21,647***
Annualized Construction Emissions[1]	***120.6***	***0.0282***	***0.000***	***121.3***
Project Emissions	21,014	27.7	0.21	21,768

*Note: 0.000 could represent <0.00
[1] Per South Coast AQMD's Methodology

Table 4.8-4
Comparison of Unmitigated and Mitigated GHG Emissions (MT/Year)

	Project Unmitigated (2005)	Project Mitigated (2020)
CO_2e Emissions	23,967	21,647
Percent Reduction		9.7%

As noted above, the SJVAPCD does not have adopted GHG thresholds. Instead, the SJVAPCD recommends using a "Business-as-Usual" (BAU) approach, which demonstrates a project's ability to reduce GHG emissions by 29 percent compared to BAU, which is measured by the project's emissions as modeled for an operational year of 2005. Applying this methodology would result in a 9.7 percent reduction by the proposed Project, at total buildout, failing to achieve the GHG emission reductions required for assessing significance of the GHG emissions.

Mitigation Measures MM 4.3-1 through MM 4.3-4 have been identified in Section 4.3, *Air Quality* and MM 4.6-1 and MM 4.6-2 in Section 4.6, *Energy* that would reduce Project specific air quality emissions and carbon-based electrical energy demand. These measures include:

MM 4.3-1: Prior to issuance of a grading or building permit or conditional use permit, individual project applicants shall submit written documentation of project compliance with applicable State and federal air pollution control laws and regulations. The project applicant shall also comply with applicable rules and regulations of the San Joaquin Valley Air Pollution Control District during construction and during operations of cannabis facilities.

MM 4.3-2: Prior to any ground disturbing activities, the Project applicant shall submit a Fugitive Dust Control Plan to the San Joaquin Valley Air Pollution Control District for review and approval, per the District's Regulation VIII to reduce construction-related emissions of particulate matter that is 10 microns or less and 2.5 microns or less in diameter (PM_{10} and $PM_{2.5}$). The requirements of Regulation VIII include:

1. **Visible Dust Emissions (VDE)** may not exceed 20 percent opacity during periods when soil is being disturbed by equipment or by wind at any time. Visible Dust Emissions opacity of 20 percent means dust that would obstruct an observer's view of an object by 20 percent. District inspectors are State certified to evaluate visible emissions. Dust control may be achieved by applying water before/during earthwork and onto unpaved traffic areas, phasing work to limit dust, and setting up wind fences to limit wind-blown dust.

2. **Soil Stabilization** is required at regulated construction sites after normal working hours and on weekends and holidays. This requirement also applies to inactive construction areas such as phased projects where disturbed land is left unattended. Applying water to form a visible crust on the soil and restricting vehicle access are often effective for short-term stabilization of disturbed surface areas. Long-term methods including applying dust suppressants and establishing vegetative cover.

3. **Carryout and Trackout** occur when materials from emptied or loaded vehicles fall onto a paved surface or shoulder of a public road or when materials adhere to vehicle tires and are deposited onto a paved surface or shoulder of a public road. Should either occur, the material must be cleaned up at least daily, and immediately if it extends more than 50 feet from the exit point onto a paved road. The appropriate clean-up methods require the complete removal and cleanup of mud and dirt from the paved surface and shoulder. Using a blower device or dry sweeping with any mechanical device other than a PM_{10}-efficient street sweeper is a violation. Larger construction sites, or sites with a high amount of traffic on one or more days, must prevent carryout and trackout from occurring by installing gravel pads, grizzlies, wheel washers, paved interior roads, or a combination thereof at each exit point from the site. In many cases, cleaning up trackout with water is also prohibited as it may lead to plugged storm drains. Prevention is the best method.

4. **Unpaved Access and Haul Roads,** as well as unpaved vehicle and equipment traffic areas at construction sites must have dust control. Speed limit signs limiting vehicle speed to 15 mph or less at construction sites must be posted every 500 feet on uncontrolled and unpaved roads.

MM 4.3-3: The Project applicant of any conditional use permit, for a cannabis related business (retail only), shall be required to make all mobile deliveries via hybrid or electric vehicles and shall submit written documentation to the City stating the retail business will ensure this mitigation measure is complied with for all mobile deliveries.

MM 4.3-4: The Project applicant of any conditional use permit, for a cannabis related business, shall include a site plan indicating the number of electric vehicles charging stations included in the parking area. The number of electric vehicle parking stations shall be at a ratio of no less than one charging station per 20 required parking spaces.

MM 4.6-1: Beginning in 2022, within 15 days of submitting an application for renewal of a cultivation license to the Bureau of Cannabis Control , the project proponent of any conditional use permit, for a cannabis related business (cultivation only), shall provide written documentation to the City of Fresno of compliance with State requirements of CCR Title 3, Div. 8, Chapter 1, Section 8203 (g). Written documentation shall include the following information:

1. Total electricity supplied by local utility provider, name of local utility provider, and greenhouse gas emission intensity per kilowatt hour reported by the utility provider under Section 398.4(c) of the Public Utilities Code for the most recent calendar year available at time of submission;

2. Total electricity supplied by a zero net energy renewable source, as set forth in Section 398.4(h)(5) of the Public Utilities Code, that is not part of a net metering or other utility benefit;

3. Total electricity supplied from other unspecified sources, as defined in 398.2(e) of the Public Utilities Code, and other on-site sources of generation not reported to the local utility provider (e.g., generators, fuel cells) and the greenhouse gas emission intensity from these sources;

4. Average weighted greenhouse gas emission intensity considering all electricity use in subsections (1), (2), and (3).

MM 4.6-2: Beginning on January 1, 2023, the project proponent of any conditional use permit, for a cannabis related business (cultivation only), shall provide written documentation to the City of Fresno of compliance with State requirements of CCR Title 3, Div. 8, Chapter 1, Section 8305 (Renewable Energy Requirements). As evidence of meeting the standard, licensees shall comply with the following:

1. If a licensee's average weighted greenhouse gas emission intensity as provided in Section 8203(g)(4) is greater than the local utility provider's greenhouse gas emission intensity, the licensee shall provide evidence of carbon offsets from any of the following sources to cover the excess in carbon emissions from the previous annual licensed period:

    a. Voluntary greenhouse gas offset credits purchased from any of the following recognized and reputable voluntary carbon registries:

        - American Carbon Registry;
        - Climate Action Reserve; (C) Verified Carbon Standard.

b. Offsets purchased from any other source are subject to verification and approval by the Department.

2. New licensees, without a record of weighted greenhouse gas emissions intensity from the previous calendar year, shall report the average weighted greenhouse gas emissions intensity, as provided in Section 8203(g)(4), used during their licensed period at the time of license renewal. If a licensee's average weighted greenhouse gas emissions intensity is greater than the local utility provider's greenhouse gas emissions intensity for the most recent calendar year, the licensee shall provide evidence of carbon offsets or allowances to cover the excess in carbon emissions from any of the sources provided in subsection (a).

Although implementation of these mitigation measures is expected to reduce emissions that can impact greenhouse gases, the proposed Project's preliminary GHG analysis demonstrates that the Project will not meet a 29 percent reduction in GHG emissions from BAU, as shown in Tables 4.8-3 and 4.8-4. Although the overall greenhouse gas emissions estimates are conservative and actual emissions levels are likely to be less than modeled, the percent reduction of the overall levels would not achieve the 29 percent reduction. In addition to the mitigation measures included in Section 4.3, *Air Quality* and Section 4.6, *Energy,* Mitigation Measure MM 4.8-1 requires the proposed Project to comply with all SJVAPCD rules regulations for reducing air quality and greenhouse gas emissions. Mitigation Measure 4.8-2 would further reduce greenhouse gas emissions by requiring specific sites to be developed with enhanced alternative transportation facilities, low-emission refrigeration, enhanced recycling, and reduced and low-energy water fixtures. Even with these feasible mitigation measures, the proposed Project would have a significant and unavoidable impact on greenhouse gas emissions.

Mitigation Measures

Implement Mitigation Measures MM 4.3-1 through MM 4.3-4, MM 4.6-1 and MM 4.6-2.

MM 4.8-1: The Project applicant shall be required to comply with all applicable State and San Joaquin Valley Air Pollution Control District (SJVAPCD) Rules and Regulations related to greenhouse gas emissions.

MM 4.8-2: Prior to the approval of a site plan, issuance of a grading or building permit, or as on site plans for applications for a conditional use permit, the Project applicant shall provide details to the Fresno City Planning and Development Department that the following menu of greenhouse gas emissions reduction measures are being implemented in conformance with the Commercial Cannabis Ordinance. Building design standards shall be made conditions of approval of any commercial/industrial site plan.

1. Designate at least two locations with adequate pedestrian, bicycle, and parking facilities for off-site transit connection service.

2. Prohibit use of chlorofluorocarbon refrigerants in commercial buildings.

3. Ensure recycling of construction debris and waste through administration by an on-site recycling coordinator and presence of recycling/separation area.

4. Implement a water wise program that includes all feasible measures to reduce indoor water use and associated energy use (e.g., for interior fixtures, require tankless water heaters and low-flow plumbing and fixtures).

Level of Significance

Impacts would be *significant and unavoidable.*

Impact 4.8-2: Conflict with Any Applicable Plan, Policy or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases

CARB SCOPING PLAN

The latest CARB Climate Change Scoping Plan (2017) outlines the State's strategy to return reduce State's GHG emissions to return to 40 percent below 1990 levels by 2030 pursuant to SB 32. The CARB Scoping Plan is applicable to State agencies and is not directly applicable to cities/counties and individual projects. Nonetheless, the Scoping Plan has been the primary tool that is used to develop performance-based and efficiency-based CEQA criteria and GHG reduction targets for climate action planning efforts.

Table 4.8-5, *Project Consistency with Scoping Plan Greenhouse Gas Emission Reduction Strategies*, demonstrates consistency with all feasible Scoping Plan emission reduction strategies.

Table 4.8-5
Project Consistency with Scoping Plan Greenhouse Gas Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Transportation Sector		
Advanced Clean Cars	T-1	Employees would purchase vehicles in compliance with CARB vehicle standards that are in effect at the time of vehicle purchase.
Low Carbon Fuel Standard	T-2	Motor vehicles driven by the proposed Project's employees would use compliant fuels.
Regional Transportation-Related GHG Targets	T-3	Not applicable to this proposed Project.
Vehicle Efficiency Measures 1. Tire Pressure 2. Fuel Efficiency Tire Program	T-4	Motor vehicles driven by the proposed Project's employees would maintain proper tire pressure when their vehicles are serviced.

Scoping Plan Measure	Measure Number	Project Consistency
3. Low Friction Oil 4. Solar Reflective Automotive Paint and Window Glazing		The proposed Project's employees would replace tires in compliance with CARB vehicle standards that are in effect at the time of vehicle purchase. Motor vehicles driven by the proposed Project's employees would use low friction oils when their vehicles are serviced. The proposed Project's employees would purchase vehicles in compliance with CARB vehicle standards that are in effect at the time of vehicle purchase.
Ship Electrification at Ports (Shore Power)	T-5	Not applicable.
Goods Movement Efficiency Measures 1. Port Drayage Trucks 2. Transport Refrigeration Units Cold Storage Prohibition 3. Cargo Handling Equipment, Anti-Idling, Hybrid, Electrification 4. Goods Movement Systemwide Efficiency Improvements 5. Commercial Harbor Craft Maintenance and Design Efficiency 6. Clean Ships 7. Vessel Speed Reduction	T-6	Transport Refrigeration Units and heavy-duty trucks potentially associated with the proposed Project would be in compliance with CARB standards that are in effect at the time of purchase. Measures related to ports and marine vessels are not applicable.
Heavy-Duty Vehicle GHG Emission Reduction 1. Tractor-Trailer GHG Regulation 2. Heavy Duty Greenhouse Gas Standards for New Vehicle and Engines (Phase I)	T-7	Heavy-duty trucks associated with the proposed Project would be in compliance with CARB standards that are in effect at the time of purchase.

Scoping Plan Measure	Measure Number	Project Consistency
Medium- and Heavy-Duty Vehicle Hybridization Voucher Incentive Project	T-8	The proposed Project would not conflict with the Medium- and Heavy-Duty Vehicle Hybridization Voucher Incentive Project.
High-Speed Rail	T-9	Not applicable.
Electricity and Natural Gas Sector		
Energy Efficiency Measures (Electricity)	E-1	In addition, all proposed Project development is required to exceed 2013 Title 24 energy requirements on a time-dependent valuation basis by at least 25%, as outlined in 24 CCR 6. A menu of the energy efficiency design elements, along with other design considerations and options, would be made available to Project proponents as part of the internal design review process. Each Project proponent must incorporate the design elements that make the most sense for their particular development project in order to meet the energy reduction requirement.
Energy Efficiency (Natural Gas)	CR-1	The proposed Project will comply with energy efficiency standards for natural gas appliances and other devices at the time of building construction (where applicable). In addition, all development on the project site is required to exceed 2013 Title 24 energy requirements on a time-dependent valuation basis by at least 25%, as outlined in 24 CCR 6. A menu of the energy efficiency design elements, along with other design considerations and options, would be made available to project proponents as part of the internal design review process. Each project proponents must incorporate the design elements that make the most sense for their particular development project in order to meet the energy reduction requirement.
Solar Water Heating (California Solar Initiative Thermal Program)	CR-2	The proposed Project will comply with the California Solar Heating Initiative Thermal Program at the time of building construction (where applicable). In addition, all development on the project site is required to exceed 2013 Title 24 energy requirements on a time-dependent valuation basis by at least 25%, as outlined in 24 CCR 6. A menu of the energy efficiency design

Scoping Plan Measure	Measure Number	Project Consistency
		elements, along with other design considerations and options, would be made available to project proponents as part of the internal design review process. Each project proponents must incorporate the design elements that make the most sense for their particular development project in order to meet the energy reduction requirement.
Combined Heat and Power	E-2	Not applicable.
Renewable Portfolios Standard (33% by 2020)	E-3	The electricity used by the proposed project will benefit from reduced GHG emissions resulting from increased use of renewable energy sources.
Senate Bill 1 Million Solar Roofs (California Solar Initiative, New Solar Home Partnership, Public Utility Programs) and earlier solar programs	E-4	Not applicable.
Water Sector		
Water Use Efficiency	W-1	The proposed Project includes all feasible water use efficiency development conditions that would reduce water and energy use (e.g., for interior fixtures, require tank-less water heaters and low flow plumbing). For optimum water efficiency, the irrigation system would be designed to match plant type, utilize drip or subsurface irrigation wherever possible, apply water at agronomic rates. In addition, irrigation system design would conform to the hydrozones of the landscape design plan. “Smart” controllers, such as weather-based irrigation controllers or other self-adjusting irrigation controllers, would be required for all irrigation systems and must be able to accommodate all aspects of the landscape and irrigation design plans.
Water Recycling	W-2	The proposed Project water and wastewater development conditions requires water efficiency to the extent possible for indoor and outdoor cultivation operations. Otherwise, additional water recycling is not applicable.

Scoping Plan Measure	Measure Number	Project Consistency
Water System Energy Efficiency	W-3	The proposed Project's water and wastewater development conditions incorporates efficient water system and a reduction in GHG emissions.
Reuse Urban Runoff	W-4	Not applicable.
Renewable Energy Production	W-5	The proposed Project promotes renewable energy technologies and commits to incorporation of renewable energy production as feasible. See discussion under Measure E-4.
Green Buildings		
State Green Building Initiative: Leading the Way with State Buildings (Greening New and Existing State Buildings)	GB-1	The proposed Project would be required to be constructed in compliance with State or local green building standards in effect at the time of building construction.
Green Building Standards Code (Greening New Public Schools, Residential and Commercial Buildings)	GB-1	The proposed Project's buildings would meet green building standards that are in effect at the time of design and construction.
Beyond Code: Voluntary Programs at the Local Level (Greening New Public Schools, Residential and Commercial Buildings)	GB-1	The proposed Project would be required to be constructed in compliance with local green building standards in effect at the time of building construction.
Greening Existing Buildings (Greening Existing Homes and Commercial Buildings)	GB-1	Applicable for existing buildings only. Not applicable for the proposed project except as future standards may become applicable to existing buildings.
Industry Sector		
Energy Efficiency and Co-Benefits Audits for Large Industrial Sources	I-1	Proposed Project applicants will be required to implement energy efficiency development standards to reduce impacts of industrial indoor grow light electricity demands on the regional utility suppliers.
Oil and Gas Extraction GHG Emission Reduction	I-2	Not applicable.
GHG Emissions Reduction from Natural Gas Transmission and Distribution	I-3	Not applicable.
Refinery Flare Recovery Process Improvements	I-4	Not applicable.
Work with the local air districts to evaluate amendments to their	I-5	Not applicable based on anticipated industrial uses.

Scoping Plan Measure	Measure Number	Project Consistency
existing leak detection and repair rules for industrial facilities to include methane leaks.		
Recycling and Waste Management Sector		
Landfill Methane Control Measure	RW-1	Not applicable for the proposed project, Option B.
Increasing the Efficiency of Landfill Methane Capture	RW-2	Not applicable for the proposed project, Option B.
Mandatory Commercial Recycling	RW-3	During both construction and operation of the proposed project, the proposed project would comply with all State regulations related to solid waste generation, storage, and disposal, including the California Integrated Waste Management Act as amended. During construction, all wastes would be recycled to the maximum extent possible as required by proposed project conditions.
Increase Production and Markets for Compost and Other Organics	RW-3	Not applicable.
Anaerobic/Aerobic Digestion	RW-3	Not applicable.
Extended Producer Responsibility	RW-3	Not applicable.
Environmentally Preferable Purchasing	RW-3	Not applicable.
Forests Sector		
Sustainable Forest Target	F-1	Not applicable. Not applicable.
High GWP Gases Sector		
Motor Vehicle Air Conditioning Systems: Reduction of Refrigerant Emissions from Non-professional Servicing	H-1	The proposed Project's employees would be prohibited from performing air conditioning repairs and required to use professional servicing.
SF6 Limits in Non-utility and Non-semiconductor Applications	H-2	Not applicable.
Reduction of Perfluorocarbons in Semiconductor Manufacturing	H-3	Not applicable.
Limit High GWP Use in Consumer Products	H-4	The proposed Project's employees would use consumer products that would comply with the regulations that are in effect at the time of manufacture.

Scoping Plan Measure	Measure Number	Project Consistency
Air Conditioning Refrigerant Leak Test During Vehicle Smog Check	H-5	Motor vehicles driven by the proposed project's employees would comply with the leak test requirements during smog checks.
Stationary Equipment Refrigerant Management Program – Refrigerant Tracking/Reporting/Repair Program	H-6	If the proposed project's industrial land uses include cold storage refrigeration systems that include more than 50 pounds of high-GWP refrigerant, the tenant of that land use would be required to conduct periodic leak inspections, promptly repair leaks, and keep service records on site; additionally, the tenant would register the refrigeration system and submit annual refrigerant use reports.
Stationary Equipment Refrigerant Management Program – Specifications for Commercial and Industrial Refrigeration	H-6	If the proposed Project's industrial land uses include refrigeration, then the proposed stationary equipment would meet the specifications outlined in Measure H-6, to the extent applicable and feasible.
SF6 Leak Reduction Gas Insulated Switchgear	H-6	Not applicable.
Agriculture Sector		
Methane Capture at Large Dairies	A-1	Not applicable.

The Project's GHG emissions shown in Tables 4.8-3 and 4.8-4 include reductions associated with Statewide strategies such as the Pavley I motor vehicle emission standards, the Low Carbon Fuel Standard (LCFS), and the 2016 Title 24 Energy Efficiency Standards. However, the modeling does not incorporate reductions from the Pavley II (LEV III) Advanced Clean Cars Program (extends to model year 2025), the Renewable Portfolio Standards (RPS), Green Building Code Standards for indoor water use, or the California Model Water Efficient Landscape Ordinance (outdoor water), or the latest 2019 Title 24 Energy Efficiency Standards (effective January 1, 2020). Therefore, actual emissions would be lower than those shown in Tables 4.8-3 and 4.8-4 with the implementation of all of the Statewide reduction strategies. The proposed Project would also be constructed in conformance with CALGreen, which requires high-efficiency water fixtures for indoor plumbing and water efficient irrigation systems. The proposed Project would not conflict with any Statewide strategies to reduce GHG emissions. As stated in Impact 4.8-1, mitigation measures have been included to further reduce greenhouse gas emissions and to comply with all State and local greenhouse gas reduction strategies. Therefore, conflicts with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases would be considered less than significant.

Mitigation Measures

Implement Mitigation Measures MM 4.3-1 through MM 4.3-4, MM 4.6-1, MM 4.6-2, MM 4.8-1 and MM 4.8-2.

Level of Significance

Impacts would *be less than significant with mitigation*.

Cumulative Setting Impacts and Mitigation Measures

CUMULATIVE SETTING

The study area for the analysis of cumulative impacts is the City of Fresno and the unincorporated portions of Fresno County located adjacent to the city limits, as well as portions of the City of Clovis and the County of Madera adjacent to the City of Fresno. The applicable cumulative projections include growth projections from the City of Fresno General Plan, Fresno County General Plan, Madera County General Plan, and the City of Clovis General Plan.

The City of Fresno General Plan was last adopted in the year 2014. Anticipated development within the General Plan includes 186,840 dwelling units, 66.4 million square feet (msf) of commercial/office/public facility, 100,000 sf of mixed uses, and 72.8 msf of industrial uses. The General Plan contains approximately 11,714 acres of agricultural land, 12,288 acres of open space, and 12,522 acres of vacant land. Existing agricultural land is primarily located in the southeastern and western portions of the General Plan.

The General Plan contains two major rail lines that generally traverse in a southeast to northwest direction. These railways include the Union Pacific Railroad line that is generally located along SR-99, and the BNSF Railway that diverges from the SR-99 in the southwest and travels through the Downtown to the northwest. There are three airports located within the City of Fresno including the Fresno-Yosemite International Airport located in the eastern portion of the Planning Area, the Fresno-Chandler Downtown Airport located west of Downtown, and Sierra Sky Park Airport that is located on the northern portion of the General Plan.

The County of Fresno General Plan was last adopted in the year 2000. The County General Plan was prepared to accommodate population growth through the year 2020, consistent with the California Department of Finance projection of 1.1 million by 2020. This represents an additional population of approximately 344,000, which includes the year 2020 projections outside the sphere of influences for cities within the East Valley area, which is located east of Interstate 5. Additional development projects are proposed northeast of the City of Fresno Project area including Friant Ranch that represents an additional population of approximately 164,693 through the year 2020.

The County of Madera General Plan was last adopted in the year 1995. The Madera County General Plan identifies population and employment growth projections through the year 2010

and includes 177,071 people and 61,866 employees. Since the adoption of Madera County's General Plan, substantial new development projects have been proposed in the southern portion of Madera County, some of which is proposed within close proximity of the City of Fresno Project area including Gateway, Gunner Ranch, Liberty Groves, North Fork Village, Tesoro Viejo, and River Ranch Estates. These projects include approximately 23,000 units, and supporting uses such as commercial, public facilities, parks, and open space.

The City of Clovis General Plan was last adopted in the year 2014. The Clovis General Plan forecasts the ultimate buildout of the entire Clovis General Plan area that is expected to occur for at least 70 years. The Clovis General Plan forecasts an additional 65,100 residential units, 179,300 population, and 38,250,000 square feet of buildings.

CUMULATIVE IMPACTS

To date, no national standards have been established for nationwide GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level. Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects.

Global climate change is a cumulative impact, and there are currently no established thresholds for assessing whether the GHG emissions of a project would be considered a cumulatively considerable contribution to global climate change.

Implementation of Mitigation Measures MM 4.3-1 through MM 4.3-4 would reduce impacts of the Project by requiring the proposed Project to comply with all SJVAPCD rules regulations for reducing air quality and greenhouse gas emissions. To further reduce greenhouse gas emissions MM 4.6-1 and MM 4.6-2 requires specific sites to be developed with enhanced alternative transportation facilities, low-emission refrigeration, enhanced recycling, and reduced and low-energy water fixtures. Implementation of these mitigation measures is expected to reduce emissions that can impact greenhouse gases, however, even with these feasible mitigation measures, the proposed Project would have a significant and unavoidable impact on greenhouse gas emission.

While the proposed Project would not result in a 29 percent reduction from BAU, many measures incorporated in the analysis are regional or Statewide in nature and do not provide a mechanism that guarantees GHG emission reductions on a cumulative basis. In addition, the City of Fresno does not have the jurisdictional authority to control the various cumulative sources of GHGs in the City, or the GHG emissions from sources around the globe, which all contribute to climate change. Although many other agencies with the necessary jurisdiction are currently taking action to reduce GHG emissions, the City cannot assure that these measures would ultimately be implemented or sufficient to address climate change. Therefore, the proposed Project's GHG emissions would be considered cumulatively considerable.

Mitigation Measures

Implement Mitigation Measures MM 4.3-1 through MM 4.3-4, MM 4.6-1, MM 4.6-2, MM 4.8-1 and MM 4.8-2.

Cumulative Level of Significance

Cumulative impacts would be *significant and unavoidable.*

4.9 - Hazards and Hazardous Materials

4.9.1 - INTRODUCTION

This section provides information on safety hazards within the City of Fresno Project area, including environmental effects associated with hazardous materials, and emergency response. Information used to prepare this section is based on the City of Fresno General Plan, City of Fresno General Plan Update Master EIR, applicable Airport Land Use Compatibility Plans (ALUCPs), and data from federal, State, and local agencies containing information regarding hazardous materials use, wastes, and environmental contamination.

4.9.2 - ENVIRONMENTAL SETTING

REGIONAL CHARACTER

The City of Fresno is located in Fresno County and is situated in the central portion of the San Joaquin Valley, in the State of California. The City encompasses approximately 113 square miles. Fresno is the largest city in Fresno County and has a current estimated population of 536,683 residents (California Department of Finance, 2019). Fresno County is California's sixth largest county in land area and encompasses approximately 6,011 square miles.

HAZARDOUS MATERIALS

Hazardous Materials Definitions

Hazardous materials, as defined by the California Code of Regulations, are substances with certain physical properties that could pose a substantial present or future hazard to human health or the environment when improperly handled, disposed, or otherwise managed. Hazardous materials are grouped into the following four categories, based on their properties:

- Toxic - causes human health effects;
- Ignitable - has the ability to burn;
- Corrosive - causes severe burns or damage to materials; and
- Reactive - causes explosions or generates toxic gases.

A hazardous waste is any hazardous material that is discarded, abandoned, or slated to be recycled. The criteria that define a material as hazardous also define a waste as hazardous. If improperly handled, hazardous materials and hazardous waste can result in public health hazards if released into the soil or groundwater or through airborne releases in vapors, fumes, or dust. Soil and groundwater having concentrations of hazardous constituents higher than specific regulatory levels must be handled and disposed of as hazardous waste when excavated or pumped from an aquifer. The California Code of Regulations, Title 22, Sections 66261.20-24 contains technical descriptions of toxic characteristics that could cause soil or groundwater to be classified as hazardous waste.

Hazardous Materials Use

Hazardous materials are routinely used, stored, and transported in the Project area and are associated with industrial and commercial/retail businesses, as well as in educational facilities, hospitals, and households. Hazardous waste generators in the Project 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); and
- 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, and regulate 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 (UST) system within the Project area. Environmental Health staff inspect 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 Project area that have been previously contaminated by hazardous materials are required to be identified and cleaned. These contaminated sites are mainly associated with

leaking underground storage tanks and are predominately clustered south of Downtown, Fresno Yosemite International Airport, Palm Bluffs Corporate Center (located in northwest Fresno) and 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 Project 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 (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 five Federal Superfund sites within the Project area.

2. Department of Toxic Substances Control EnviroStor Database: The Department of Toxic Substances Control (DTSC) Site Mitigation and Brownfields Reuse Programs (SMBRP) 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, and 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 January 2019 identified a total of 137 sites in the Project area. Table 4.9-1 lists current active sites within the Project area.

Table 4.9-1
Facilities in the City of Fresno Listed on the DTSC EnviroStor Database

EnviroStor ID	Project Name	Status	Project Type	Address
CAL000160729	All Valley Environmental Inc.	Closed	Non-Operating	523 N Brawley Ave
CAD981377138	Buckner by Storm	Closed	Non-Operating	4381 N Brawley Ave
13040074	Commercial Electroplaters	Active	State Response	2940 South Elm Ave
CAT000646158	County of Fresno Hamilton Yard Complex	Closed	Non-Operating	1730 S Maple Ave
CAD000629998	FMC Corp	Undergoing Closure	Non-Operating	2501 S Sunland Ave
80001330	FMC Corp	Active	Corrective Action	2501 S. Sunland Ave
10280013	FMC Corp – Fresno	Active	State Response	2501 S Sunland Ave
10400004	Former Burlington Northern Santa Fe Ice House	Active	State Response	3090 E Church Ave
60001247	Former Fresno 2 Manufactured Gas Plant Site	Active	Voluntary Cleanup	Mariposa St between F and G Streets
60002664	Fowler-McKinley Elementary School Project	Active	School Cleanup	Northeast Corner of Fowler and McKinley Avenues
10450005	Fresno Air Terminal/Old Hammer Field (J09CA0823)	Active	State Response	McKinley and Clovis Avenues
10490097	Fresno Sanitary Landfill	Active	Federal Superfund	SW Corner of Jensen and West Avenues
10330038	H S Mann Metal Waste Company	Active	State Response	5404 S Del Rey Ave
CAD009158411	Jain Irrigation Inc	Protective Filer	Non-Operating	2851 E Florence Ave
CAD980673842	Oil Conservation Service	Undergoing Closure	Non-Operating	3256 N Marks Ave
10490094	PG&E MGP, Fresno	Active	State Response	Block of N Thorne, W Voorman, Button, RR

EnviroStor ID	Project Name	Status	Project Type	Address
60002694	Planned Ventura – 10th School	Active	School Cleanup	SW Corner of E Ventura Ave and S 10th St
60002029	SA Recycling Fresno	Active	Voluntary Cleanup	3489 S Chestnut Ave
CAD066113465	Safety-Kleen	Undergoing Closure	Non-Operating	3561 S Maple Ave
CAD982446882	Safety-Kleen of California Inc – Fresno	Operating Permit	Operating	4139 N Valentine Ave
CAL000188148	San Joaquin Filter Recycling	Closed	Non-Operating	1922 E Belmont Ave
60002685	Schnitzer – Fresno	Active	Voluntary Cleanup	2727 S Chestnut Ave
CAD983661661	Sierra Medical Imaging	Closed	Non-Operating	4838 W Jacquelyn No 102
CAD982041980	Sourceone Healthcare Technologies	Closed	Non-Operating	223 Broadway St
60000706	South Fresno PCE Groundwater Plume	Active	State Response	2376 S Railroad Ave
10400005	South Fresno Regional Groundwater Plume	Active	State Response	N of Church Ave at S East Ave
CAD047384185	Univar USA Inc	Protective Filer	Non-Operating	1152 G St
10390001	Valley Foundry and Machine Works	Active	State Response	2510 S East Ave
60002472	West Shields Elementary School	Active	School Investigation	4108 Shields Ave

Source: Department of Toxic Substances Control- Envirostor Database 2019

3. GeoTracker is the Water Boards' data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater. GeoTracker contains records for sites that require cleanup, such as Leaking Underground Storage Tank (LUST) Sites, Department of Defense Sites, and Cleanup Program Sites. GeoTracker also contains records for various unregulated projects as well as permitted facilities including: Irrigated Lands, Oil and Gas production, operating Permitted USTs, and Land Disposal Sites (GeoTracker, 2019). Per the Geotracker database, the Project area contains 135 sites, in which the cleanup status is open.

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 4.9-2, are located in the Project area (Cortese List Data Resources, 2019).

Table 4.9-2
Waste Management Units

Discharger System No.	Waste Mgmt. Unit Name	Facility Name	Agency Name
5D100300001-01	Mckinley Ave. Yard	T.H. Agriculture and Nutrition	North American Phillips
5D100319001-01	Orange Avenue Disposal Company	Orange Avenue Landfill	Orange Avenue Disp Co. Inc

5. List of "active" Cease and Desist Orders (CDOs) and Cleanup and Abatement Orders (CAOs) from 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 (Cortese List Data Resources, 2019). As shown in Table 4.9-3 below, all four of the facilities in the Project area are active facilities. None of the sites are listed as hazardous waste; however, the waste type for the USA SS #96 facility is not listed.

Table 4.9-3
Cease and Desist Orders

Facility ID	Facility Name	Agency Name	Description	Address	Facility Waste Type	Status
246108	Orange Ave Landfill	Orange Avenue Disposal Company, Inc	Refuse Systems	3280 Orange Avenue	Nonhazardous Solid Wastes	Active
241258	Monson Facility	RBT Properties, LLC	Farm-Product Raw Materials, Nec	2533 West Mckinley Avenue, #92	Designated Washwater Waste	Active
273180	Malaga CWD WWTF	Malaga CWD	Sewerage Systems	3749 MAPLE	Nonhazardous Domestic Sewage/Industrial Waste	Active
269508	USA SS #96	USA Petroleum Corporation	Gasoline Service Stations	5698 Kings Canyon	N/A	Active

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 Section 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 (Cortese List Data Resources, 2019). The facilities listed in Table 4.9-4 below are within the Project area.

Table 4.9-4
Hazardous Waste and Substances Sites

Facility ID	Facility Name	Address	Program Type	Status
10390001	Valley Foundry and Machine Works	2510 S East Ave	State Response	Active
10280334	TH Agriculture & Nutrition LLC	7183 E McKinley Ave	Federal Superfund – Delisted	Certified/ Operation & Maintenance – Land Use Restrictions
10280013	FMC Corporation – Fresno	2501 S Sunland Ave	State Response	Active
10340137	Weir Floway Inc	2494 S Railroad Ave, PO Box 164	State Response	Active
10400004	Former Burlington Northern Santa Fe Ice House	3090 E Church Ave	State Response	Active
10400005	South Fresno Regional Groundwater Plume	North of Church Ave at S East Ave	State Response	Active
10490097	Fresno Sanitary Landfill	SW Corner of Jensen & West Ave	Federal Superfund – Listed	Active – Land Use Restrictions
10340074	Commercial Electroplaters	2940 S Elm Ave	State Response	Active
10450005	Fresno Air Terminal/ Old Hammer Field (J09CA0823)	McKinley and Clovis Ave	State Response	Active

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 Project 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 Project area includes 4,903 eligible sites, as summarized in Table 4.9-5 below.

Table 4.9-5
Project Eligible Sites

Commercial Cannabis Uses	Eligible Sites[1]	Businesses	Building Sq Ft
Cultivation, Distribution, and Manufacturing Within Cannabis Innovation Zone	154	8	700,000
Cultivation, Distribution, and Manufacturing Outside of Cannabis Innovation Zone	953	8	
Cannabis Retailers	5,420	21	55,000
Testing Laboratories	13,660	Unlimited	100,000
Totals	**20,817**	**N/A**	**855,000**

The Project eligible sites are located within existing commercial, mixed-use, and industrial zones and urbanized areas. The potential for hazardous materials incidents is heightened with cultivation, as accidental releases of pesticides, fertilizers, and other agricultural chemicals may be harmful to the public's health, safety, and the environment. In addition, the Project area contains major transportation routes, such as State Routes 99, 180, 41, and 168, that will be used to transport cultivation chemicals to the eligible sites.

Due to the City's urbanized setting and its location among several routes that regularly transport hazardous materials through and around the City, the proposed Project area already faces risks associated with the potential for hazardous materials emergencies. 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. Therefore, the Fresno City Fire Department Hazardous Materials Response Team (HMRT) has embraced an all-hazards approach to emergency response to ensure that the City receives a robust, competent level of service to all hazardous materials events.

The HMRT is comprised of approximately 50 personnel trained to the Hazardous Materials Technician and/or Specialist requirements set by the State of California. There are seven personnel on duty each day with a minimum staffing of five Technician/Specialist level trained members. The HMRT responds from a centrally located fire station within the City of Fresno. The station is staffed with a fire engine, fire truck and a Type One Hazardous Materials vehicle that is equipped to handle any type of hazardous materials release. In addition, the closest Engine or Truck 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.

1 Includes partial eligible sites.

The Department also houses an OES Type 2 hazardous materials vehicle for statewide deployment that is staffed with HMRT members.

Emergency Response

In addition to emergency response to hazardous materials incidents, both the City and County implement programs to facilitate emergency preparedness for other types of incidents within the Project 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-Hazard Mitigation Plan, which is a multi-jurisdictional plan that aims to reduce or eliminate long-term risk to people or property from natural disasters and their effects that is applicable to the City and areas outside of the City but within the Project area.

STANDARDIZED EMERGENCY MANAGEMENT SYSTEM

In addition to the City Emergency Operations Plan and the County Multi-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

The primary City of Fresno EOC is located at the city owned wastewater treatment facility located at 5607 W Jensen Ave, Fresno, CA 93706. 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

The three airports within the City of Fresno are described below.

FRESNO YOSEMITE INTERNATIONAL AIRPORT

Fresno Yosemite International Airport (FYI) occurs 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 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.

FRESNO CHANDLER EXECUTIVE AIRPORT

Fresno Chandler Executive Airport (FCH) occurs in the southwestern portion of the City at the intersection of Kearny Boulevard and 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. There are currently no plans to expand the airport.

SIERRA SKY PARK AIRPORT

Sierra Sky Park Airport occurs in the northern portion of the City adjacent to the San Joaquin River along 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. There are currently no plans to expand the facility.

Fire Hazards

The Project area is located within the Central Valley and is relatively flat. The majority of the Project area occurs as developed properties or agricultural lands. Similar uses surround the Project 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 Project 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 Project area and undeveloped areas, the primary fire hazard concern within the Project area consists of the potential for structure fires in developed areas.

4.9.3 - Regulatory Setting

Potential hazards and the use and transportation of hazardous substances are regulated by City, County, State, and federal plans, policies and regulations. In general, federal and State legislation enables regulation by local agencies; however, both State and federal agencies such as the Federal Aviation Administration (FAA) and Regional Water Quality Control Board (RWQCB) retain a substantial direct regulatory role. The City addresses these issues primarily in its Municipal Code and to a lesser extent in its General Plan. Hazardous materials are also regulated by the California Fire and Building Code, the California Department of Toxic Substances Control, the Fresno County Environmental Health Agency, the Occupational Safety and Health Administration (OSHA), the U.S. Department of Transportation, the Environmental Protection Agency, the City of Fresno Fire Department, and the San Joaquin Valley Air Pollution Control District (SJVAPCD). The following list of regulations may apply to all or certain cannabis related businesses.

Federal

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.

HAZARDOUS MATERIALS TRANSPORTATION ACT – SAFE TRANSPORT OF HAZARDOUS MATERIALS

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 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 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. As of 2001, an estimated 85 percent of USTs complied with the required standard.

State

CALIFORNIA HEALTH AND SAFETY CODE

The California Environmental Protection Agency has established rules governing the use of hazardous materials and the management of hazardous wastes. California Health and Safety Code Sections 25531, et seq., incorporate the requirement of Superfund Amendments and Reauthorization Act and the Clean Air Act as they pertain to hazardous materials. Health and Safety Code Section 25534 directs facility owners storing or handling acutely hazardous materials in reportable quantities to develop a Risk Management Plan (RMP). The RMP must be submitted to the appropriate local authorities, the designated local administering agency, and the EPA for review and approval.

SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT (SJVAPCD)

The San Joaquin Valley Air Pollution Control District (District) Rule 4002 requires compliance with the National Emission Standards for Hazardous Air Pollutants (NESHAP) regulation, 40 CFR, Part 61, Subpart M developed by the Unified States Environmental Protection Agency (EPA).

The SJVAPCD requires all renovations or demolitions of regulated facilities to conduct a thorough asbestos inspection of the facility. Regulated facilities (facilities subject to the NESHAP) include all commercial buildings, residential buildings with more than four dwelling units, other structures and non-portable equipment. A single-family dwelling or residential buildings with four or fewer units may be exempt, depending on its past use and future use of the property. (SJVAPCD Compliance Bulletin, 2015).

BUREAU OF CANNABIS CONTROL

The Bureau is housed within the Department of Consumer Affairs and licenses testing labs, distributors, dispensaries, retailers, and microbusinesses. CCR Title 16, Division 42, Chapter 1, Section 5054 provides requirements for these uses applicable to Destruction of Cannabis Goods Prior to Disposal.

CALCANNABIS CULTIVATION LICENSING (CALCANNABIS)

CalCannabis is housed within the Department of Food and Agriculture and licenses cannabis cultivators, nurseries, and procecessors. CCR Title 3, Division 8, Chapter 1, Section 8307 (Pesticide Use Requirements) includes a requirement that all licensees comply with all licensees comply with all pesticide laws and regulations enforced by the Department of Pesticide Regulation. CCR Title 3, Division 8, Chapter 1, Section 8308 (Cannabis Waste Management) includes requirements applicable to all licensees regarding the disposal of cannabis waste and hazardous waste and mandates compliance with applicable State laws.

MANUFACTURED CANNABIS SAFETY BRANCH (MCSB)

MCSB is housed within the Department of Public Health and licenses manufacturers of cannabis products, including those products meant to be consumed, inhaled, or used topically. Manufactured cannabis safety regulations, which include waste management and disposal requirements, are found at CCR Title 17, Division 1, Chapter 13, Section 40100 et seq. Waste management requirements are found at Section 40290. Among other requirements, licensees are required to have a written cannabis waste management plan and must dispose of all waste, including cannabis waste, in accordance with the Public Resources Code.

Local

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 – "…expense incurred by the taxpayers as a result of the City of Fresno or its Designee having to respond in an emergency to protect life, property and the environment when there has been a release of hazardous materials should be recovered from the person responsible for the emergency."

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 (HMBP) 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 HMBP.

The HMBP Program is administered throughout the County and its incorporated cities. The purpose of the HMBP Program is to protect public health, the environment and groundwater from risks or adverse effects associated with the improper storage and handling of hazardous materials. In addition, the program is designed to protect the community and its first responders from accidents and fatalities by providing the required information so that proper planning and training can occur to prevent a large-scale incident.

Approved commercial cannabis businesses must complete a HMBP for the safe storage and use of chemicals. In general, a HMBP must be submitted if the business handles and/or stores a hazardous material equal to or greater than these minimum reportable quantities:

- 55 gallons for liquids;
- 500 pounds for solids; and
- 200 cubic feet (at standard temperature and pressure) for compressed gases.

The general requirements require an electronic submittal of a HMBP on the California Environmental Reporting System (CERS) which includes:

- Facility Information (Business Activities & Business Owner/Operator Identification);
- Hazardous Materials Inventory (including Site Map/Plan);
- Emergency Response and Training Plans;
- Payment of annual HMBP fees to keep the permit active; and
- Complete annual submittal in CERS with employee training documentation. (Fresno Department of Enviromental Health, 2019).

AIRPORT LAND USE COMMISSION AIRPORT LAND USE PLANS

The specific safety regulations for the Fresno-Yosemite International Airport, Fresno Chandler Downtown Airport, and Sierra Sky Park Airport are identified in Impact 4.9-5, below.

FRESNO GENERAL PLAN

The General Plan policies applicable to hazards and hazardous materials are summarized below.

Objective NS-4. Minimize the risk of loss of life, injury, serious illness, and damage to property resulting from the use, transport, treatment, and disposal of hazardous materials and hazardous wastes.

Policy NS-4-a - Processing and Storage. Require safe processing and storage of hazardous materials, consistent with the California Building Code and the Uniform Fire Code, as adopted by the City.

Policy NS-4-b - Coordination. Maintain a close liaison with the Fresno County Environmental Health Department, Cal-EPA Division of Toxics, and the State Office of Emergency Services to assist in developing and maintaining hazardous material business plans, inventory statements, risk management prevention plans, and contingency/emergency response action plans.

Policy NS-4-c - Soil and Groundwater Contamination Reports. Require an investigation of potential soil or groundwater contamination whenever justified by past site uses. Require appropriate mitigation as a condition of project approval in the event soil or groundwater contamination is identified or could be encountered during site development.

Policy NS-4-d - Site Identification. Continue to aid federal, State, and County agencies in the identification and mapping of waste disposal sites (including abandoned waste sites), and to assist in the survey of the kinds, amounts, and locations of hazardous wastes.

Policy NS-4-e - Compliance with County Program. Require that the production, use, storage, disposal, and transport of hazardous materials conform to the standards and procedures established by the County Division of Environmental Health. Require compliance with the County's Hazardous Waste Generator Program, including the submittal and implementation of a Hazardous Materials Business Plan, when applicable.

Policy NS-4-f - Hazardous Materials Facilities. Require facilities that handle hazardous materials or hazardous wastes to be designed, constructed, and operated in accordance with applicable hazardous materials and waste management laws and regulations.

Policy NS-4-g - Hazmat Response. Include policies and procedures appropriate to hazardous materials in the City's disaster and emergency response preparedness and planning, coordinating with implementation of Fresno County's Hazardous Materials Incident Response Plan.

Policy NS-4-h - Household Collection. Continue to support and assist with Fresno County's special household hazardous waste collection activities, to reduce the amount of this material being improperly discarded.

Policy NS-4-i - Public Information. Continue to assist in providing information to the public on hazardous materials.

4.9.4 - IMPACTS AND MITIGATION MEASURES

Methodology

Consistent with ASTM Standard Practice for Environment Site Assessments, the existing hazardous materials sites analyzed for the Project area, are those within 1,000-feet of the Project boundary that have known environmental contamination; those that have underground storage tanks; or, those that store, use, or dispose of hazardous materials with reported incidents of spills or violations. These are sites with the potential to have resulted in environmental contamination on the Project area.

Thresholds of Significance

The following criteria, as established in Appendix G of the CEQA Guidelines, will be utilized to determine if a project could potentially have a significant impact:

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 one-quarter mile of an existing or proposed school;

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area;

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.

Project Impacts

Impact 4.9-1: Create a Significant Hazard to the Public or the Environment Through the Routine Transport, Use, or Disposal of Hazardous Materials

It is anticipated that implementation of the proposed Project could result in the exposure of persons to hazards and/or hazardous materials during construction as well as during the life of the Project. Thus, potential construction-related and long-term (i.e. operational) hazards impacts are discussed below.

POTENTIAL SHORT-TERM CONSTRUCTION IMPACTS

Project eligible sites will enable infill development and intensification of land uses within the Project area. Therefore, existing structures within the Project area may need to be demolished and new buildings may be constructed. Demolition of existing buildings in the Project area could expose persons working or living in the Project area to potentially hazardous materials including but not limited to asbestos and lead from lead-based paints.

Grading and excavation of sites for new development may expose construction workers and the public to known or potentially unknown hazardous substances present in the soil or groundwater. There are sites containing hazardous materials located throughout the City (see Table 4.9-1), which pose potential health hazards. However, new development on contaminated property that would occur as a result of Project implementation would be required to be remediated, prior to the commencement of construction activities. These activities would be under the supervision of the Department of Toxic Substances Control (DTSC), Fresno County Division of Environmental Health, and/or Regional Water Quality Control Board (RWQCB), depending on the site characteristics.

Project construction would involve routine transport, use, and disposal of hazardous materials such as solvents, paints, oils, and grease consistent with applicable federal, State, and local regulations. Small amounts of these materials would be onsite at any given time and are typical materials used in construction of projects. However, any hazardous waste that is generated during construction of the Project would be collected and transported away from the Project site in compliance with existing regulations. During construction, non-hazardous construction debris would be generated. This debris would be disposed of in local landfills. In addition, sanitary waste would be managed during construction through the use of portable toilets, which would be located at reasonably accessible onsite locations. The Project would be required to adhere to all OSHA and Cal/OSHA standards for the protection of workers during the construction period. Therefore, no significant hazard to the public or to the environment through the routine transport, use, or disposal of hazardous waste during construction of the Project would occur, and impacts would be less than significant.

POTENTIAL LONG-TERM OPERATIONAL IMPACTS

New development associated with the proposed Project may include new buildings and related site improvements, which may utilize hazardous materials, and expose business employees to future hazardous materials releases. Additionally, new development that involves routine transport, use, or disposal of hazardous materials will be required to conform to City of Fresno ordinances and regulations regarding the transport, use and disposal of hazardous materials. Section 15-2514 (Fire and Explosive Hazards) of the Fresno Municipal Code, requires all businesses that involve the use, handling, storage and transportation of hazardous and extremely hazardous materials to comply with all California Hazardous Materials Regulations, the California Fire and Building Code, the California Department of Toxic Substances Control, the Fresno County Environmental Health Agency, the Occupational Safety and Health Administration (OSHA), the U.S. Department of Transportation, and the Environmental Protection Agency.

New businesses that handle a hazardous material, or a mixture containing a hazardous material, in quantities equal or greater than 500 pounds of a solid, 55 gallons of a liquid, 200 cubic feet of a compressed gas at a standard room temperature and pressure, the federal threshold planning quantity (TPQ) for extremely hazardous substances, and 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 Regulation (CFR) will be required to conform to the City of Fresno approved Hazardous Materials Business Plan (HMBP). The HMBP includes business owner/operator identification form, business activities form, hazardous materials inventory, site map and building diagram(s), written emergency response plans, and written employee training programs.

As noted in the Regulatory Section, above, there are three State licensing agencies with regulations regarding cannabis waste. These agencies include: Bureau of Cannabis Control, CalCannabis Cultivation Licensing, and Manufactured Cannabis Safety Branch.

Cannabis businesses licensed by the Bureau of Cannabis Control (labs, distributors, dispensaries, retailers, and microbusinesses) must comply with the regulations pertaining to the destruction of cannabis goods prior to disposal found at CCR Title 16, Division 42, Chapter 1, Section 5054. These requirements include at a minimum, removing or separating the cannabis goods from any packaging or container and rendering it unrecognizable and unusable. (Section 5054(d).)

Cannabis cultivation, similar to other agricultural crops, would require the use of pesticides and fertilizers. Potting soil, amendments, and fertilizers contain nutrients, particularly nitrogen and phosphorous, which when excess water is applied and untreated runoff occurs, these nutrients could contribute to toxic algae blooms, and deplete the dissolved oxygen that fish and other aquatic species need to survive. In addition, pesticides can lead to many unintended effects, and often are easily mobilized by storm water runoff. There are no pesticides registered specifically for use on cannabis, and the use of pesticides on cannabis plants has not been reviewed for safety, human health effects, or environmental impacts. Under California law, the only pesticide products not illegal to use on cannabis are those that contain an active ingredient that is exempt from residue tolerance requirements and either registered and labeled for a broad enough use

to include use on cannabis or exempt from registration requirements as a minimum risk pesticide under FIFRA Section 25(b) and the California Code of Regulations, Title 3, Section 6147. There are many effective practices for controlling pests and enhancing soil and plant growth that do not require chemical fertilizers or pesticides. Overuse or improper use and storage of potting soil, amendments, fertilizers, pesticides, poisons and petroleum products could result in a significant hazard to the public. Mitigation measures would be implemented in order to reduce risks associated with the use or disposal of hazardous materials.

A cannabis cultivator is required to dispose of cannabis waste in one of the following methods:

1. On-premises composting of cannabis waste;

2. Collection and processing of cannabis waste by a local agency, a waste hauler franchised or contracted by a local agency, or a private waste hauler permitted by a local agency;

3. Self-haul cannabis waste to one or more of the following:

    a. A manned, fully permitted solid waste landfill or transformation facility;

    b. A manned, fully permitted composting facility or manned composting operation;

    c. A manned, fully permitted in-vessel digestion facility or manned in-vessel digestion operation;

    d. A manned, fully permitted transfer/processing facility or manned transfer/processing operation; or

    e. A manned, fully permitted chip and grind operation or facility.

    f. A recycling center as defined in Title 14, Section 17402.5(d) of the California Code of Regulations and that meets the following:

        i. The cannabis waste received shall contain at least ninety (90) percent inorganic material;

        ii. The inorganic portion of the cannabis waste is recycled into new, reused, or reconstituted products which meet the quality standards necessary to be used in the marketplace; and

        iii. The organic portion of the cannabis waste shall be sent to a facility or operation identified in subsection (c)(1) through (5).

4. Reintroduction of cannabis waste back into agricultural operation through on premises organic waste recycling methods, including but not limited to tilling directly into agricultural land and no-till farming.

A cannabis cultivator must also secure waste in a waste receptacle or in a secured area on the licensed premises. Physical access to this area must be restricted to the licensee, employees of the licensee, and the local agency or company providing hauling services, if applicable. Public access to this area shall be strictly prohibited.

Cannabis waste is considered a type of organic waste and is not considered hazardous. However, cannabis waste may contain hazardous materials. The byproducts of cannabis manufacturing, including processing, extraction and quality assurance testing, can be subject to hazardous waste requirements. It is the generator's responsibility in California to determine if its waste is considered hazardous and follow all hazardous waste management requirements as applicable, including MCSB waste disposal requirements. Manufacturers licensed by the MCSB must follow the waste management requirements found at CCR Title 17, Division 1, Chapter 13, Section 40290, including the development of a written cannabis waste management plan and disposal of all waste, including cannabis waste, in accordance with the Public Resources Code. Local CUPAs generally enforce generator requirements and other hazardous materials management provisions. The CUPA for the City is the Fresno County Environmental Health Department. The area of most concern in the processing of cannabis would typically be the extraction and concentration of THC and other cannabinoids from cannabis plant leaves and buds to produce highly concentrated oils, honeys, and waxes. This is achieved through a variety of extraction processes and solvents. Cannabis processing for concentrates such as oils, honeys, and waxes uses a variety of extraction processes and solvents, such as butane (C4H10), carbon dioxide (CO_2), or alcohol distillation. Cannabis or infused products found to have residues of banned chemicals be destroyed, as they pose a threat to public health. In California, the legislature passed Assembly Bill (AB) 2679 on September 29, 2016, which amends Section 11362.775 of the Health and Safety Code and establishes rules for the manufacture of oils, waxes, and other concentrates. These manufacturing systems may be solvent-less, or may use non-flammable, non-toxic solvents.

Mitigation Measure MM 4.9-1 would require the approval of a HMBP, prior to approval of a conditional use permit. Implementation of Mitigation Measure MM 4.9-2 would require cannabis processing businesses to meet specific requirements regarding extraction processes, product management and equipment standards. Mitigation Measure MM 4.9-3 requires that employees be properly trained to safely handle volatile solutions and other materials used during cannabis processing procedures. Implementation of MM 4.9-1 through MM 4.9-3 would reduce the risk of creating a significant hazard to the public through the transport, use, or disposal of hazardous materials to less-than-significant levels.

Mitigation Measures

MM 4.9-1: As part of the Conditional Use Permit Application, all commercial cannabis related businesses which may utilize hazardous materials, shall include a Hazardous Materials Business Plan (HMBP) and a Waste Management Plan (WMP), approved by the Fresno County Environmental Health Department. The HMBP shall include, at a minimum, floor plans of the facility and business conducted at the site; an inventory of hazardous materials that are handled or stored onsite; and an Emergency Response and Training Plan. The WMP shall include a list of

all byproducts associated with cannabis manufacturing, and a plan for proper disposal, at an approved facility.

MM 4.9-2: For cannabis processing operations with systems that use solvents that are potentially flammable or toxic, the project applicant shall provide written verification to the Fresno County Environmental Health Department and the City of Fresno Planning and Development Department that the cannabis operations meet the following requirements:

1. Use a closed-loop system that will prevent off-gassing;

2. Use solvents that are recognized as safe pursuant to the Federal Food, Drug and Cosmetic Act;

3. Have a licensed engineer certify that the system was commercially manufactured, is safe for its intended use, and was built to codes of recognized and generally accepted good engineering practices, including, but not limited to, the American Society of Mechanical Engineers, the American National Standards Institute, Underwriters Laboratories, the American Society for Testing and Materials, or Occupational Safety and Health Administration Nationally Recognized Testing Laboratories;

4. Have a certification document that includes the unit's serial number and is signed by a professional engineer;

5. Receive and maintain approval from local fire officials for the closed-loop system, other equipment, the extraction operation and the facility; and

6. Adhere to federal, State and local fire protection standards.

MM 4.9-3: Volatile Manufacturing Employee Training Plan. Cannabis activities dealing in volatile manufacturing shall develop a Volatile Manufacturing Employee Training Plan (Training Plan) and submit to the City as part of the permitting and licensing process. Volatile manufacturing means to compound, blend, extract, infuse, or otherwise make or prepare a cannabis product with the use of volatile solvents or substances including but not limited to, butane and ethanol. The Training Plan shall detail how the licensed volatile manufacturing operators will train their employees on the proper use of equipment and on the proper hazard response protocols in the event of equipment failure, per established OSHA standards. The Training Plan shall include a log, identifying trained employees and the date upon which training was completed.

Level of Significance

Impacts would be *less than significant with mitigation.*

Impact 4.9-2: Create a Significant Hazard to the Public or the Environment Through reasonably Foreseeable Upset and Accident Conditions Involving the Release of Hazardous Materials into the Environment

The City of Fresno Fire Department recognizes the potential for a chemical release to occur within a cannabis cultivation or manufacturing facility, which could expose people to hazardous/toxic vapors. Therefore, the City of Fresno Fire Department Hazardous Materials Response Team has embraced an all-hazards approach to emergency response to ensure that the community receives a robust, competent level of service to all hazardous materials events. Implementation of the proposed Project could result in significant impacts with regard to the creation of a hazard to the public or environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. However, all cannabis license applications and proposed sites will be reviewed and approved by the City of Fresno Fire Department, prior to issuance.

During construction, any activity which results in the accidental release of hazardous or potentially hazardous materials could result in a hazard to the public or the environment. Materials that could contribute to this impact include, but are not limited to, the following: lead-based paint flakes, diesel fuel, gasoline, lubricating fluids, solvents, hydraulic fluid, antifreeze, transmission fluid, cement slurry, and other fluids utilized by construction and maintenance vehicles and equipment; however, the potential consequences of any spill or release of these types of materials are generally small due to the localized, short-term nature of such releases. Furthermore, as noted in Impact 4.7-5 *Geology and Soils*, implementation of a Stormwater Pollution Prevention Plan (SWPPP) and site-specific BMPs for erosion and sediment control would identify measures regarding the protocols for actions taken if a spill or release does occur. Therefore, with implementation of Mitigation Measures MM 4.9-2 through MM 4.9-3 impacts associated with these types of pollutants would be considered less than significant.

Hazardous materials from historic land uses (legacy hazards) could be encountered. Existing site structures may include asbestos-containing materials (ACMs). There is the potential for ACMs to exist in onsite structures. Improvements to existing structures could result in the demolition or remodeling of structures containing ACM. Mitigation Measure MM 4.9-4 requires that any structure to be demolished or extensively remodeled as part of a future cannabis facility be tested for ACMs prior to demolition or remodeling. If ACMs are detected, then a certified asbestos abatement specialist would be required to handle and dispose of the material prior to project construction. In addition, Mitigation Measure MM 4.9-4 would require the coordination with the San Joaquin Valley Air Pollution Control District (SJVAPCD) to determine if additional requirements are necessary. Implementation of Mitigation Measure MM 4.9-4 would reduce the potential ACM-related impacts to less than significant.

As discussed in Impact 4.9-1 above, cannabis-related activities could result in the use of hazardous materials. Future cannabis cultivation activities, similar to other agricultural crops, would require the use of pesticides and fertilizers. Future cannabis processing activities would use a variety of extraction processes and solvents, some of which are considered hazardous. Mitigation Measure MM 4.9-1 would require that a future cannabis related business provide a Hazardous Materials Business Plan if the facility would be using hazardous material. This would provide information regarding the hazardous materials stored and used onsite, and provide actions required if hazardous materials are accidentally released into the environment.

Mitigation Measures MM 4.9-2, MM 4.9-3, and MM 4.9-4 requires specific safety procedures, adherence with federal, State and local fire protection regulations and employee training in the appropriate handling and use of volatile materials. Implementation of these measures would reduce impacts to less-than-significant levels.

Assembly Bill (AB) 2679 amended Section 11362.775 of the California Health and Safety Code and established rules for the manufacturing of oils, waxes and other concentrates produced by a collective or cooperative producing medical cannabis products. AB 2679 provides guidelines on the manufacturing systems and solvents that are allowable for commercial cannabis. Like other businesses that use hazardous materials, and in accordance with the California Health and Safety Code and Fresno County regulations, business owners would be required to prepare a HMBP and submit it to the Fresno County Department of Public Health for review and approval. Implementation of HMBPs not only helps to reduce the frequency of emergency calls to the Fresno Fire Department, it allows the Fire Department to be prepared to respond to all types of emergencies that could occur at such facilities.

If a future indoor cannabis cultivator promotes plant growth by elevating levels of carbon dioxide (CO_2), the process of elevation CO_2 levels for plant growth can produce elevated levels of ultrafine particles and carbon monoxide (CO); which can be hazardous to workers within the indoor facility.

Appropriate heating, ventilation, and air conditioning (HVAC) systems would be required. The future cannabis related facility would be required to adhere to development standards as outlined in this EIR, as well as all other federal, State, and local requirements regarding HVAC systems.

There is a potential that hazardous materials used at a future cannabis-related facility would be released into nearby drainages or other surface waters; however, Mitigation Measure MM 4.10-1 would reduce the potential for any spilled materials to enter nearby watercourses.

As stated in Impact 4.6-1 *Energy*, indoor cannabis cultivation requires high energy demands. Impacts associated with increased fire risk, and release of hazardous materials could occur. Building permits associated with proposed facilities will be required to submit engineered calculations for energy capacity and load requirements. Permits will be verified through the Fresno plan check process and will be reviewed by the Fresno Fire Department. Mitigation Measure MM 4.9-5 would require a Fire Hazard Plan (FHP) be submitted and approved by the Fresno Fire Department prior to operation of any cannabis cultivation, manufacturing, or distribution facility.

Therefore, impacts related to upset and accident conditions involving hazardous materials would be less than significant.

Mitigation Measures

MM 4.9-4: In the event of planned renovation or demolition of any structures on the proposed site, prior to the issuance of demolition permits, asbestos and lead based paint (LBP) surveys shall be conducted in order to determine the presence or absence of asbestos-containing materials (ACM) and/or LBP. Removal of friable ACM, and non-friable ACMs that have the potential to become friable, during demolition and/or renovation shall conform to the standards set forth by the National Emissions Standards for Hazardous Air Pollutants (NESHAPs).

The San Joaquin Valley Air Pollution Control District (SJVAPCD) is the responsible agency on the local level to enforce the National Emission Standards for Hazardous Air Pollutants (NESHAPs) and shall be notified by the property owners and/or developers of properties (or their designee(s)) prior to any demolition and/or renovation activities. If asbestos-containing materials are left in place, an Operations and Maintenance Program (O&M Program) shall be developed for the management of asbestos containing materials.

MM 4.9-5: All cannabis license applications which may utilize hazardous materials, shall include a Fire Hazard Plan (FHP), approved by the Fresno Fire Department. The FHP shall include, at a minimum, floor plans of the facility and business conducted at the site; an inventory of hazardous materials that are handled or stored onsite; and an Emergency Response and Training Plan.

Level of Significance

Impacts would *be less than significant with mitigation.*

Impact 4.9-3: Emit Hazardous Emissions or Handle Hazardous or Acutely Hazardous Materials, Substances, or Waste Within One-quarter Mile of an Existing or Proposed School

Cannabis retail businesses and testing laboratories are not expected to contain concentrations of hazardous materials that would be emit emissions in excess of federal, State or local standards within one-quarter mile of an existing or proposed school.

Based on the minimum setback requirements proposed for cultivation, manufacturing, and distribution (1,000 ft) and no proposed setbacks in the Cannabis Innovation Zone, it is anticipated that potential development could occur within one-quarter mile of an existing or proposed school. However, all generation, transport, and treatment of hazardous materials are required to comply with applicable federal, State and local requirements, in addition to proposed Mitigation Measure MM 4.9-1 through MM 4.9-5, above. With adherence to these regulations and mitigation measures, the proposed Project would not emit hazardous emissions or handle hazardous materials within one-quarter mile of a school without proper permits and handling procedures.

As stated in Impacts 4.9-1 and 4.9-2, above, impacts related to hazardous materials from cultivation, manufacturing, and distribution could emit hazardous emissions in the event of an accident. However, these impacts are considered less than significant with proposed mitigation

through the requirement to obtain approval of a HMBP from the Fresno County Environmental Health Department and an FHP from the Fresno Fire Department. Therefore, impacts in this regard are anticipated to be less than significant with implementation of Mitigation Measures MM 4.9-1 through MM 4.9-5.

Mitigation Measures

Implementation of Mitigation Measure MM 4.9-1 through MM 4.9-5.

Level of Significance

Impacts would be *less than significant with mitigation.*

Impact 4.9-4: Be Located on a Site Which is Included on a List of Hazardous Materials Sites Compiled Pursuant to Government Code Section 65962.5 and, as a Result, would it Create a Significant Hazard to the Public or the Environment

Contaminated sites are mainly associated with leaking underground storage tanks and are predominately clustered south of Downtown, Fresno Yosemite International Airport, Palm Bluffs Corporate Center (northwest Fresno) and along the Union Pacific Railroad tracks. These sites may include Superfund, Environmental Protection Agency, Storage and Disposal Facilities, Toxic Release Inventory System, National Discharge Elimination System Majors, Large Quantity Generators, Major Discharge of Air Pollutants, Corrective Actions, Risk Management Plan, Section Seven Tracking System (pesticides) and Brownfield Properties, as defined by the Environmental Protection Agency.

Cortese list data resources were searched to determine the extent of sites within the City of Fresno Project area, which are included on a list of hazardous materials sites complied pursuant to Government Code Section 65962.5. The provisions in Government Code Section 65962.5 are commonly referred to as the "Cortese List." Information on the California Environmental Protection Agency's website includes five data resources that provide information regarding the facilities or sites identified as meeting the "Cortese List" requirements (Cortese List Data Resources, 2019).

- List of Hazardous Waste and Substances sites from Department of Toxic Substances Control (DTSC) EnviroStor database
- List of Open Active Leaking Underground Storage Tank Sites from the State Water Board's GeoTracker database
- List of solid waste disposal sites identified by Water Board with waste constituents above hazardous waste levels outside the waste management unit
- List of "active" CDO and CAO from Water Board

- List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC.

Each of the above sources was reviewed for the City of Fresno to ascertain the extent of hazardous waste in the City with regard to the Cortese List Data Resources provided on the California Environmental Protection Agency's website.

It is anticipated that new development in accordance with the Proposed Regulation and Permitting of Commercial Cannabis Activities (Project) could be located on an eligible site, which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. However, before a development could be permitted, the site would be required to be remediated and mitigated for onsite hazardous materials to a level that would permit the development. Thus, impacts in this regard are anticipated to be less than significant.

To reduce potential impacts from development on a site, which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, Mitigation Measure MM 4.9-6 has been included. Any application for a cannabis license shall verify whether the proposed site is located on the Cortese List. If the proposed business is located on a parcel that is on the list, site remediation shall occur, consistent with State regulations, prior to occupancy of the site.

Mitigation Measures

MM 4.9-6: All cannabis license applications submitted to the City of Fresno shall include proof that the proposed site is not located on the Cortese List, pursuant to Government Code Section 65962.5. Any site found to be located on the list shall be remediated consistent to California State regulations, and written documentation shall be submitted to the City of Fresno, prior to final occupancy of the site. If the property is listed the applicant shall submit a Phase I ASTM report that determines the current state of the hazardous materials, and any management restrictions on the use of the site. The report and any recommendations shall be reviewed by Fresno County Environmental Health Department and the City of Fresno to determine if a Phase II ASTM is warranted.

Appropriate subsurface testing and recommended remediation, with regulatory agency oversight, shall be undertaken if considered warranted by Fresno County Environmental Health Department and the City of Fresno. Potential remediation options could include excavation and offsite disposal of contaminated soil, in-place treatment, and/or the installation of protective barriers.

Level of Significance

Impacts would be *less than significant with mitigation*.

Impact 4.9-5: For a Project Located Within an Airport Land Use Plan or, Where Such a Plan Has Not Been Adopted, Within Two Miles of a Public Airport or Public Use Airport, Would the Project Result in a Safety Hazard or Excessive Noise for People Residing or Working in the Project Area

The Safety Element of the Fresno General Plan, states that there are two public airports in the City of Fresno – (1) Fresno-Yosemite International Airport, and (2) Fresno Chandler Downtown Airport. The General Plan also states that in conjunction with the Fresno- Yosemite International Airport, the Air National Guard maintains an airbase for military flight and training operations. Per the Noise Element of the City's General Plan, the Air National Guard is stationed at the Fresno Yosemite International Airport. Implementation of the Proposed Project would include eligible sites that may expose those working at the eligible sites to potential safety hazards associated with airport operations. As detailed in the Safety Element of the current Fresno General Plan, each airport has its own specific plan and airport land use plan designed to provide for public safety. Information about each airport's land use plan is provided below.

1. **Fresno-Yosemite International Airport:** The Fresno-Yosemite International Airport (FYI) Compatibility Land Use Plan states that the FYI airport was formerly known as the Fresno Air Terminal (FAT). The FYI Airport is the largest and busiest commercial service airport in California's Central Valley and is owned and operated by the City of Fresno. FYI is a joint use civilian and military facility used by commercial air carriers, air cargo operators, charter operators, the State of California, general aviation, and the United States military. The California National Guard uses a 58-acre portion of the southeastern part of the Airport. The Army National Guard, the California Division of Forestry, corporate aviation businesses, and two fixed base operators also lease facilities from the Airport (FYI ALUC Plan 2018).

   The intent of land use safety compatibility is to minimize the risks associated with an off-airport aircraft accident or emergency landing. Risks to both people and property on the ground in the vicinity of the airport and to people on board aircraft are considered. The safety zone boundaries are based upon general aviation aircraft accident location data contained in the California Airport Land Use Planning Handbook ("Caltrans Handbook") along with data regarding the runway configuration and aircraft operation procedures at FYI.

Based on a review of the FYI Airport zones as shown in Figure 4.9-1, there are 89 Project eligible sites located within the Fresno Yosemite Airport Safety zones.

2. **Fresno Chandler Executive Airport (FCH):** The land use policy plan for this airport sets forth the criteria which the Airport Land Use Commission (ALUC) will use in evaluating land use actions, such as general plan or specific plan amendments, revisions to ordinances or regulations, airport plans, and individual development projects. The ALUC includes criteria specific to infill development and the expansion or reconstruction of existing buildings.

> Cities and counties bear responsibility for the orderly development of areas surrounding the airports within their respective jurisdiction. To achieve this goal, each jurisdiction is charged with making sure all applicable planning documents and building codes are consistent with the ALUCP or go through the overrule process as outlined in Government Code, Section 65302.3. Local jurisdictions that include territory within the AIA boundary are also obligated to bring local plans into consistency with the ALUCP and submit land use actions to the ALUC for a determination of consistency under Public Utility Code (PUC) Section 21676.

Based on a review of the FCH Airport zones as shown in Figure 4.9-1, there are 136 Project eligible sites located within the Fresno Chandler Executive Airport safety zones.

All cannabis license applications will be reviewed for compatibility with the ALUCP by the City of Fresno. All conditions and requirements of the ALUCP will be met prior to issuance of an application. Therefore, impacts associated with safety hazards or excessive noise related to airport proximity will be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be *less than significant.*

Impact 4.9-6: Impair Implementation of or Physically Interfere with an Adopted Emergency Response Plan or Emergency Evacuation Plan

The City's Police and Fire Departments are tasked with all local emergency response efforts. Both departments have received specialized training to deal with terrorist threats and activities. In addition, 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.

In the event of any emergency, the public will be notified via local TV and radio stations and other means (including personal contact, if necessary). Information will be provided as quickly as possible as to the nature of the emergency and any actions the public may need to take.

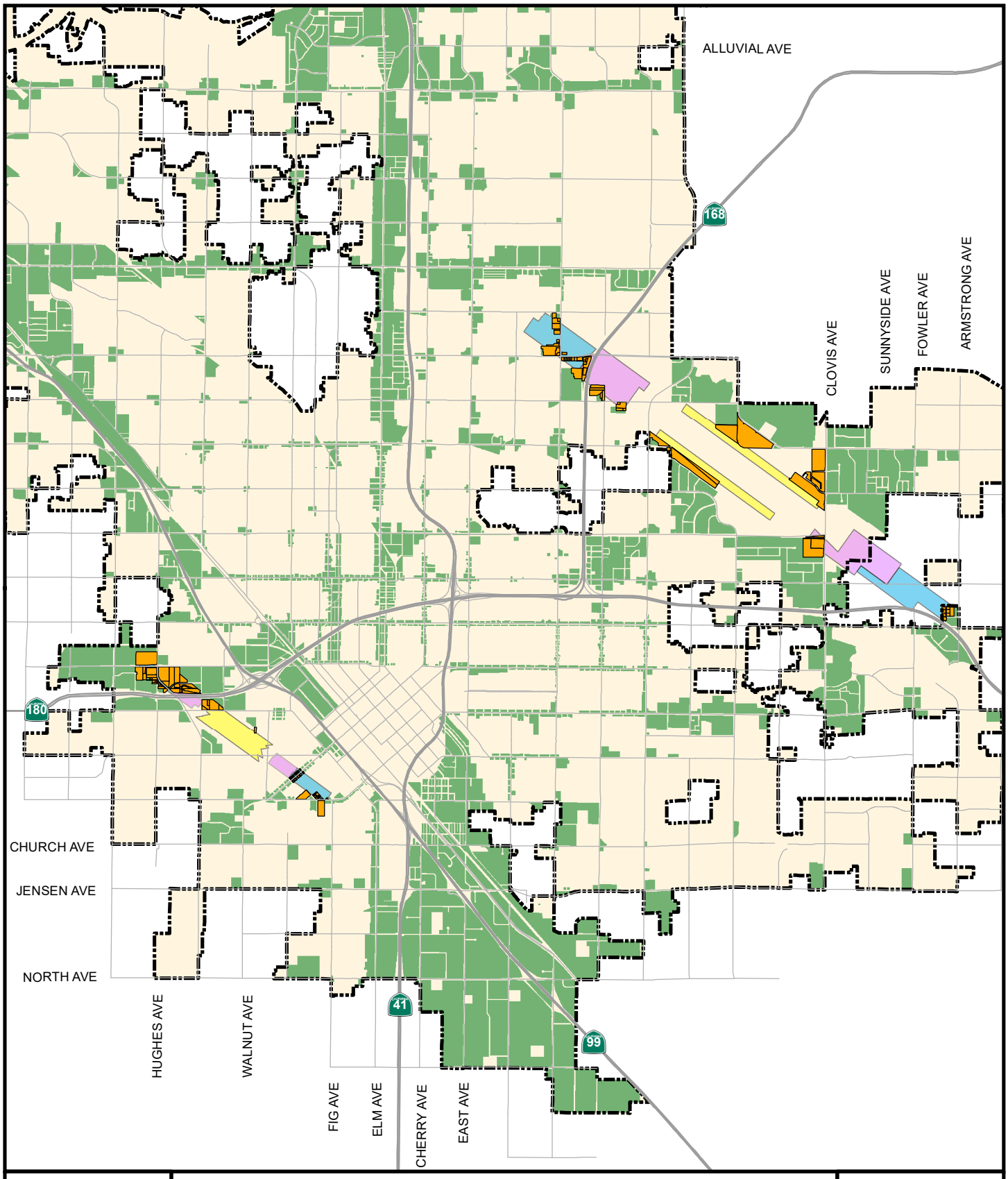


Figure 4.9-1

Airport Safety Zones

- Inner Airport Safety
- Outer Airport Safety
- Side Airport Safety
- Eligible Cannabis Business Locations in Airport Safety Zone
- Eligible Cannabis Business Location
- City Limits

N

0 1.5 Miles

QK Sources: ESRI

The proposed Project would allow for cannabis cultivation, manufacturing, distribution, retail sales and laboratory testing. These types of uses are similar in nature to other light industrial, agricultural, and retail uses allowed within the City. It is not anticipated that new or different impairments would occur that may physically interfere with an adopted emergency response plan or emergency evacuation plan. All new applications submitted to the City will be reviewed incompliance with federal, State and local regulations related to emergency access. Therefore, impacts to the proposed Project would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be *less than significant.*

Impact 4.9-7: Expose People or Structures, Either Directly or Indirectly, to a Significant Risk of Loss, Injury or Death Involving Wildland Fires

As detailed in the 2011 City of Fresno Map Atlas Existing Conditions Report, although the City of Fresno is within the "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 prone to wildfires due to relatively steep terrain/vegetation, and these areas are classified as "high" fire hazard areas.

State Responsibility Areas (SRA) are recognized by the Board of Forestry and Fire Protection as areas where CAL FIRE is the primary emergency response agency responsible for fire suppression and prevention. According to available data, the Project area is not in a designated State Responsibility Area (SRA) or Fire Hazard Severity Zone (FHSZ). The Project area is entirely located in a Local Responsibility Area (LRA) and has been designated as Non-Wildland (CAL FIRE).The operation of the Project would pose minimal wildfire risk during construction or business operations in the Project area. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be *less than significant*.

Cumulative Setting Impacts and Mitigation Measures

CUMULATIVE SETTING

The study area for the analysis of cumulative impacts is the City of Fresno and the unincorporated portions of Fresno County located adjacent to the city limits, as well as portions of the City of Clovis and the County of Madera adjacent to the City of Fresno. The applicable cumulative projections include growth projections from the City of Fresno General Plan, Fresno County General Plan, Madera County General Plan, and the City of Clovis General Plan.

The City of Fresno General Plan was last adopted in the year 2014. Anticipated development within the General Plan includes 186,840 dwelling units, 66.4 million square feet (msf) of commercial/office/public facility, 100,000 sf of mixed uses, and 72.8 msf of industrial uses. The General Plan contains approximately 11,714 acres of agricultural land, 12,288 acres of open space, and 12,522 acres of vacant land. Existing agricultural land is primarily located in the southeastern and western portions of the General Plan.

The General Plan contains two major rail lines that generally traverse in a southeast to northwest direction. These railways include the Union Pacific Railroad line that is generally located along SR-99, and the BNSF Railway that diverges from the SR-99 in the southwest and travels through the Downtown to the northwest. There are three airports located within the City of Fresno including the Fresno-Yosemite International Airport located in the eastern portion of the Planning Area, the Fresno-Chandler Downtown Airport located west of Downtown, and Sierra Sky Park Airport that is located on the northern portion of the General Plan.

The County of Fresno General Plan was last adopted in the year 2000. The County General Plan was prepared to accommodate population growth through the year 2020, consistent with the California Department of Finance projection of 1.1 million by 2020. This represents an additional population of approximately 344,000, which includes the year 2020 projections outside the sphere of influences for cities within the East Valley area, which is located east of Interstate 5. Additional development projects are proposed northeast of the City of Fresno Project area including Friant Ranch that represents an additional population of approximately 164,693 through the year 2020.

The County of Madera General Plan was last adopted in the year 1995. The Madera County General Plan identifies population and employment growth projections through the year 2010 and includes 177,071 people and 61,866 employees. Since the adoption of Madera County's General Plan, substantial new development projects have been proposed in the southern portion of Madera County, some of which is proposed within close proximity of the City of Fresno Project area including Gateway, Gunner Ranch, Liberty Groves, North Fork Village, Tesoro Viejo, and River Ranch Estates. These projects include approximately 23,000 units, and supporting uses such as commercial, public facilities, parks, and open space.

The City of Clovis General Plan was last adopted in the year 2014. The Clovis General Plan forecasts the ultimate buildout of the entire Clovis General Plan area that is expected to occur

for at least 70 years. The Clovis General Plan forecasts an additional 65,100 residential units, 179,300 population, and 38,250,000 square feet of buildings.

CUMULATIVE IMPACTS

A small percentage of the Project eligible sites are vacant infill lots that can support new development, all of which are located in existing commercial, mixed-use and industrial zones and in urbanized areas. The majority of the Project eligible sites are fully serviced industrial and commercial lots that have been improved with industrial and commercial uses and buildings. Therefore, implementation of the proposed Project may include development of new buildings and sites, and changes to occupancies of existing buildings and sites, which could result in impacts relating to hazards and hazardous materials.

The implementation of cumulative development that is located outside of the Project area, such as development that would occur within the City of Clovis, the County of Fresno, and the County of Madera, would not result in the potential for cumulative impacts relating to the transport or accidental release of hazardous materials because there are several existing routes that regularly transport hazardous materials throughout the Project area, and several agencies that regulate the proper use of hazardous materials, including the HMRT, OES, and EOC. And all of the new commercial cannabis facilities will be required to operate under an approved hazardous materials business plan.

The implementation of incremental development would not result in the potential for cumulative impacts relating to an airport land use plan, emergency response plan, or wildland fires because, the small percentage of the Project eligible sites that are vacant infill lots and can support new development, are all located in existing commercial and industrial zones and in urbanized areas. The majority of the Project eligible sites are fully serviced industrial and commercial lots that have been improved with industrial and commercial uses and buildings. All of the Project eligible sites were previously assessed in the applicable airport land use plan, and emergency response plan.

With regard to the creation of a hazard through the routine transport, use, or disposal of hazardous materials (Impact 4.9-1), a potentially significant impact could result during construction or operation of the proposed project; however, compliance with the existing HMBP and federal, State, and local regulations and implementation of Mitigation Measures MM 4.9-1 and MM 4.9-2 would ensure that cumulative impacts would be less than significant. Therefore, this impact does not have the potential to combine with contamination from spills from other projects to result in a cumulative impact, due to the site-specific nature of soil contamination and the mitigation measures that would ensure proper cleanup and disposal of any contaminated soil.

The processing of cannabis would typically be the extraction and concentration of THC and other cannabinoids from cannabis plant leaves and buds through a variety of extraction processes and solvents. Although proposed facilities could be located near existing or proposed industrial

activities, compliance with the federal, State, and local regulations and implementation of Mitigation Measures MM 4.9-4 and MM 4.9-5 would ensure that cumulative impacts due to an accidental release of hazardous chemicals would be less than significant.

As for cumulative impacts to airports, all new development within the jurisdiction of an applicable plan will require review and approval by the applicable ALUC agency.

Mitigation Measures

Implement Mitigation Measures MM 4.9-1 through MM 4.9-5, and MM 4.10-1.

Cumulative Level of Significance

Cumulative impacts would be *less than significant with mitigation.*

4.10 - Hydrology and Water Quality

4.10.1 - INTRODUCTION

This section addresses hydrology and water quality impacts that are associated with the Project. The following discussion addresses existing environmental conditions in the affected environment, evaluates the proposed Project's consistency with applicable goals and policies, identifies and analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from proposed Project implementation.

A description of the environmental setting (affected environment) for hydrology and water quality is presented below in Section 4.10.2, *Environmental Setting*, including discussion of water supply and service providers. The regulatory setting applicable to the Project is presented in Section 4.10.3, *Regulatory Setting*, while the Project impacts and associated mitigation measures are analyzed in Section 4.10.4, *Impacts and Mitigation Measures*.

4.10.2 - ENVIRONMENTAL SETTING

The Project is applicable to the entire City of Fresno. The Project sites will occupy both existing urban facilities and vacant areas within the City. The City is located within the Tulare Lake Hydrologic Region, the San Joaquin Valley Groundwater Basin, and the Kings Subbasin thereof (see Figure 4.10-1).

The City of Fresno provides water service to a variety of customer types within the city limits. It has about 133,000 service connections, and as of 2018, provides approximately 120,067-acre feet (af) of potable water annually (36 percent surface water and 64 percent groundwater). The City currently relies on a combination of surface water and groundwater supplies to meet water demands of the citizens and businesses. The City's overall reliance on groundwater as a principal source of water has decreased over the years and is now supplemented with treated surface water.

Hydrologic Area Climate

The City of Fresno's service area is located in California's San Joaquin Valley in Fresno County along Highway 99. The climate of the area is best described as Mediterranean, characterized by hot dry summers and cool winters. Precipitation in the area averages around 11 inches per year, as shown in Table 4.10-1, which also shows the average monthly temperature and rainfall. Average evapotranspiration (ETo) is based on data taken from a monitoring station located at California State University Fresno, while precipitation and temperature data are taken from a station at the Fresno Yosemite International Airport.


Project Location - Groundwater
Project Location
San Joaquin Valley Groundwater Basin
Tulare Lake Hydrologic Region
Kings Groundwater Subbasin
N
0
50
Miles
QK Sources:
ESRI Sources: Esri, HERE,

Figure 4.10-1

Table 4.10-1
Climate Characteristics

Month	Standard Monthly Average ETo (inches)(a)	Monthly Average Rainfall (inches)(b)	Monthly Average Temperature (°F)(b)	
			Min.	Max
January	1.14	2.09	37.6	54.6
February	1.92	1.90	40.7	61.5
March	3.68	1.89	43.8	67.0
April	5.36	1.03	48.0	74.4
May	7.34	0.36	54.3	83.5
June	8.32	0.16	60.5	91.7
July	8.71	0.01	65.7	98.3
August	7.74	0.01	64.0	96.4
September	5.62	0.15	59.7	90.8
October	3.62	0.53	54.2	79.7
November	1.79	1.13	42.4	65.3
December	1.07	1.64	37.3	54.7
Annual Total/Average	**56.31**	**10.89**	**50.4**	**76.5**

(a) CIMIS Website: http://www.cimis.water.ca.gov. Station 80 Fresno State (1988 to 2015) Monthly Average ETo Report, December 2015 (downloaded January 12, 2016)
(b) Data from Western Regional Climate Center (http://www.wrcc.dri.edu) for Fresno WSO AP, California Period of Record 01/01/1948 to 1/20/2015 (downloaded January 12, 2016)

The City's water use in the summer months is significantly higher than in the winter, reflecting increased water use for irrigation purposes during the hot, dry summers.

Groundwater

The Kings Subbasin is generally bounded on the north by the San Joaquin River; on the west by the Fresno Slough; on the south by the Kings River and Cottonwood Creek; and on the east by the Sierra foothills. The State Department of Water Resources (DWR) has classified the Kings Subbasin as being in a state of critical overdraft (California Department of Water Resources, 2016). The upper several hundred feet of alluvium within the Kings Subbasin generally consists of highly permeable, coarse-grained, deposits which are termed older alluvium. Coarse-grained stream channel deposits, associated with deposits by the ancestral San Joaquin and Kings Rivers, underlie much of the northwest portion of the City. The presence of a laterally extensive clay layer, at an average depth of approximately 250 feet below the ground surface, beneath most of the south and southeastern portions of the City has been confirmed (City of Fresno, 2016). Below the older alluvium, to depths ranging from about 600 to 1,200 feet below ground surface, the finer-grained sediments of Tertiary-Quaternary continental deposits are typically encountered. Substantial groundwater has been produced and utilized from these depths by the City; however, deeper deposits located in the southeastern and northern portions of the City have produced less groundwater.

There are also reduced deposits in the northern and eastern portions of the City, at depths generally below 700 or 800 feet, which are associated with high concentrations of iron, manganese, arsenic, hydrogen sulfide, and methane gas. Groundwater at these depths does not generally provide a significant source for municipal supply wells.

Groundwater Overdraft

The City has long made efforts towards offsetting the decline of groundwater levels and minimizing overdraft conditions through an active recharge program that started in 1971. Through cooperative agreements with the Fresno Municipal Flood Control District (FMFCD) and Fresno Irrigation District (FID), the City has access to not only City-owned basins, but also those of these two agencies. Utilizing available surface water supplies, the City was able to recharge approximately 50,000 af/yr for the period of 2000-2013; however, with the reduction in available surface water supplies, intentional recharge declined to 34,700 af in 2014 and 19,800 af in 2015. In recent years intentional groundwater recharge has increased. Recharge in 2016 was 65,650 af/yr, 2017 was 72,116 af/yr, and 2018 was 63,833 af/yr. This increase will be attained despite the direct usage increase of surface water currently (2019) occurring as a result of the new northeast Fresno surface water supply pipeline and southeast Fresno surface water treatment facility now in service. The Fresno City Council has adopted the Fresno Metropolitan Water Resources Management Plan which has a goal to attain a balanced use of groundwater by the year 2025. Peak groundwater use occurred in 2002 with 165,542 produced. Groundwater produced in 2018 was 76,797 af. By attaining this level of recharge, the City would optimize the use of available supplies, and further improve groundwater conditions as declines in natural recharge occur due to urbanization. The City's successful metering program, and concurrent drought-related restrictions on water usage, have made a significant difference in subbasin overdraft since 2002. With the addition of the Southeast Surface Water Treatment Facility, in May 2018, the goal of balance use groundwater was largely accomplished.

Water Quality

Groundwater within the Kings Subbasin generally meets primary and secondary drinking water standards for municipal water use and is described as being bicarbonate-type with calcium, magnesium, and sodium as the dominant ions. Total dissolved solids (TDS) concentrations rarely exceed 600 mg/L, and typically range from 200 to 700 mg/L. However, the groundwater basin is threatened by chemical contaminants that affect the City's ability to fully use the groundwater basin resources without some type of wellhead treatment in certain areas. Many different types of chemical pollutants have contaminated portions of the Kings Subbasin. Some of the major contaminant plumes include 1,2-Dibromo-3-Chloropropane (DBCP), ethylene dibromide (EDB), trichloropropane (TCP), other volatile organic compounds (VOCs) such as trichloroethylene (TCE) and tetrachloroethylene (PCE), methyl tertiary butyl ether (MTBE), nitrate (NO_3), manganese (Mn), radon (Rn), chloride (Cl), and iron (Fe). The City has received settlements in a number of lawsuits related to specific contaminants and has constructed wellhead treatment systems and implemented blending plans for a number of wells impacted by nitrates. The City now has 29

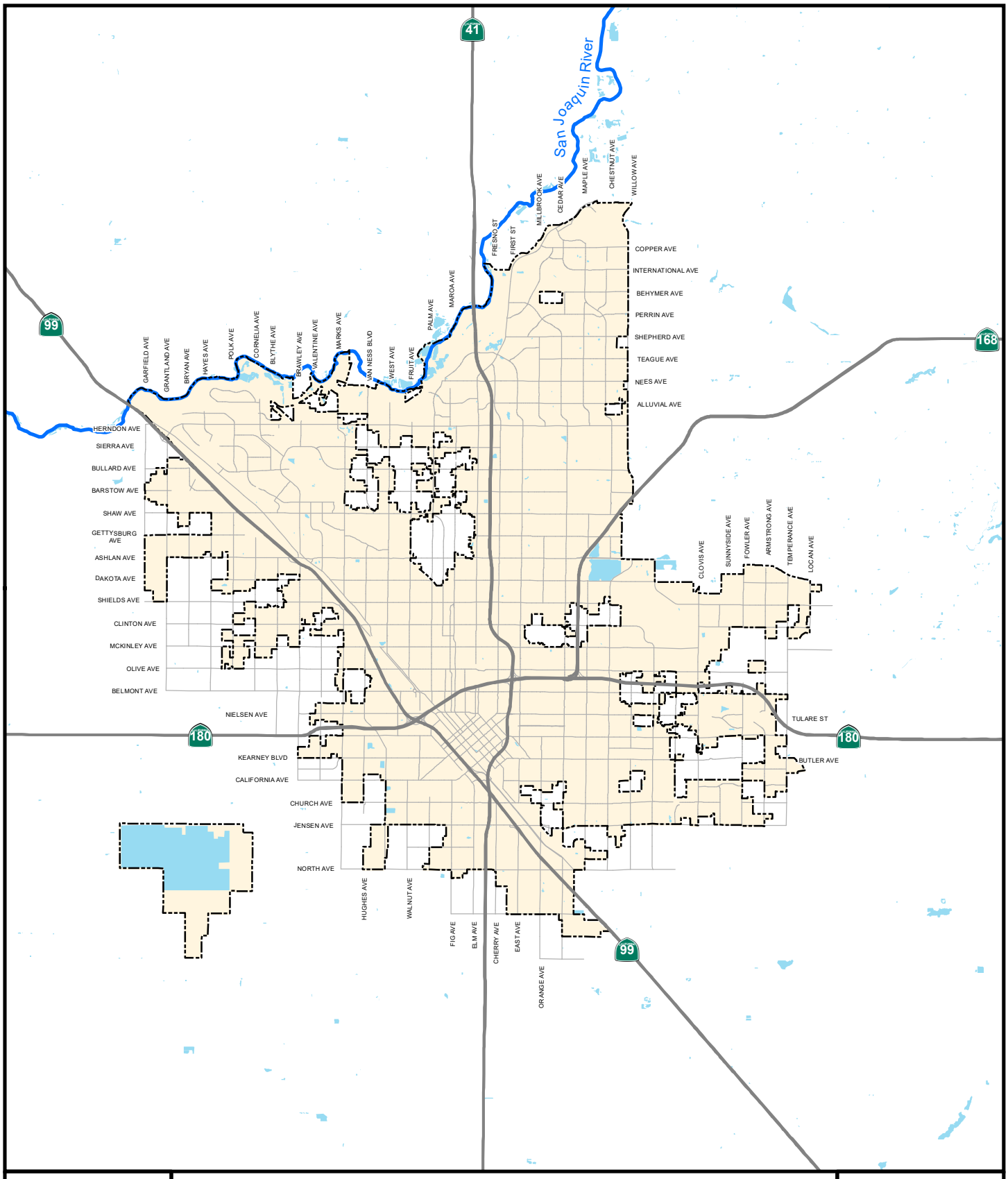
wells affected with excessive TCP levels, and anticipates expenditure in the hundreds of millions of dollars to treat all contaminated wells.

Surface Water

The City's second significant source of water is surface water from the Sierra Nevada (the Kings and San Joaquin Rivers) delivered via Fresno Irrigation District and Friant-Kern Canals. This water is stored in both Millerton and Pine Flat Lakes, located in the foothills east of Fresno. Both surface water and groundwater are treated to drinking water standards at state-of-the-art treatment facilities. Surface water treatment facilities are illustrated on Figure 4.10-2; groundwater treatment is at wellheads. The U.S. Bureau of Reclamation Central Valley Project contract is for 60,000 af/yr of Class 1 water. The Fresno Irrigation District contract is based on a percentage of annexed land in the City that is part of the District's boundaries.

Surface Water Quality

According to the 2015 Urban Water Management Plan (UWMP), in 2004, the City also began treating surface water supplies for direct potable use at its first surface water treatment facility located in northeast Fresno (NESWTF). For the period of 2005 through 2014 this 30 million gallons per day (mgd) rated facility provided 10 percent to 15 percent of the City's potable water supplies. For the 2015 calendar year this facility produced 25 percent of the City's potable water supply, an increase largely attributed to transmission system improvements which permitted conveying water further into the City's distribution system and the City's lower overall system demands. Also, in 2015, the City commenced operations of its new T-3 Water Storage and modular Surface Water Treatment Facility in southeast Fresno. In January 2013, the City completed the installation of meters on all single-family residences. In March 2016, the City commenced construction of its new 54 mgd surface water treatment facility in southeast Fresno (SESWTF) and large diameter water mains that will service nearly one-half of the City (City of Fresno, 2016).



Surface Water Features

San Joaquin River | Surface Water | City Limits

N

0 3 Miles

QK Sources: USGS National Hydrologic Dataset

Figure 4.10-2

4.10.3 - REGULATORY SETTING

The complexity of the Project warrants a summary of the various codes and regulations which will constrain its implementation.

Federal

CLEAN WATER ACT (CWA) AND ASSOCIATED PROGRAMS

The Clean Water Act (CWA) (33 U.S.C. Section 1251 et seq.), formerly the Federal Water Pollution Control Act of 1972, was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. The CWA requires individual states to set standards to protect, maintain, and restore water quality through the regulation of point source and certain non-point source discharges to surface water. Those discharges are regulated by the National Pollutant Discharge Elimination System (NPDES) permit process (CWA Section 402). In California, NPDES permitting authority is delegated to, and administered by, the nine Regional Water Quality Control Boards (RWQCBs). The State Water Resources Control Board (SWRCB) has elected to adopt one statewide general permit for California that applies to all construction-related stormwater discharges.

Construction activities that are subject to this general permit include clearing, grading, stockpiling, and excavation that result in soil disturbances to at least one acre of the total land area. Construction activities that disturb less than one acre are still subject to this general permit if the activities are part of a large common plan of development or if significant water quality impairment would result. In California, the Construction General Permit, revised in September 2009, is implemented by the SWRCB.

The discussion below specifies provisions of the CWA that may relate to cultivation activities. Of particular relevance are Sections 401, 402, 404, and 303.

Section 401

CWA Section 401 requires an evaluation of water quality when a proposed activity requiring a federal license or permit could result in a discharge to waters of the United States. In California, USEPA has delegated to SWRCB and the RWQCBs the authority to issue water quality certifications. Each RWQCB is responsible for implementing Section 401 in compliance with the CWA and that region's water quality control plan (also known as a Basin Plan). Applicants for a federal license or permit to conduct activities that might result in the discharge to waters of the United States must also obtain a Section 401 water quality certification to ensure that any such discharge would comply with the applicable provisions of the CWA.

Section 402

Section 402 of the CWA establishes the National Pollutant Discharge Elimination System (NPDES). Under Section 402, a permit is required for point-source discharges of pollutants into navigable

waters of the United States (other than dredge or fill material, which are addressed under Section 404). In California, the NPDES permit program is also administered by the SWRCB. Permits contain specific water quality-based limits and establish pollutant monitoring and reporting requirements. Discharge limits in NPDES permits may be based on water quality criteria designed to protect designated beneficial uses of surface waters, such as recreation or supporting aquatic life. The various NPDES permits that may apply to the proposed Project are discussed below.

Section 404

CWA Section 404 regulates the discharge of dredged and fill materials into waters of the U.S., which include all navigable waters, their tributaries, and some isolated waters, as well as some wetlands adjacent to the afore-mentioned waters (33 CFR Section 328.3). Areas typically not considered to be jurisdictional waters include non-tidal drainage and irrigation ditches excavated on dry land, artificially irrigated areas, artificial lakes or ponds used for irrigation or stock watering, small artificial waterbodies such as swimming pools, and water-filled depressions (33 CFR Part 328). Areas meeting the regulatory definition of waters of the U.S. are subject to the jurisdiction of USACE under the provisions of CWA Section 404. Construction activities involving placement of fill into jurisdictional waters of the U.S. are regulated by USACE through permit requirements. No USACE permit is effective in the absence of state water quality certification pursuant to Section 401 of the CWA.

With respect to cannabis cultivation, dredge or fill activities within waters of the U.S. would primarily be associated with site development (i.e., access road crossings of creeks), and not cultivation activities themselves, which would have less potential to result in dredge or fill within jurisdictional waters.

NPDES General Permit for Construction Activities

Most construction projects that disturb one acre or more of land are required to obtain coverage under the SWRCB's *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* (Order 2009-0009-DWQ, as amended by 2010-0014-DWQ and 2012-0006-DWQ - "Construction General Permit") (SWRCB 2009). The Construction General Permit requires the applicant to file a Notice of Intent to discharge stormwater and prepare and implement a stormwater pollution prevention plan (SWPPP). The SWPPP must include a site map and a description of the proposed construction activities; demonstrate compliance with relevant local ordinances and regulations; and present a list of best management practices (BMPs) that will be implemented to prevent soil erosion and protect against discharge of sediment and other construction-related pollutants to surface waters.

Permittees are further required to conduct monitoring and reporting to ensure that BMPs are implemented correctly and are effective in controlling the discharge of construction-related pollutants. Additionally, if a project that receives coverage under the Construction General Permit is located in an area that is not subject to a municipal stormwater permit (described below), the project must implement post-construction stormwater controls in accordance with permit Section XIII, Post-Construction Standards.

Construction of facilities that may eventually be used for licensed cultivation under the proposed program, if that construction involves construction and/or land disturbance activities on one-acre or more of land, may require coverage under the Construction General Permit. The Construction General Permit would not apply to cultivation itself.

NPDES Permits for Municipal Stormwater Discharges

The Municipal Storm Water Permitting Program regulates stormwater discharges from municipal separate storm sewer systems (MS4s). Storm water is runoff from rain or snow melt that runs off surfaces such as rooftops, paved streets, highways, or parking lots, and it can carry pollutants such as oil, pesticides, sediment, trash, bacteria, and metals. This runoff ultimately may reach surface waterbodies.

The municipal or urban areas addressed by the MS4 permit program commonly include large areas of impervious surface. These large impervious surfaces can contribute to increased pollutant loads, with results such as turbid water, nutrient enrichment, bacterial contamination, increased temperature, and accumulation of trash. In addition, these impervious areas can contribute to an increase in runoff duration, volume, and velocity, and streams may be affected by streambed scouring, sedimentation, and loss of aquatic and riparian habitat.

MS4 permits were established in two phases. Under Phase I, which started in 1990, the RWQCBs adopted NPDES permits for medium-sized (serving 100,000-250,000 people) and large (serving more than 250,000 people) municipalities. Most of these permits have been issued to groups of co-permittees, encompassing entire metropolitan areas. Phase I MS4 permits generally require the discharger to develop and implement a Storm Water Management Plan/Program with the goal of reducing the discharge of pollutants to the maximum extent practicable (MEP). MEP is the performance standard specified in Section 402(p) of the CWA. These management programs specify measures used to address various program areas, including public education and outreach; illicit discharge detection and elimination; construction and post-construction; and good housekeeping for municipal operations. MS4 permits themselves may specify management measures for the program areas, eliminating the need for dischargers to develop a Storm Water Management Plan/Program. In general, medium-sized and large municipalities also are required to conduct monitoring.

Under Phase II, the SWRCB issued the first General Permit for the Discharge of Storm Water from Small MS4s (WQ Order No. 2003-0005-DWQ) in 2003, to provide permit coverage for smaller municipalities (population less than 100,000), including nontraditional Small MS4s, which are facilities such as military bases, public campuses, and prison and hospital complexes. The current Phase II Small MS4 General Permit, *NPDES General Permit No. CAS000004, Waste Discharge Requirements (WDRs) for Storm Water Discharges from Small MS4s,* was adopted in 2013. The Phase II Small MS4 General Permit addresses Phase II permittees statewide.

Proposed program activities may occur in locations with permit coverage under the MS4 program and as such, licensed cultivation activities may be subject to the requirements of such permits with regard to their stormwater discharges.

Section 303

Section 303 of the Federal CWA (as well as the State-level Porter-Cologne Act, discussed further below) requires that California adopt water quality standards. In addition, under CWA Section 303(d), states are required to identify a list of "impaired waterbodies" (those not meeting established water quality standards), identify the pollutants causing the impairment, establish priority rankings for waters on the list, and develop a schedule for preparation of control plans to improve water quality. USEPA then approves or modifies the state's recommended list of impaired waterbodies. Each RWQCB must update its Section 303(d) list every two years. Waterbodies on the list are defined to have no further assimilative capacity for the identified pollutant, and the Section 303(d) list identifies priorities for development of pollution control plans for each listed waterbody and pollutant.

The pollution control plans mandated by the CWA Section 303(d) list are called Total Maximum Daily Loads (TMDLs). The TMDL is a "pollution budget," designed to restore the health of a polluted waterbody and provide protection for designated beneficial uses. The TMDL also contains the target reductions needed to meet water quality standards and allocates those reductions among the pollutant sources in the watershed (i.e., point sources, non-point sources, and natural sources) (40 Code of Federal Regulations [CFR] Section 130.2). A TMDL is unique to a specific waterbody and its surrounding pollutant sources and is not applicable to other waterbodies.

The current effective USEPA-approved Section 303(d) list for waterbodies in California is the 2010 list, which received final approval by USEPA on October 11, 2011. For the proposed program, cultivation activities that may result in discharge of a contaminant to waterbodies listed as impaired for that contaminant would be of particular concern because of the water bodies' lack of assimilative capacity for that contaminant.

National Toxics Rule and California Toxics Rule

USEPA issued the National Toxics Rule (NTR) in 1992. The goal of the NTR is to establish numeric criteria for specific priority toxic pollutants, to ensure that all states comply with the requirements in CWA Section 303. *A* total of 126 priority toxic pollutants currently are specified in the NTR.

In 2000, USEPA promulgated the California Toxics Rule (CTR), which contains additional numeric water quality criteria for priority toxic pollutants for waters in the state. The CTR fills a gap in California water quality standards that was created in 1994 when a State court overturned the State's water quality control plans containing water quality criteria for priority toxic pollutants. These federal criteria are legally applicable in California for inland surface waters, enclosed bays, and estuaries for all purposes and programs under the CWA.

The NTR and CTR include toxicity thresholds for freshwater and saltwater systems and human health for a number of chemicals which may be used for permitted or unpermitted cannabis cultivation, including heavy metals (which may be found in fertilizers, irrigation water, soils, and

other grow media), hydrocarbons (found in fuels and lubricants for powered equipment used in cultivation), and pesticides.

Federal Antidegradation Policy

The federal antidegradation policy includes minimum criteria to protect existing beneficial uses, ensure that the level of water quality is offset to maintain existing uses, and prevent degradation of water quality. This policy stipulates that states must adopt the following minimum provisions and allows states to adopt even more stringent rules (40 CFR Part 131):

- Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.

- Where the quality of waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the state finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located.

- Where high quality waters constitute an outstanding national resource, such as waters of national and state parks, wildlife refuges, and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.

Permits issued by the SWRCB and RWQCBs under the CWA or Porter-Cologne Act, including permits for activities conducted in accordance with the proposed Project, must incorporate provisions to ensure this policy is met.

SAFE DRINKING WATER ACT

The Safe Drinking Water Act (SDWA) was established to protect the quality of drinking water in the United States. This SDWA focuses on all waters either designed or potentially designed for drinking water use, whether from surface water or groundwater sources. The SDWA and subsequent amendments authorized the EPA to establish health-based standards, or maximum contaminant levels (MCLs), for drinking water to protect public health against both natural and anthropogenic contaminants. All owners or operators of public water systems are required to comply with these primary (health-related) standards. State governments, which can be approved to implement these primary standards for the EPA, also encourage attainment of secondary (nuisance-related) standards. At the federal level, the EPA administers the SDWA and establishes MCLs for bacteriological, organic, inorganic, and radiological constituents (United States Code Title 42, and Code of Federal Regulations Title 40). At the State level, California has adopted its own SDWA, which incorporates the federal SDWA standards with some other requirements specific only to California (California Health and Safety Code, Section 116350 et seq.).

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 EPA 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 California State Water Resources Control Board: Division of Drinking Water (SWRCB-DDW) is the primary agency for developing and implementing the DWSAP program and is responsible for performing the assessments of existing groundwater sources.

State

DEPARTMENT OF WATER RESOURCES (DWR)

DWR's major responsibilities include preparing and updating the California Water Plan to guide development and management of the State's water resources; planning, designing, constructing, operating, and maintaining the State Water Resources Development System; regulating dams; providing flood protection; assisting in emergency management to safeguard life and property; educating the public; and serving local water needs by providing technical assistance. In addition, DWR cooperates with local agencies on water resources investigations; supports watershed and river restoration programs; encourages water conservation; explores conjunctive use of ground and surface water facilities voluntary water transfers; and, when needed, operates a State drought water bank.

The California Water Code (Water Code) Section 13149 was enacted to require the State Water Resources Control Board (Board), in consultation with the California Department of Fish and Wildlife (CDFW), to adopt interim and long-term principles and guidelines for the diversion and use of water for cannabis cultivation in areas where cannabis cultivation may have the potential to substantially affect instream flows. The legislation requires the Board to establish these principles and guidelines as part of a State policy for water quality control. The Board has adopted policies to guide cannabis production. The Cannabis Cultivation Policy: Principles and Guidelines for Cannabis Cultivation (2019) guide outlines requirements for cannabis cultivation with regard to management practices and permits required prior to operation (State Water Resources Control Board, 2019).

The State of California has directed that, under the direction of the Board, local agencies representing each critically impacted groundwater basin in the State submit to the State by January 2020 a plan for sustainable groundwater management for that basin (SGMA). In Fresno County that document is under preparation and public review. The City is a member of the North Kings Groundwater Sustainability Authority (NKGSA). The draft Groundwater Sustainability Plan for NKGSA was submitted it to the California Department of Water Resources (DWR) on January 28, 2020.

STATE WATER RESOURCES CONTROL BOARD

The National Pollution Discharge Elimination System (NPDES) was established per the 1972 amendments to the Federal Water Pollution Control Act, or Clean Water Act (CWA), to control discharges of pollutants from point sources (Section 402). Amendments to the CWA created a new section to the Act, which is devoted to stormwater permitting, with individual states designated for administration and enforcement of the provisions of the CWA and the NPDES permit program. The State Water Resources Control Board (SWRCB) issues both general construction permits and individual permits under this program.

As required by the California Water Code (Section 13240) and supported by the CWA, each RWQCB must formulate and adopt a water quality plan (Basin Plan) for its region. The Basin Plan includes a summary of beneficial water uses, water quality objectives needed to protect the identified beneficial uses and implementation measures. The Basin Plan establishes water quality standards for all the ground and surface waters of the region. The term "water quality standards," as used in the CWA, includes both the beneficial uses of specific water bodies and the levels of quality that must be met and maintained to protect those uses. The Basin Plan includes an implementation plan describing the actions by the RWQCB and others that are necessary to achieve and maintain water quality standards. Water quality problems in the region are listed in the Basin Plan, along with the causes, where they are known. For water bodies with quality below the levels needed to meet the beneficial uses, plans for improving water quality are included. The Basin Plan reflects, incorporates and implements applicable portions of a number of national and statewide water quality plans and policies, including the Porter-Cologne Act, California Water Code and the CWA.

The SWRCB developed a policy for water quality control to establish principles and guidelines for cannabis cultivation statewide. The principles and guidelines include measures to protect springs, wetland, and aquatic habitats from negative impacts of cannabis cultivation. The policy includes instream flow objectives, limits on diversions, and requirements for screening of diversions and elimination of barriers to fish passage. The policy also includes requirements that apply to groundwater extractions, forbearance periods, off-stream storage requirements, riparian buffers, and irrigation conservation measures as well as other best management practices.

As discussed above, the primary responsibility for the protection of water quality in California rests with the SWRCB. The SWRCB sets statewide policy for the implementation of State and federal laws and regulations. To do this more effectively, the SWRCB is divided into nine regional water quality control boards (RWQCBs). The RWQCBs adopt and implement Water Quality Control Plans (Basin Plans) that recognize regional differences in natural water quality, actual and potential beneficial uses, and water quality problems associated with human activities.

The City of Fresno is within the Central Valley RWQCB (Regional Board 5F). The jurisdiction of the Central Valley RWQCB extends from the Oregon border, over the valley and foothills from Redding to Fresno, through the Central Valley, to the border with Los Angeles County.

CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD

On October 2, 2015, the Central Valley Regional Water Quality Control Board adopted the General Waste Discharge Requirements Order for Discharges of Waste Associated with Medical Cannabis Cultivation Activities Order No. RS-2015-0113 (Central Valley Order). The CVWQCB separates the cultivators into Tiers based on the criteria including area of cultivation, slopes and presence of watercourses. These Tiers are shown in Table 4.10-2, *CVWQCB Tiers,* below. All cannabis cultivators not currently enrolled under the Central Valley Regional Water Quality Control Board Order No. RS-2015-0113 (Central Valley Order) are required to apply for coverage under the Cannabis General Order. Once an online application is submitted and the applicable fee is paid, a Notice of Applicability (NOA) will be issued to the enrollee by the appropriate Regional Water Quality Control Board. However, beginning July 1, 2019, the General Order will default to the SWRCB standards and individual RWQCBs will no longer set their own criteria.

Table 4.10-2
CVWQCB Tiers

Tier 1	Cannabis Cultivators whose cultivation areas and associated facilities are located on less than 30% slopes, occupy and/or disturb less than 1/4 acre, AND are not located within 200 feet of a wetland, Class I or II watercourse
Tier 2	Cannabis Cultivators whose cultivation areas and associated facilities are located on less than 30% slopes, occupy and/or disturb less than 1 acre and less than 50% of the Cultivator's/Landowner's parcel, AND are not located within 200 feet of a wetland, Class I or II watercourse
Tier 3	Cannabis Cultivators whose cultivation areas and associated facilities are located on greater than 30% slopes, occupy and/or disturb more than 1 acre or more than 50% of the Cultivator's/Landowner's parcel, OR are within 200 feet of a wetland, Class I or II watercourse

Cannabis Cultivation Regulation

Pursuant to the Medicinal and Adult-Use Cannabis Regulation and Safety Act (MAUCRSA), the SWRCB and RWQCBs are developing a regulatory program to protect waters of the State from harmful activities that could result from cannabis cultivation. As stated above, SWRCB and the nine RWQCBs are the primary agencies tasked with water regulation and water quality protection; therefore, while CDFA is the lead agency for this PEIR, potential water quality and related impacts from cannabis cultivation remain under the water agencies' primary jurisdiction. SWRCB's and RWQCB's regulatory program would prohibit waste discharges from cannabis-related agricultural practices, land clearing, and grading activities in rural areas and forests. SWRCB adopted a general order on October 17, 2017, regarding waste discharge requirements for cannabis cultivation operations. Cultivators whose operations occupy and/or disturb areas above a certain threshold and/or are within certain designated setbacks or above certain slope

designations must apply for coverage under the SWRCB's order for waste discharge. At the same time, SWRCB adopted a Cannabis Cultivation Policy that outlines policies for water quality and water rights including flow and gaging requirements, waste discharge requirements, exemptions, and enforcement. The SWRCB's guidance will apply to cannabis cultivation sites statewide.

SWRCB 's final guidance document and order will take effect following adoption by the Office of Administrative law. This is expected to be prior to the issuance of licenses for cannabis cultivation (January 1, 2018). In the interim period while the guidance is being established, other permits (e.g., General Construction Permit, General Industrial Permit, Irrigated Lands Regulatory Program (ILRP), MS4 permits, general permits established by the NCRWQCB and CVRWQCB, and/or individual WDRs) may apply to cannabis cultivation activities.

State Drinking Water Standards

Title 22, Division 4, Chapter 15, of the California Code of Regulations establishes parameters for safe drinking water throughout the state. These drinking water standards are similar to, but in many cases more stringent than, federal standards. Title 22 contains both primary standards, and secondary standards related to aesthetics (taste and odor). These standards include limits for water quality parameters that may be found in runoff from permitted or unpermitted cultivation sites, such as heavy metals, pesticides, petroleum hydrocarbons, color, foaming agents, turbidity, and total dissolved solids/specific conductance.

Policy for Implementation of Toxics Standards in Inland Surface Waters, Enclosed Bays, and Estuaries of California

In 1994, SWRCB and USEPA agreed to a coordinated approach for addressing priority toxic pollutants in inland surface waters, enclosed bays, and estuaries of California. In March 2000, SWRCB adopted the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California, commonly referred to as the State Implementation Policy. This policy implements NTR and CTR criteria and applicable Basin Plan objectives for toxic pollutants. When a RWQCB issues any permit allowing the discharge of any toxic pollutant(s) in accordance with the CWA or the Porter-Cologne Act, the permit's promulgation and implementation must be consistent with the State Implementation Policy's substantive or procedural requirements. Any deviation from the State Implementation Policy requires the concurrence of USEPA if the RWQCB is issuing any permit under the CWA Consistency with the State Implementation Policy would occur when water permits are issued for proposed program activities.

California Antidegradation Policy

SWRCB enacted the Statement of Policy with Respect to Maintaining High Quality of Waters in California, which is also referred to as the California antidegradation policy. This policy is used to ensure that high-quality water is maintained, and it limits the discharge of pollutants into high-quality water in the State (Resolution Number 68-16; SWRCB 1968), as follows:

- Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained until it has been demonstrated to the State that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water and will not result in water quality less than that prescribed in the policies.

- Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.

Similar to the federal anti-degradation policy (described above), permits issued by SWRCB and the RWQCBs under the CWA or Porter-Cologne Act for activities conducted under the proposed program must incorporate provisions to ensure that this State-level policy is met.

California Pesticide Management Plan for Water Quality

The California Pesticide Management Plan for Water Quality is a joint effort between the California Department of Pesticide Regulation (CDPR), county agricultural commissioners, SWRCB, and the RWQCBs to protect water quality from pesticide pollution. To reduce the possibility of pesticides entering groundwater or surface water, a four-stage approach was designed by CDPR and SWRCB. Stage 1 involves educational outreach to the community to prevent pesticide contamination in water supplies. Stage 2 occurs after pesticides are detected in a water supply, and an appropriate response is selected that is safe and site specific. If Stage 2 is not effective, then Stage 3 tactics are employed, which include implementing restricted material use permit requirements, regulations, and other regulatory authority by CDPR and the county agricultural commissioners. In addition, SWRCB and the RWQCBs can employ Stage 4 and a variety of water quality control planning programs and other regulatory measures to protect water quality as necessary.

Surface Water Protection Program

CDPR implements the California Pesticide Management Plan for surface water protection through its Surface Water Protection Program, under a Management Agency Agreement with SWRCB. The Surface Water Protection Program is designed to characterize pesticide residues, identify contamination sources, determine flow of pesticides to surface water, and prepare site-specific mitigation measures. The program addresses both agricultural and nonagricultural sources of pesticide residues in surface waters. It has preventive and response components that reduce the presence of pesticides in surface waters. The preventive component includes local outreach to promote management practices that reduce pesticide runoff. Prevention also relies on CDPR's registration process, in which potential adverse effects on surface water quality, and particularly those in high-risk situations, are evaluated. The response component includes

mitigation options to meet water quality goals, recognizing the value of self-regulating efforts to reduce pesticides in surface water as well as regulatory authorities of CDPR, SWRCB, and the RWQCBs.

Pesticide Contamination Prevention Act

The Pesticide Contamination Prevention Act, approved in 1985, was developed to prevent further pesticide contamination of groundwater from legal agricultural pesticide applications. The act defines pesticide pollution as "the introduction into the groundwaters of the state of an active ingredient, other specified product, or degradation product of an active ingredient of an economic poison above a level, with an adequate margin of safety that does not cause adverse health effects." CDPR has compiled a list of pesticide active ingredients on the Groundwater Protection List that have the potential to pollute groundwater. These various pesticides are reviewed, and their use is modified when they are found in groundwater.

Groundwater Protection Program

CDPR implements the Pesticide Contamination Prevention Act through its Groundwater Protection Program, which is coordinated with SWRCB under the California Pesticide Management Plan. The Groundwater Protection Program evaluates and samples pesticides to determine whether they may contaminate groundwater, identifies areas sensitive to pesticide contamination, and develops mitigation measures to prevent the movement of pesticides. CDPR may adopt regulations to carry out these mitigation measures. CDPR conducts four groundwater monitoring programs. The first monitors whether pesticides on the Groundwater Protection List with the potential to pollute have been found in groundwater. The second type is four-section monitoring, which monitors wells in the vicinity of a contaminated well. The third monitoring type is sensitive-area monitoring that identifies areas sensitive to pesticide pollution. The fourth type is investigative monitoring, used to identify and understand the factors that affect pesticide movement into groundwater.

State Water Rights System

SWRCB administers a water rights system for the diversion of surface waters (springs, streams, and rivers), including diversion of water from subterranean streams flowing in known and definite channels. The granting of a water right provides permission to withdraw water from a river, stream, or groundwater source for a "reasonable" and "beneficial" use. Water right permits and licenses identify the amounts, conditions, and construction timetables for a proposed diversion. Before issuing the permit, SWRCB must take into account all prior rights and the availability of water in the basin, as well as the flows needed to preserve instream uses such as recreation and fish and wildlife habitat. Water rights are administered using a seniority system based on the date of applying for the water right-commonly referred to as "first in time, first in right." Junior water rights holders may not divert water in a manner that would reduce the ability of senior water rights holders to exercise their water right.

All surface water used for cannabis cultivation must be associated with a valid water right, whether the cultivator personally holds such a water right or it is held by the water purveyor supplying the cultivation operation (i.e., a municipal water system or a water delivery service).

Water Rights Administration for Cannabis Cultivation

MAUCRSA contains provisions that are directly relevant to SWRCB's water rights permit process. For example, Section 26060.l(b) of the Business and Professions Code requires that SWRCB, in accordance with Section 13149 of the California Water Code and in consultation with the California Department of Fish and Wildlife (CDFW) and CDFA, shall ensure that individual and cumulative effects of water diversion associated with cultivation of cannabis do not affect the instream flows needed for fish spawning, migration, and rearing or the flows needed to maintain natural flow variability. California Water Code Section 13149 goes on to describe that this is to be accomplished through adoption of principles and guidelines for diversion and use of water for cannabis cultivation in areas where cannabis cultivation may have the potential to substantially affect instream flows. The principles and guidelines adopted in October 2017 by the SWRCB address topics such as instream flow objectives, limits on diversions, and requirements for screening of diversions and elimination of barriers to fish passage. The principles and guidelines include requirements that apply to groundwater extraction where it may affect surface flows. SWRCB, CDFW, and CDFA are actively coordinating on the development and implementation of the principles and guidelines.

As part of this, under MAUCRSA, applicants proposing to divert surface water must possess a valid water right. Specifically, an application for a license issued by CDFA will be required to identify at least one of the following water sources:

- Retail water supplier;
- Groundwater well;
- Rainwater catchment system; or
- Diversion from a surface water body or underground stream flowing in a known and definite channel.

CDFA's regulations will describe the supplemental information requirements for water diversions:

- A copy of a registration, permit, or license issued under Part 2 (commencing with Section 1200) of Division 2 of the California Water Code that covers the diversion;

- A copy of any statements of diversion and use filed with the SWRCB before October 31, 2017 detailing the water diversion and use;

- A copy of a statement of water diversion and use, filed with SWRCB before October 31, 2017, demonstrating that the diversion is authorized under a riparian right and that no

diversion occurred in any calendar year between January 1, 2010, and January 1, 2017; and

- For a water source where the applicant has claimed an exception from the requirement to file a statement of diversion and use, documentation, submitted to SWRCB, establishing that the diversion is subject to subdivision (a), (c), (d), or (e) of Section 5101 of the California Water Code.

SWRCB issued a notice on May 19, 2017, providing guidance and making available the forms to be filed to meet these requirements.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA), passed in 2014, became law in 2015, and created a legal and policy framework to manage groundwater sustainably at a local level. The SGMA allows local agencies to customize groundwater sustainability plans to their regional economic and environmental conditions and needs and establish new governance structures, known as groundwater sustainability agencies (GSAs) (State of California 2015). The SGMA requires that a groundwater sustainability plan (GSP) be adopted for groundwater basins designated as high and medium priority (127 out of 515 basins and subbasins) under the California Statewide Groundwater Elevation Monitoring Program (described below) by 2020 for basins with critical overdraft of underground aquifers. GSPs are intended to facilitate the use of groundwater in a manner that can be maintained during the planning and implementation horizon without causing undesirable results. Undesirable results are defined as the following:

- Chronic lowering of groundwater levels (not including overdraft during a drought if a basin is otherwise managed);

- Significant and unreasonable reduction of groundwater storage;

- Significant and unreasonable seawater intrusion;

- Significant and unreasonable degraded water quality, including the migration of contaminant plumes that impair water supplies;

- Significant and unreasonable land subsidence that substantially interferes with surface land uses; and

- Depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water.

GSPs are required to include measurable objectives, as well as interim milestones in 5-year increments, to achieve the sustainability goal for the basin for the long-term beneficial uses of groundwater. The GSP may, but is not required to, address undesirable results that occurred before, or had not been corrected prior to the date that the SGMA went into effect. The GSA has

the discretion to decide whether to set measurable objectives and the timeframes for achieving any objectives for undesirable results that occurred before 2015. Additionally, GSPs are required to include components related to the monitoring and management of groundwater levels within the basin, mitigation of overdraft, and a description of surface water supply used or available for use for groundwater recharge or in lieu use.

As with other local regulatory requirements, GSP requirements may apply to licensed cultivators located within the boundaries of a GSA and using groundwater as a source; the source could include existing on- or off-site wells, as well as supplies from water purveyors or water delivery services that have groundwater as some component of their supply. The City does not currently allow for new groundwater wells to be drilled within its service area.

California Statewide Groundwater Elevation Monitoring Basin Prioritization

In 2009, the California State Legislature amended the California Water Code with SBx7-6, which mandates a statewide groundwater elevation monitoring program to track seasonal and long-term trends in groundwater elevations in California. Under this amendment, DWR established the California Statewide Groundwater Elevation Monitoring (CASGEM) Program, which establishes the framework for regular, systematic, and locally managed monitoring in all of California's groundwater basins. To facilitate implementation of the CASGEM Program and focus limited resources, as required by the California Water Code, DWR ranked all of California's basins by priority: High, Medium, Low, and Very Low. DWR's basin prioritization was based on the following factors:

- Population overlying the basin;
- Rate of current and projected growth of the population overlying the basin;
- Number of public supply wells that draw from the basin;
- Total number of wells that draw from the basin;
- Irrigated acreage overlying the basin;
- Degree to which persons overlying the basin rely on groundwater as their primary source of water;
- Any documented impacts on the groundwater within the basin, including overdraft, subsidence, saline intrusion, and other water quality degradation; or
- Any other information determined to be relevant by DWR.

Cannabis General Order

On October 17, 2017, the State Water Resources Control Board (State Water Board) adopted the current Cannabis Cultivation Policy Principles and Guideline for Cannabis Cultivation (Cannabis

Policy) and the General Waste Discharge Requirements and Waiver of Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities (Cannabis General Order), which implements the Cannabis Policy (WQ 2017-0023-DWQ). On December 18, 2017, the state's Office of Administrative Law approved the Cannabis Policy, making the Cannabis Policy and Cannabis General Order effective as of that date. The Cannabis Policy is implemented through the Small Irrigation Use Registration (SIUR) Program and the Cannabis General Order. Compliance with the Cannabis Policy is required to obtain a license from the California Department of Food and Agriculture (CDFA) under its CalCannabis Licensing Program.

On September 28, 2018, the State Water Board released proposed updates to the Cannabis Cultivation Policy - Principles and Guidelines for Cannabis Cultivation (Cannabis Policy), Cannabis Cultivation Policy Staff Report (Staff Report), and General Waste Discharge Requirements and Waiver of Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities (Cannabis Cultivation General Order) for public comment. Hearings on the revised policy are to be held on February 5, 2019 and the revised General Order would be adopted after that time. It should be noted that some existing Dischargers may qualify for conditional exemption from the General Order; some previously exempted activities may need to obtain coverage under the Waiver or enroll under this General Order. Once and if the new rules take effect, all cannabis cultivation within the County will be required to comply with this order.

Accordingly, no new applications will be accepted under the Central Valley Order. Cannabis cultivators currently enrolled under the Central Valley Order may continue to operate under and comply with the requirements of their respective order until they enroll in the Cannabis General Order. All enrollees under the Central Valley Order must transition the Cannabis General Order by July 1, 2019.

The General Order also uses a tiered approach, which includes Tier 1 and Tier 2 but also includes categorization for personal use, indoor commercial cultivation, and outdoor cultivation less than 2,000sf. This system would be applicable statewide upon adoption of the statewide General Order. The General Order also assigns risk factors to cultivation areas based on the slope of the cultivation sites. Table 4.10-3, *RWQCB General Order Tiers,* and Table 4.10-4, *Summary of Risk Designations,* show these criteria below:

Table 4.10-3
RWQCB General Order Tiers

Personal Use	Personal use exempt Dischargers are very small non-commercial cultivators that are exempt from this General Order (Refer to the General Order for specific exemptions for more information).
Indoor Commercial Cultivation	Indoor commercial cultivation activities are conditionally exempt under this General Order (Refer to the General Order for specific exemptions for more information)
Outdoor Cultivation (<2,000 sf)	Cultivation activities that disturb less than 2,000 square feet may be conditionally exempt under this General Order (Refer to the General Order for specific exemptions and more information.)
Tier 1	Tier 1 Dischargers cultivate cannabis commercially outdoors and have a disturbed area equal to or greater than 2,000 square feet and less than 1 acre (43,560 square feet).
Tier 2	Tier 2 Dischargers cultivate cannabis commercially outdoors, and have a disturbed area equal to or greater than 1 acre

Source: RWQCB, 2018
Notes: Regarding Personal Use, Indoor Commercial Cultivation, and Outdoor Cultivation <2,000 sf, (Refer to the General Order for specific
exemptions and for more information).
Under the revised General Order, there are no proposed changes to the tiers.

Table 4.10-4
Summary of Risk Designations

Low Risk	Moderate Risk	High Risk
No portion of the disturbed area is located on a slope greater than 30 percent, and	Any portion of the disturbed area is located on a slope greater than 30 percent, and less than 50 percent, and	Any portion of the disturbed area is located within the setback requirements
All of the disturbed area complies with the setback requirements	All of the disturbed area complies with the setback requirements	

Source: RWQCB, 2018
Notes: less than 50 percent, and is the only revised language.
Setbacks are defined as follows: 150 ft from perennial watercourses, waterbodies (e.g. lakes ponds, springs); 100 ft from intermittent
watercourses or wetlands; and 50 ft from ephemeral watercourses.

CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN CODE)

The State of California enacted The California Green Building Standards Code (CALGreen Code) as part 11 of The California Building Standards Code (Title 24). The 2016 CALGreen Code, effective on January 1, 2017, contains measures that are designed to improve public health, safety, and general welfare by utilizing design and construction methods that reduce the negative environmental impact of development and encourage sustainable construction practices.

Under the CALGreen Code, all residential and non-residential sites are required to keep surface water from entering buildings and to incorporate efficient outdoor water use measures. Construction plans are required to show appropriate grading and surface water management methods. Plans should also include outdoor water use plans that utilize weather or soil moisture-controlled irrigation systems. In addition to the above-mentioned requirements, non-residential structures are also required to develop:

- A SWPPP;
- An irrigation budget for landscapes greater than 2,500 square feet; and
- A quantified plan to reduce wastewater by 20 percent through use of water-efficient fixtures or non-potable water systems, such as use of harvested rainwater, grey water, and/or recycled water.

CALGreen also offers a tiered set of voluntary measures to encourage residential and non-residential development that goes beyond the mandatory standards to reduce soil erosion, rainwater capture and infiltration, and use of recycled and/or grey water systems. Non-residential developers are further encouraged to integrate treatment BMPs that result in zero net increase in runoff due to development and can treat runoff from the 85th percentile storms.

SENATE BILLS 610 (CHAPTER 643, STATUTES OF 2001) AND 221 (CHAPTER 642, STATUTES OF 2001) (SEE APPENDIX A)

Senate Bill (SB) 610 and SB 221 are companion measures that seek to promote more collaborative planning among local water suppliers and cities and counties. They require that water supply assessments occur early in the land use planning process for all large-scale development projects. If groundwater is the proposed supply source, the required assessments must include detailed analyses of historic, current, and projected groundwater pumping and an evaluation of the sufficiency of the groundwater basin to sustain a new project's demands. They also require an identification of existing water entitlements, rights, and contracts and a quantification of the prior year's water deliveries. In addition, the supply and demand analysis must address water supplies during single and multiple dry years presented in five-year increments for a 20-year projection. Under Senate Bill 221, approval by a county of a subdivision of more than 500 homes, or an equivalent project in terms of water demand, requires an affirmative written verification of a sufficient water supply.

PORTER-COLOGNE WATER QUALITY CONTROL ACT

The Porter Cologne Act, passed in 1969, acts in concert with the Federal CWA. The Act established the SWRCB and divided the State into nine regions, each overseen by a RWQCB. The SWRCB is the primary State agency responsible for protecting the quality of the State's surface and groundwater supplies; however, much of its daily implementation authority is delegated to the nine RWQCBs.

The Porter Cologne Act provides for the development and periodic review of water quality control plans (basin plans) that designate beneficial uses of California's major rivers and groundwater basins and establish narrative and numerical water quality objectives for those waters.

RESOLUTION NO. 68-16 (ANTIDEGRADATION POLICY)

SWRCB Resolution No. 68-16, Statement of Policy with Respect to Maintaining High Quality Water of the State (Antidegradation Policy), requires that high quality waters of the State of California be maintained consistent with their beneficial uses and water quality objectives as defined in a basin plan. Resolution No. 68-16 prohibits degradation of groundwater by waste discharges unless dischargers meet specific conditions.

RECYCLED WATER POLICY

On February 3, 2009, by Resolution No. 2009-0011, the SWRCB adopted a Recycled Water Policy in an effort to move towards a sustainable water future. In the Recycled Water Policy, it is stated "we declare our independence from relying on the vagaries of annual precipitation and move towards sustainable management of surface waters and groundwater, together with enhanced water conservation, water reuse and use of stormwater."

The following goals were included in the Recycled Water Policy:

- Increase use of recycled water over 2002 levels by at least one million-acre feet per year by 2020 and at least two million-acre feet per year by 2030;
- Increase the use of stormwater over use in 2007 by at least 500,000-acre feet per year by 2020 and at least one million-acre feet by year 2030; and
- Increase the amount of water conserved in urban and industrial areas by comparison to 2007 by at least 20 percent by 2020.

Included in these goals is the substitution of as much recycled water for potable water as possible by 2030.

The Recycled Water Policy provides direction to the RWQCBs regarding issuing permits for recycled water projects, addresses the benefits of recycled water, addresses a mandate for uses

of recycled water and indicates that the SWRCB will exercise its authority to the fullest extent possible to encourage the use of recycled water.

TULARE LAKE BASIN PLAN

The Tulare Lake Basin Plan provides quantitative and narrative criteria for a range of water quality constituents applicable to receiving water bodies and groundwater basins within the basin. Specific water quality objectives are provided for the larger designated water bodes within the region, and more general narrative water quality objectives are provided for all surface waters and groundwater. In general, the narrative objectives require that degradation of water quality not occur due to increases in pollutant loads that will adversely impact the designated beneficial uses of a water body. For example, the narrative objective for inland surface waters for sediment states, "the suspended sediment load and suspended sediment discharge rate of water shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses." Water quality criteria apply within receiving waters as opposed to applying directly to runoff; therefore, water quality from the Tulare Lake Basin Plan are utilized as benchmarks to evaluate the potential ecological impacts of projects runoff on the receiving waters of the proposed Project.

Waterbodies, including surface water and groundwater, with a municipal and domestic supply designated beneficial use (MUN) are not to have concentrations that exceed maximum contaminant levels (MCLs). Federal MCLs are established by U.S. EPA, and California MCLs are established by the SWRCB-DDW under the California Safe Drinking Water Act. California MCLs are in Title 22 of the California Code of Regulations (CCR)). The MCLs consist of (1) primary MCLs, which are enforceable standards for contaminants that present a risk to human health, and (2) secondary MCLs, which are non-mandatory standards established to assist public water systems in managing drinking water for aesthetic considerations, such as taste, color and odor, but do not relate to a health risk. The U.S. EPA sets the secondary MCL for TDS at 500 milligrams per liter (mg/L). The SWRCB-DDW sets a recommended MCL of 500 mg/L, and upper concentrations of 1,000 mg/L and a short-term upper limit of 1,500 mg/L.

CALIFORNIA CODES

State of California, Sections 2600(c) and 26100 Business and Professions Code.

State of California Department of Public Health Food and Drug Branch Regulations.

State of California, Section 19353 of the Business and Professions Code, and Sections 11362.775 and 11362.9 of the Health and Safety Code, Federal FDA Practices and Standard Operating Procedures.

Local

Metropolitan Water Resources Management Plan (2014)

The Metropolitan Water Resources Plan, which was originally adopted in 1996, was updated in 2014 and includes a comprehensive and integrated water supply plan for management of the City's water supplies, addresses groundwater level declines beneath the City's service area and groundwater quality concerns, and further balances and optimizes the City's use of its water supply sources.

Urban Water Management Plan (2015)

This 2015 UWMP describes the City's water demands and supplies, reliability and water conservation strategies. The 2015 UWMP includes data covering the years from 2011 to 2015. The 2015 UWMP has been prepared to include the recommended chapters, discussions and data reporting required by the CWC and is based on the 2015 UWMP Guidebook provided by DWR.

Recycled Water Master Plan (2010)

The Recycled Water Master Plan is intended to serve as a basis to support the City's decision-making process in selecting recycled water projects. The expansion of the recycled water system will enable the City to offset potable water use, enhance the sustainability of the water supply, and lessen the burden on the wastewater treatment plant percolation ponds that are currently used for effluent discharge.

Municipal Code

Chapter 6-Municipal Services and Utilities, includes the following Articles specific to Hydrology and Water Quality.

Article 3 - Sewage and Water Disposal establishes provisions for the protection of the City's Publicly Owned Treatment Works (POTW) as related to wastewater collection and treatment systems. This Chapter provides a list of discharge prohibitions and local limits for wastewater discharged into the City's POTW. It includes control authority to exercise permitting, inspections and/or enforcement of violations related to the conditions and/or prohibitions set forth in the Fresno Municipal Code or the National Pretreatment Program.

Article 4 – Wells, includes compliance requirements and development standards specific to water wells.

Article 5 – Water Regulations, provides the rules and regulations specific to water systems and service connections.

Article 7 - Urban Storm Water Quality Management and Discharge Control, of the Fresno Municipal Code establishes provisions regarding stormwater discharges. The purpose and intent of Article 7 is to ensure the health, safety, and general welfare of residents, and to protect the

water quality of surface water and groundwater resources in a manner pursuant to and consistent with the Federal CWA by reducing pollutants in urban stormwater, discharges to the maximum extent practicable, and by effectively prohibiting non-stormwater discharges to the storm drain system.

Article 9 – Recycled Water Ordinance, provides the processes, procedures, and requirements to provide recycled water to all service areas in the City identified in the Recycled Water Master Plan (currently under development).

Other applicable City of Fresno Code sections affecting cannabis cultivation, processing and sales are:

- City of Fresno Article 35, Municipal Code Section 9-3312, prohibiting outdoor cultivation of cannabis.
- City of Fresno, Municipal Code Chapter 11, Building Permits and Regulations; Chapter 15, Citywide Development Code; Article 21 of Chapter 12; California Building Code, Title 21.
- City of Fresno, Municipal Code, Article 33, Chapter 9, defining permitted types of retail and commercial cannabis businesses.
- The Project: Fresno Municipal Code, amendment to Sections 15-2739 and 15-2739.1, Article 33, Chapter 9, and Article 21, Chapter 12 relating to adult use and medicinal cannabis retail and commercial business.

CITY OF FRESNO GENERAL PLAN

Objective PU-8. Manage and develop the City's water facilities on a strategic timeline basis that recognizes the long life cycle of the assets and the duration of the resources, to ensure a safe, economical, and reliable water supply for existing customers and planned urban development and economic diversification.

Policy PU-8-a - Forecast Need. Use available and innovative tools, such as computerized flow modeling to determine system capacity, as necessary to forecast demand on water production and distribution systems by urban development, and to determine appropriate facility needs.

Policy PU-8-b - Potable Water Supply and Cost Recovery. Prepare for provision of increased potable water capacity (including surface water treatment capacity) in a timely manner to facilitate planned urban development consistent with the General Plan. Accommodate increase in water demand from the existing community with the capital costs and benefits allocated equitably and fairly between existing users and new users, as authorized by law, and recognizing the differences in terms of quantity, quality and reliability of the various types of water in the City's portfolio.

Policy PU-8-c - Conditions of Approval. Set appropriate conditions of approval for each new development proposal to ensure that the necessary potable water production and supply facilities and water resources are in place prior to occupancy.

Policy PU-8-d - CIP Update. Continue to evaluate capital improvement programs and update them, as appropriate, to meet the demands of both existing and planned development consistent with the General Plan.

Policy PU-8-e - Repairs. Continue to evaluate existing water production and distribution systems and plan for necessary repair or enhancement of damaged or antiquated facilities.

Policy PU-8-f - Water Quality. Continue to evaluate and implement measures determined to be appropriate and consistent with water system policies, including prioritizing the use of groundwater, installing wellhead treatment facilities, constructing above-ground storage and surface water treatment facilities, and enhancing transmission grid mains to promote adequate water quality and quantity.

Policy PU-8-g - Review Project Impact on Supply. Mitigate the effects of development and capital improvement projects on the long-range water budget to ensure an adequate water supply for current and future uses.

City of Fresno Specific Plans

The City of Fresno has 11 Specific Plans. Specific Plans guide future development within its defined area. Plans layout long-term goals, as well as an implementation plan for immediate and midterm actions. Policies that assist in implementing these goals, provide a basis for urban and economic growth with the plan area. Development within those plan areas that have been repealed, development standards will be deferred to the Development Code for the corresponding zone district. The Specific Plan and Community Plans are intended to be consistent with the General Plan. Proposed project sites are located throughout the City and included in these Specific Plan areas.

City of Fresno Community Plans

The City of Fresno has eight Community Plans. Community Plans establish the City's statement of policy for the development of the specific area defined in the plan. Community Plans lays out the quality and character of future development, a service plan for distribution, extent, and capacity of public and private services, which are essential to the development of a community. Any development, within the community plan areas that have been repealed, development standards will be deferred to the Development Code for the corresponding zone district.

City of Fresno Neighborhood Plans

The City of Fresno has three Neighborhood Plans. Neighborhood Plans include the areas of Pinedale, El Dorado Park, and Old Fig Garden. A Neighborhood Plan can provide guidelines which

depicts how a neighborhood grows by adopting policies pertaining to those certain goals. This provides a channel of communication between residents and the local agency by being engage with the decision making as it affects the development of the neighborhood.

4.10.4 - IMPACTS AND MITIGATION MEASURES

Methodology

In order to evaluate the hydrology and water quality impacts of the Project, it is necessary to:

- Demonstrate the locations of Project-proposed cannabis facilities and sites within the City (see Figures 3-3, 3-4 and 3-5);
- Estimate the water demands of Project-authorized facilities and compare those demands to current City General Plan-authorized water demand; and
- Evaluate any potential impacts on water quality of cannabis-derived wastewater.

The Project includes the implementation of the following cannabis-related activities and facilities:

CULTIVATION, DISTRIBUTION AND MANUFACTURING

- Cultivation, Distribution, and manufacturing activities are similar in regard to the ratio of personnel/equipment to acreage.
- Eight total businesses would be permitted inside the Cannabis Innovation Zone.
- Eight businesses would be permitted within industrial zoned property within a half mile of Highway 99 between Shaw and Clinton Avenues, or within one mile of Highway 99 north of Shaw and south of Clinton Aves., or within one mile of Highway 180 west of Highway 99. All buildings in which a cultivator, distributor, or manufacturer is located shall be located no closer than 1,000 feet from any property boundary containing a residence, school, daycare, or youth center.
- It is assumed that Cultivation, Distribution, and Manufacturing will be limited to a combined total of 16 acres (700,000 sf).

TESTING LABORATORIES

- Testing laboratories may take place in a Commercial, Employment, or Downtown District. There is not limit on how many may be permitted.
- It is assumed that Testing Laboratories will be limited to a combined total of 100,000 sf.

CANNABIS RETAILERS

- Twenty-one total possible cannabis retail locations – this includes up to 14 medicinal and/or adult use cannabis retail locations (two per Council District); with the potential to add seven additional retailers (one additional per Council District) upon Council Resolution.

- Retailers would be restricted to the DTN (Downtown Neighborhood), DTG (Downtown General), CMS (Commercial Main Street), CC (Commercial Community), CR (Commercial Regional), CG (Commercial General), CH (Commercial Highway), NMX (Neighborhood Mixed-Use), CMX (Corridor/Center Mixed Use), or RMX (Regional Mixed-Use) zone districts. In addition, retailers would be required to maintain a minimum distance of 800 feet from any property boundary containing another cannabis retailer, school, daycare center, or youth center (i.e. parks, playgrounds, facilities hosting activities for minors)

- It is assumed that Cannabis Retailers will be limited to a combined total of 55,000 sf.

Thresholds of Significance

Appendix G of the California Environmental Quality Act (CEQA) Guidelines as amended contains analysis guidelines related to the assessment of hydrology and water quality impacts. A project would result in a significant impact if it would:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater;

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:

   i. result in substantial erosion or siltation on- or off-site;

   ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;

   iii. 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

   iv. 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.

Project Impacts

Impact 4.10-1: Violate Any Water Quality Standards or Waste Discharge Requirements or Otherwise Substantially Degrade Surface or Groundwater Quality

As discussed in Section 4.4, *Biological Resources*, cultivation activities have been identified by the California State Water Resources Control Board (Water Board) as having a potential impact to wildlife due to water runoff containing pesticides and other harmful chemicals being introduced to natural water ways. The Water Board has adopted policies, in consultation with CDFW, to reduce these impacts. According to the Cannabis Cultivation Policy document, adopted on February 5, 2019, indoor cultivation activities are conditionally exempt, if they meet the following criteria:

> *Commercial cannabis cultivation activities are classified as conditionally exempt if they occur within a structure with a permanent roof, a permanent relatively impermeable floor (e.g., concrete or asphalt paved), comply with this Policy and all applicable Requirements in Attachment A, and either: 1) discharge all industrial wastewaters generated to a permitted wastewater treatment collection system and facility that accepts cannabis cultivation wastewater; or 2) collect all industrial wastewater in an appropriate storage container to be stored and properly disposed of by a permitted wastewater hauler at a permitted wastewater treatment facility that accepts cannabis cultivation wastewater. To obtain documentation of the conditionally exempt status to obtain a CDFA commercial cannabis cultivation license, conditionally exempt commercial cannabis cultivators are required to obtain coverage under the Waiver. Refer to the Application Process and Fees section of the Cannabis Cultivation General Order for information on the Cannabis Cultivation General Order's application requirements. (California State Water Resources Control Board, 2019)*

In order to obtain exempt status, applicants are required to obtain a waiver from the Water Board website. The proposed Project only allows for indoor cultivation; therefore, with implementation of Mitigation Measure MM 4.4-1, below, impacts associated with harmful runoff are considered less than significant.

MM 4.4-1: Prior to commencement of operations of any cultivation facility, the Project applicant shall submit to the City of Fresno Planning and Development Department written documentation of a waiver from the California State Water Control Board Cannabis Cultivation General Order.

As noted in Section 4.7, *Geology and Soils*, the Project would comply with federal CWA, as well as SWRCB regulations that may require adherence with NPDES General Permit and the preparation of a SWPPP and site-specific BMPs for erosion and sediment control. Furthermore, implementation of a SWPPP would identify measures regarding the handling of these types of materials and the protocols for actions taken if a spill or release does occur. Implementation of these requirements would reduce the potential for groundwater contamination or degradation of water quality.

In addition, Section 4.9, *Hazards and Hazardous Materials* include specific mitigation to reduce the threat of chemical usage including solvents and pesticides. These mitigations measures include:

MM 4.9-1: As part of the Conditional Use Permit Application, all commercial cannabis related businesses which may utilize hazardous materials, shall include a Hazardous Materials Business Plan (HMBP) and a Waste Management Plan (WMP), approved by the Fresno County Environmental Health Department. The HMBP shall include, at a minimum, floor plans of the facility and business conducted at the site; an inventory of hazardous materials that are handled or stored onsite; and an Emergency Response and Training Plan. The WMP shall include a list of all byproducts associated with cannabis manufacturing, and a plan for proper disposal, at an approved facility.

MM 4.9-2: For cannabis processing operations with systems that use solvents that are potentially flammable or toxic, the project applicant shall provide written verification to the Fresno County Environmental Health Department and the City of Fresno Planning and Development Department that the cannabis operations meet the following requirements:

1. Use a closed-loop system that will prevent off-gassing;

2. Use solvents that are recognized as safe pursuant to the Federal Food, Drug and Cosmetic Act;

3. Have a licensed engineer certify that the system was commercially manufactured, is safe for its intended use, and was built to codes of recognized and generally accepted good engineering practices, including, but not limited to, the American Society of Mechanical Engineers, the American National Standards Institute, Underwriters Laboratories, the American Society for Testing and Materials, or Occupational Safety and Health Administration Nationally Recognized Testing Laboratories;

4. Have a certification document that includes the unit's serial number and is signed by a professional engineer;

5. Receive and maintain approval from local fire officials for the closed-loop system, other equipment, the extraction operation and the facility; and

6. Adhere to federal, State and local fire protection standards.

MM 4.9-3: Volatile Manufacturing Employee Training Plan. Cannabis activities dealing in volatile manufacturing shall develop a Volatile Manufacturing Employee Training Plan (Training Plan) and submit to the City as part of the permitting and licensing process. Volatile manufacturing means to compound, blend, extract, infuse, or otherwise make or prepare a cannabis product with the use of volatile solvents or substances including but not limited to, butane and ethanol. The Training Plan shall detail how the licensed volatile manufacturing operators will train their employees on the proper use of equipment and on the proper hazard response protocols in the event of equipment failure, per established OSHA standards. The Training Plan shall include a log, identifying trained employees and the date upon which training was completed.

Mitigation Measures

Implement MM 4.9-1 through MM 4.9-3.

MM 4.10-1: Concurrent with submittal of a conditional use permit for any cultivation facility, the applicant shall submit to the City Planning and Development Department a Wastewater Control Plan (WCP). The WCP shall include best management practices for capture and treatment of runoff (including recycling systems for capture and reuse of produced water, disclosure of pesticides to be used, and amounts of individual contaminate concentrates that will be disposed of through public wastewater treatment facilities. If contaminate concentrations exceed wastewater standards, pretreatment of wastewater will be required, prior to disposal. The plan shall also outline the materials to be used to create impermeable flooring surfaces and containment directly beneath all cultivation areas and associated walkways.

Level of Significance After Mitigation

Impacts would be *less than significant with mitigation.*

Impact 4.10-2: Substantially Decrease Groundwater Supplies or Interfere Substantially with Groundwater Recharge Such That the Project May Impede Sustainable Groundwater Management of the Basin

The City of Fresno 2015 Urban Water Management Plan was adopted by the City Council, June 2016. This document evaluates the adequacy of the City's groundwater and surface water supply through 2040. This assessment reflects the information in that document and based on information furnished by the City of Fresno Water Division staff.

The City of Fresno is a major participant in the development of the Sustainable Groundwater Management Plan for the Kings Basin by the North Kings Groundwater Sustainability Agency. The Plan was completed and submitted to the State in January 2020. It will detail the steps which must be implemented to achieve groundwater sustainability within Agency boundaries by 2040.

Based on available data on water usage by land use type, light industrial warehousing and distribution uses are estimated to have an annual water usage 0.07-acre feet per year per 1,000 sq. ft (City of Santa Barbara, 2009). If all 16 commercial cannabis licenses were for distribution

only, the estimated water usage would be 48.8-acre feet per year (16 acres x 43,560 square feet per acre x .07-acre feet per year/ 1,000 sq. ft.). Light manufacturing uses are estimated to have an annual water usage 0.15-acre feet per year per 1,000 sq. ft. If all 16 commercial cannabis licenses were for manufacturing only, the estimated water usage would be 104.5-acre feet per year (16 acres x 43,560 square feet per acre x 0.15-acre feet per year/ 1,000 sq. ft.).

Water usage for indoor cultivation of cannabis can vary widely based on many factors (type of watering techniques, crop rotation, species, etc.). In order to calculate an estimated amount of water consumption for this proposed Project, certain assumptions were used based on available data. CalNORML estimates one gram of cannabis requires one gallon of water to produce (California NORML, 2015). Indoor cannabis cultivation is estimated to produce 40 grams per sq. ft. per harvest (BOTEC Analysis Corporation). Available data suggests the total number of harvests per year range from 1-12, with most sources using four harvests as a reasonable estimate (Caulkins, 2010).

Using these assumptions, 160 grams of cannabis would be produced per sq. ft. per year. Assuming a total of 700,000 sq. ft. of cultivation, 112,000,000 grams of Cannabis could be produced per year. This would equate to 112,000,000 gallons of water per year, or 343-acre feet per year, if all 700,000 sq. ft. were permitted as cultivation only. It should be noted that this estimate is more than 10 times the typical industrial use estimates as accounted for in the 2014 Metropolitan Water Resources Management Plan Update.

There is no significant water usage for testing laboratories or retail businesses, apart from that customary for these types of non-cannabis usage (restrooms, sinks, etc.). Conservatively, water usage for testing laboratories would be 2.06-acre feet (100,000 sq. ft./43,560 x 0.9-acre feet per acre per year). Retail businesses would use 2.15-acre feet (55,000 sq. ft./43,560 x 1.7-acre feet per acre). The maximum estimated water use for both testing laboratories and retail businesses would be 4.21-acre feet per year.

The exact configuration of permits that will be applied for and granted is not known at this time. It is reasonable to assume there would be a mix of cultivation, distribution, manufacturing, retail and testing laboratories. In order to accurately estimate the total water demand for the proposed Project, the following combination of facilities were used:

- Eight commercial cannabis licenses would be used for cultivation
- Four for manufacturing
- Four for distribution
- 21 retail businesses (55,000 sq. ft.)
- Five testing laboratories (100,000 sq. ft.)

Table 4.10-5
Project Estimated Water Demand

License Type	Number of Licenses	Water Demand per License (af/yr)	Total Water Demand (af/yr)
Cultivation	8	21.4	171.2
Manufacturing	4	6.5	21.1
Distribution	4	3.1	12.4
Retail	21	0.1	2.1
Testing Laboratories	5	0.4	2.1
Total	42	31.5	208.9

As noted in Table 4.10-5, the estimated maximum total water demand of the Project is approximately 208.9-acre feet per year, approximately 0.17 percent of the City's current total water demand (120,067) acre feet per year.

As noted above, the typical industrial use estimates accounted for in the 2014 Metropolitan Water Resources Management Plan Update were 2.0-acre-ft/acre. For comparison purposes, using 2.0-acre-ft/acre for typical industrial uses on 16-acres would be approximately 32-acre feet. The proposed Project's unmitigated water demand would exceed the typical industrial use demand by more than 6.5 times.

The City of Fresno Municipal Code prohibits open-air, non-structure-housed cannabis production. Available, peer-reviewed, literature discloses no documented wastewater or surface runoff-water quality impacts of structure-housed cannabis production or processing; however, best management practices should be adhered to. Mitigation Measure MM 4.10-1 would require impermeable flooring and the submittal of a Wastewater Control Plan, which will require quantification of wastewater contaminants and proper pretreatment prior to disposal.

Additionally, the estimated 208.9-acre feet of water usage per year will be reduced through the compliance with MM 4.10-1. The Wastewater Control Plan also requires the applicants of any cultivation facility to comply with BMPs for the capture and reuse of produced water. Based on information from companies specializing in water reuse systems, wastewater reuse can exceed 80 percent reductions in overall water use (Doherty, n.d.). Common systems include equipment to capture produced water and store it in holdings tanks. UV sterilization is used to eliminate microbes. Water is then pumped through a reverse osmosis (RO) membrane to remove inorganic solids (salts). Discharge tempering systems are used to regulate the quality and quantity of the discharge to regulate levels of salts and biochemical oxygen demand. These systems allow for data logging to be used to comply with City regulations pertaining to discharge.

The City of Fresno's water usage, even in multiple dry years, approximates 120,067-acre feet per year. The incremental usage of the potential cannabis facilities is less than one percent (0.17) of

that usage. The Project incorporates dispersion of cannabis facilities, assuring no localized impacts to the overall water system (see Impact 4.19-1 for more information on water service connection). The impact of the Project is less than significant with incorporated mitigation measures.

Mitigation Measures

Implement Mitigation Measures MM 4.10-1.

Level of Significance

The impact is *less than significant with mitigation.*

Impact 4.10-3(i): Substantially Alter the Existing Drainage Pattern of the Site or Area, Including Through the Alteration of the Course of a Stream or River, or Through the Addition of Impervious Surfaces, in a Manner Which Would: Result in Substantial Erosion or Siltation On- or Off-Site

The Project consists of existing structures or construction of new facilities corresponding to existing zoning. As noted in Section 4.4, *Biological Resources,* the Project does not propose any activities that would impact canals or the river. The permitting of cannabis commercial activity would not result in adverse changes to the streams and creeks in the Project area, as all industrial and commercial development permitted as a result of the proposed Project would comply with applicable federal, State, and local regulations, codes and development standards.

With adherence to existing City ordinances and regulations regarding usage and construction activities (requirement of SWPPPs, drainage plans, slope stability reporting, etc.), no alterations of streams or rivers, which would result in substantial erosion or siltation, will occur. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be *less than significant.*

Impact 4.10-3(ii): Substantially Alter the Existing Drainage Pattern of the Site or Area, Including the Alteration of the Course of a Stream or River or Through the Addition of Impervious Surfaces, or Substantially Increase the Rate or Amount of Surface Runoff in a Manner Which Would Result in Flooding On- Or Off-Site

The proposed Project does not include alterations to any waterways or excessive runoff sources that would require approvals other than standard City regulatory review. Compliance with the State Subdivision Map Act may, for some Project-permitted actions, be required in addition to

each actions' compliance with General Plan requirements, zoning, the City's grading ordinance and Uniform Building Code regulations, and the Fresno Metropolitan Flood Control District requirements. See Impact 4.10-3(i), above.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be *less than significant*.

Impact 4.10-3(iii): Substantially Alter the Existing Drainage Pattern of the Site or Area, Including Through the Alteration of the Course of a Stream or River or Through the Addition of Impervious Surfaces, in a Manner Which Would Create or Contribute Runoff Water Which Would Exceed the Capacity of Existing or Planned Stormwater Drainage Systems or Provide Substantially Additional Sources of Polluted Runoff

See Impacts 4.10-1, 4.10-2, 4.10-3(i) and 4.10-3(ii), above.

The Fresno Metropolitan Flood Control District has implemented an effective Storm Drainage Master Plan. The Project would adhere to all requirements related to this Plan and would not generate any substantially additional sources of polluted runoff. Potential water-quality related runoff issues would be less than significant with implementation of MM 4.10-1.

Mitigation Measures

Implement Mitigation Measure MM 4.10-1.

Level of Significance After Mitigation

Impacts would be *less than significant with mitigation.*

Impact 4.10-3(iv): Substantially Alter the Existing Drainage Pattern of the Site or Area, Including Through the Alteration of the Course of a Stream or River or Through the Addition of Impervious Surfaces, in a Manner Which Would impede or redirect flood flows

See Impacts 4.10-3(i) and 4.10-3(ii), above.

The Project consists of existing structures or construction of new facilities corresponding to existing zoning. With application of existing City ordinances and regulations regarding usage and construction, no alterations of streams or rivers, or flood plains that would result in substantial erosion or siltation, or redirection of flood flows will occur. Therefore, no significant impacts will occur.

Mitigation Measures

Implement Mitigation Measure MM 4.10-1.

Level of Significance After Mitigation

Impacts would be *less than significant with mitigation.*

Impact 4.10-4: In Flood Hazard, Tsunami, or Seiche Zones, Risk Release of Pollutants Due to Project Inundation

The location of the City and the Project site's locations are on essentially flat ground with little topography. As noted in Section 4.4, *Biological Resources*, the northwestern half of the City is within a minimal flood hazard zone, while the southeastern half is within a 0.02 percent annual chance flood hazard zone in many areas). Near the border between Fresno and Clovis, and near the southwestern border of Fresno, there are smaller areas that fall within a one percent annual chance flood hazard zone (see Figure 4.10-3). The Project is not in close proximity to any significant water body or topographic slopes.

New future cannabis-related facilities, not located within existing structures, could be located within areas of special flood hazards and would be required to comply with the Fresno Grading and Development Standards, Fresno Metropolitan Flood Control District, and Fresno Zoning Ordinances. Any activity that requires fill to be placed within a FEMA Floodplain which alters the limits of the floodplain is required to process a Letter of Map Revision based on Fill (LOMR-F) with FEMA. All applicable federal, State, and local requirements and BMPs would be incorporated into construction of new or modified structures.

A tsunami is typically a wave, or series of waves, generated in a large body of water (typically the ocean) by fault displacement or major ground movement. The City is more than 100 miles from the nearest coastline, buffered by mountainous regions and surrounded by valley terrain.

A seiche is defined as a large, standing wave in an enclosed or partially enclosed body of water, such as a lake or reservoir. There are several flood control facilities that have been constructed throughout the County to address the need for flood prevention plans. Such facilities include Redbank Reservoir, Big Dry Creek Reservoir, Millerton Reservoir, Pine Flat Reservoir, Mendota Pool, Friant-Kern Canal, Fresno Slough, and James Bypass. However, there are no large bodies of water or lakes within the Project boundary.

The closest dam is the Friant Dam, located approximately 14 miles northeast of the center of the City. If the Friant dam fails portions of the City and the Project would be inundated by water, which is depicted in Figure 4.10-4. Future cannabis-related facilities and businesses located within areas of flooding as a result of the failure of a levee or dam would comply with the requirements and construction design specifications of City grading and municipal code standards and Floodplain Management and the City Zoning Ordinances. In addition, the proposed

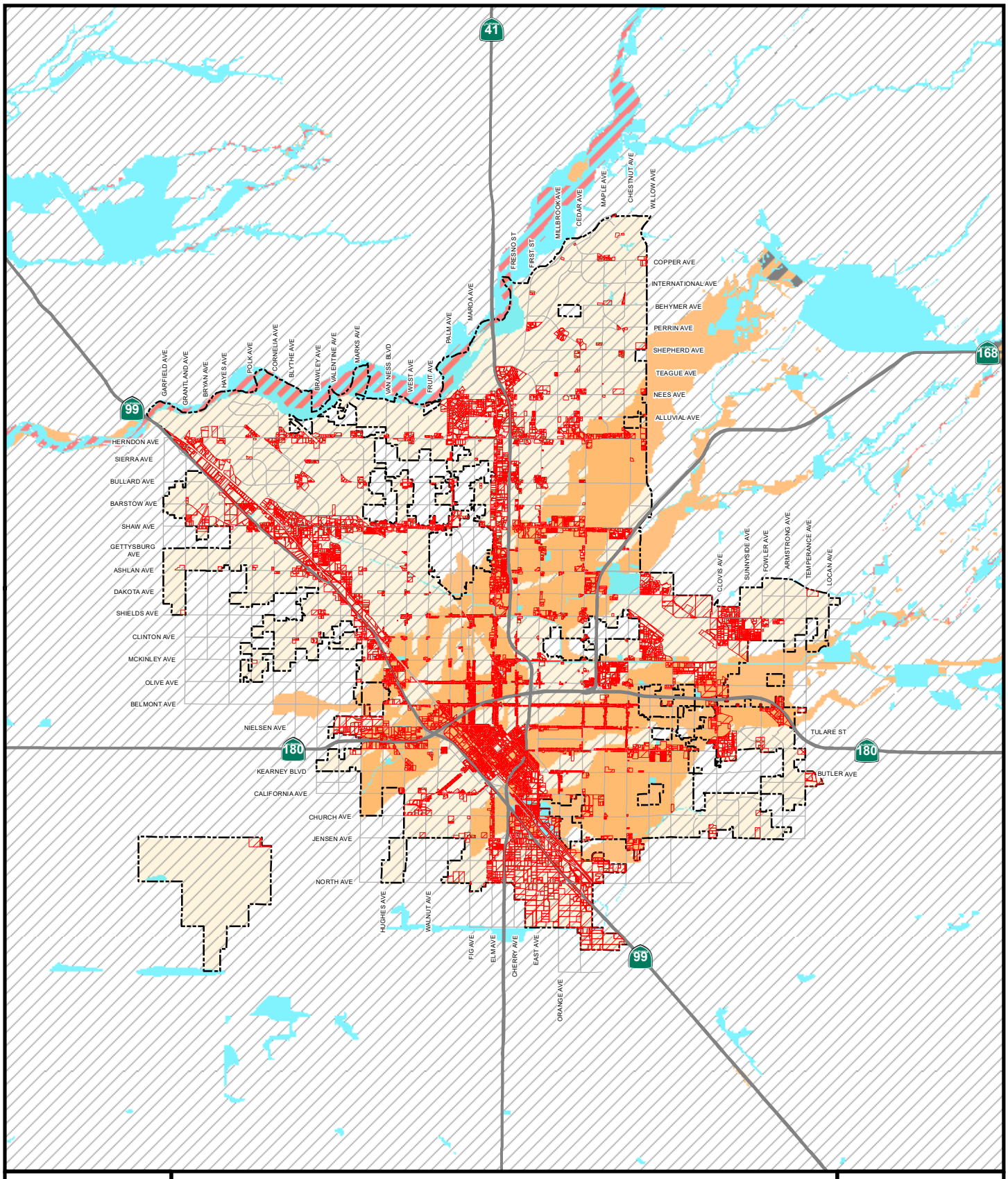


Figure 4.10-3

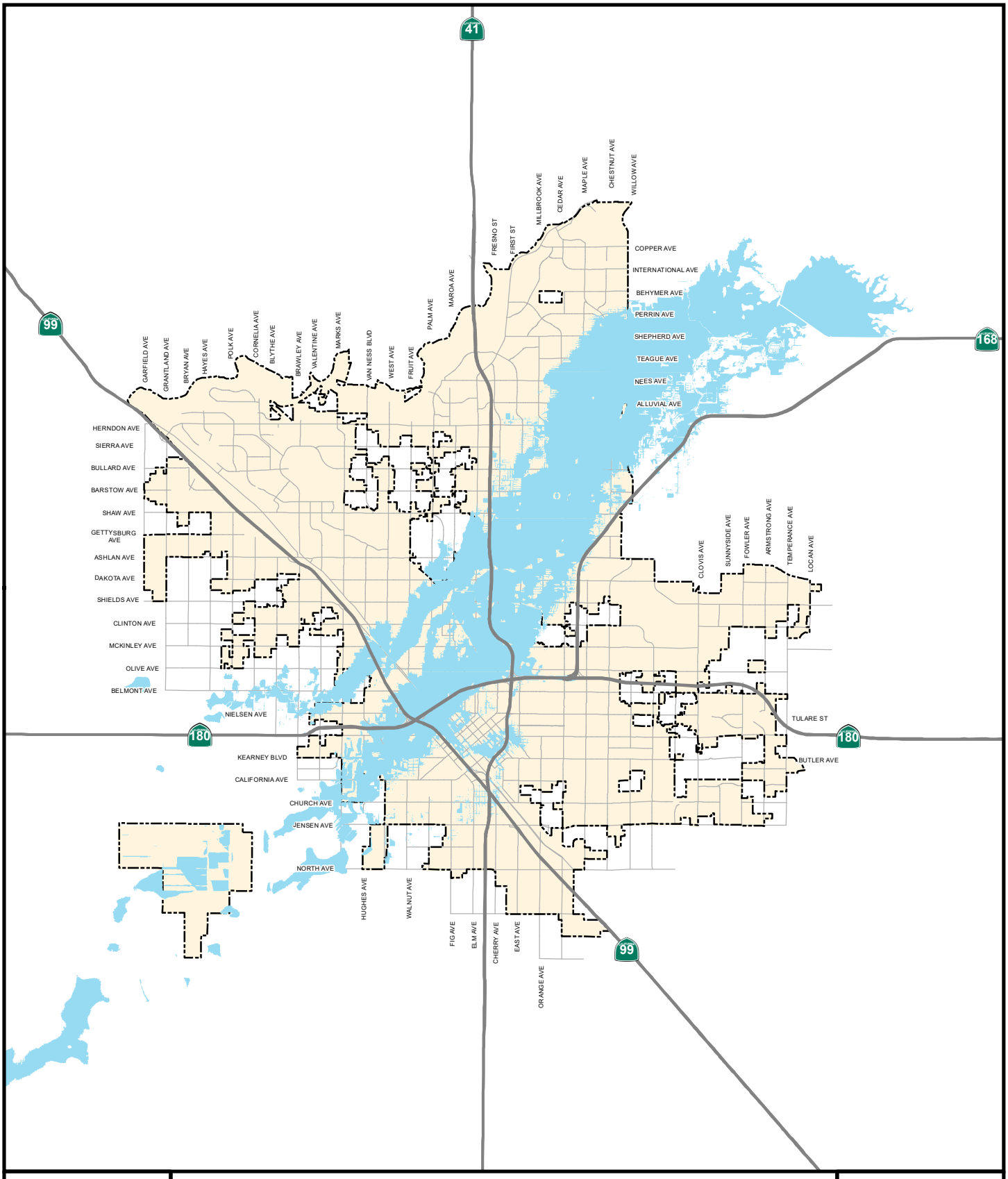
FEMA Flood Hazards

- Eligible Sites
- 1% Annual Chance Flood Hazard
- 0.2% Annual Chance Flood Hazard
- Area with Reduced Risk Due to Levee
- Regulatory
- Area of Minimal Flood Hazard
- City

N

0 3 Miles

QK Sources: FEMA NHFL Dataset



Potential Dam Flood Inundation

Dam Inundation Boundary

City Limits

N

0 3

Miles

QK Sources: USGS National Hydrologic Dataset

Figure 4.10-4

Project is not anticipated to result in a substantial population increase, as discussed in Section 4.14, *Population and Housing*. As a result, the proposed Project would not substantially affect the number of residents or employees within the County that are located within areas on inundation as a result of the failure of a levee or dam. Impacts would be less than significant.

Therefore, impacts from flood, seiche or inundation would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be *less than significant*.

Impact 4.10-5: Conflict with or Obstruct Implementation of a Water Quality Control Plan or Sustainable Groundwater Management Plan

The City of Fresno 2015 Urban Water Management Plan was adopted by the City Council, June 2016. This document evaluates the adequacy of the City's groundwater and surface water supply through 2040. Further updates to information provided in the 2015 Urban water management Plan is based on information furnished by the City of Fresno Water Division staff.

As noted in Table 4.10-5, the estimated maximum total water demand of the Project is approximately 208.9-acre feet per year, approximately 0.17percent of the City's current total water demand (120,067) acre feet per year.

The City is a major participant in the development of the Sustainable Groundwater Management Plan for the Kings Basin by the North Kings Groundwater Sustainability Agency. The Plan was completed and submitted to the State in January 2020. The Plan details the steps which must be implemented within Agency boundaries to achieve groundwater sustainability within Agency boundaries by 2040.

The City of Fresno's water usage, even in multiple dry years exceeds 120,000-acre feet per year. The incremental usage of the potential cannabis facilities is less than one percent of that usage. The Project incorporates dispersion of usage facilities, assuring no localized impacts to the water system.

The Final PEIR for CalCannabis Cultivation Licensing, completed by the California Department of Food and Agriculture (California Department of Food and Agriculture, 2017), concluded a less-than-significant impact to Hydrology and Water Quality. These conclusions, similar to those in this project EIR, are based on facts that include - businesses would generally operate indoors and would not have a direct mechanism to affect water quality, businesses that do generate wastewater would be required to dispose of it in accordance with applicable laws and regulations, outdoor components of these businesses, including vehicle parking, would be

subject to local stormwater management requirements. The PEIR analysis assumes that local jurisdictions would ensure and enforce compliance with local requirements.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts are *less than significant*.

Cumulative Setting Impacts and Mitigation Measures

CUMULATIVE SETTING

The study area for the analysis of cumulative impacts is the City of Fresno and the unincorporated portions of Fresno County located adjacent to the cty limits, as well as portions of the City of Clovis and the County of Madera adjacent to the City of Fresno. The applicable cumulative projections include growth projections from the City of Fresno General Plan, Fresno County General Plan, Madera County General Plan, and the City of Clovis General Plan.

The City of Fresno General Plan was last adopted in the year 2014. Anticipated development within the General Plan includes 186,840 dwelling units, 66.4 million square feet (msf) of commercial/office/public facility, 100,000 sf of mixed uses, and 72.8 msf of industrial uses. The General Plan contains approximately 11,714 acres of agricultural land, 12,288 acres of open space, and 12,522 acres of vacant land. Existing agricultural land is primarily located in the southeastern and western portions of the General Plan.

The General Plan contains two major rail lines that generally traverse in a southeast to northwest direction. These railways include the Union Pacific Railroad line that is generally located along SR-99, and the BNSF Railway that diverges from the SR-99 in the southwest and travels through the Downtown to the northwest. There are three airports located within the City of Fresno including the Fresno-Yosemite International Airport located in the eastern portion of the Planning Area, the Fresno-Chandler Downtown Airport located west of Downtown, and Sierra Sky Park Airport that is located on the northern portion of the General Plan.

The County of Fresno General Plan was last adopted in the year 2000. The County General Plan was prepared to accommodate population growth through the year 2020, consistent with the California Department of Finance projection of 1.1 million by 2020. This represents an additional population of approximately 344,000, which includes the year 2020 projections outside the sphere of influences for cities within the East Valley area, which is located east of Interstate 5. Additional development projects are proposed northeast of the City of Fresno Project area including Friant Ranch that represents an additional population of approximately 164,693 through the year 2020.

The County of Madera General Plan was last adopted in the year 1995. The Madera County General Plan identifies population and employment growth projections through the year 2010 and includes 177,071 people and 61,866 employees. Since the adoption of Madera County's General Plan, substantial new development projects have been proposed in the southern portion of Madera County, some of which is proposed within close proximity of the City of Fresno Project area including Gateway, Gunner Ranch, Liberty Groves, North Fork Village, Tesoro Viejo, and River Ranch Estates. These projects include approximately 23,000 units, and supporting uses such as commercial, public facilities, parks, and open space.

The City of Clovis General Plan was last adopted in the year 2014. The Clovis General Plan forecasts the ultimate buildout of the entire Clovis General Plan area that is expected to occur for at least 70 years. The Clovis General Plan forecasts an additional 65,100 residential units, 179,300 population, and 38,250,000 square feet of buildings.

CUMULATIVE IMPACTS

A small percentage of the Project eligible sites are vacant infill lots that can support new development, all of which are located in existing commercial and industrial zones and in urbanized areas. The majority of the Project eligible sites are fully serviced industrial and commercial lots that have been improved with industrial and commercial uses and buildings. Therefore, implementation of the proposed Project may include development of new buildings and sites, and changes to occupancies of existing buildings and sites, which could result in impacts relating to hydrology and water quality.

CEQA Section 15130 (a) states: An EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in Section 15065(a)(3). Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

Implementation of the Project would result in a less-than-significant impact on water quality and runoff (Impacts 4.9-1, 4.9-5, and 4.9-6). Future cannabis-related activities and facilities requiring construction would be required to incorporate BMPs and an NPDES Permit, with associated SWPPP. Future cannabis-related activities within the Central Valley RWQCB requires that cannabis cultivators enroll in the Cannabis Cultivation Waste Discharge Regulatory Program. Mitigation Measure MM 4.4-1 requires evidence of a waiver from the Cannabis Cultivation General Order requirement.

Future cannabis-related facilities and activities could result in water quality degradation during construction or operation as a result of runoff and wastewater generation. Mitigation Measures MM 4.9-1 through MM 4.9-3 would reduce the severity of impacts. Other projects in the cumulative area would be required to comply with BMPs, NPDES Permit, and SWPPP, as well as runoff and wastewater BMPs.

Regarding altering drainage patterns such that runoff results in increased erosion, siltation, or flooding (Impacts 4.10-3(i) through 4.10-3(iii)), would require that future cannabis-related facilities and activities comply with federal, State, and local requirements and BMPs, and well as incorporate Mitigation Measure MM 4.10-1. Future cannabis cultivators within the Central Valley RWQCB would also be required to enroll in the Cannabis Cultivation Waste Discharge Regulatory Program. Other projects in the cumulative area would be required to comply with federal, State, and local requirements cited in Section 4.10.3, Regulatory Setting (above), as well as requirements from the Central Valley RWQCB and project-appropriate mitigation measures. Therefore, the Project would not result in a significant cumulative impact.

The implementation of cumulative development that is located outside of the Project area, such as development that would occur within the City of Clovis, the County of Fresno, and the County of Madera, would not result in the potential for cumulative impacts relating to hydrology and water quality because the City, Project area, and surrounding areas are not downstream from any significant water body or topographic slopes, and are in full compliance with all applicable federal, State, and local regulations pertaining to hydrology and water quality.

Mitigation Measures

Implement MM 4.9-1 through MM 4.9-3, and MM 4.10-1

Cumulative Level of Significance

Cumulative impacts *would be less than significant with mitigation.*

4.11 - Land Use and Planning

4.11.1 - INTRODUCTION

This section addresses potential land use impacts that are associated with the Proposed Regulation and Permitting of Commercial Cannabis Activities (Project). The following discussion addresses existing environmental conditions in the affected environment, evaluates the proposed Project's consistency with applicable goals and policies, identifies and analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from proposed Project construction and operation.

4.11.2 - ENVIRONMENTAL SETTING

Regional

The City of Fresno (City) is located in Fresno County and is situated in the central portion of the San Joaquin Valley, in the State of California. The City encompasses approximately 113 square miles. Fresno is the largest city in Fresno County and has a current estimated population of 536,683 residents (California Department of Finance, 2019). Fresno County is California's sixth largest county in land area and encompasses approximately 6,011 square miles.

Local

The topography of the City is relatively flat with little topographic variation. It occurs at an elevation of approximately 328 feet above mean sea level (AMSL). The surrounding land is relatively flat with a sharp rise towards the foothills of the Sierra Nevada Mountain Range to the east. State Route (SR) 99 runs northwest-southeast on the western edge of the City, connecting it with Sacramento and Bakersfield. SR-41 runs north-south through the heart of the City, connecting it with Yosemite National Park. SR-168 links the Downtown to Clovis, and SR-180 runs east-west within the southern portion of the City.

The northern border of the City is largely defined by the San Joaquin River, which flows to the Sacramento-San Joaquin River Delta and San Francisco Bay. The eastern border of the City mostly abuts the city limits of the City of Clovis. The western border of the City traverses Highway 99 and passes through western rural residential and agricultural lands of the unincorporated County. The southern boundary extends as far south as Malaga Avenue.

The City center is within Township 14 South, Range 20 East, Mount Diablo Baseline and Meridian and the U.S. Geological Survey 7.5 Minute Fresno South Quadrangle.

The latitude and longitude of the approximate center of the City site is 36.74077, -119.78562. The Universal Transverse Mercator (UTM) coordinates for the approximate center are Easting 252,462 meters and Northing 4,070,374 meters, in Zone 11S.

Surrounding Cities

Surrounding cities include the following:

- **North** – Cities of Madera and Merced;
- **East** – Cities of Clovis and Sanger;
- **South** – Cities of Fowler, Selma, and Kingsburg; and
- **West** – City of Kerman.

4.11.3 - Regulatory Setting

Federal

Cannabis is currently regulated as a Schedule 1 drug under the Federal Controlled Substances Act. In California, the passage of Proposition 215 in 1996 legalized medical marijuana, and the passage of Proposition 64 in 2016 legalized recreational marijuana for adults over 21 years of age. Even though cannabis is "decriminalized" under State law, and even with the U.S. Department of Justice (USDOJ) issuance of memoranda guiding federal law enforcement related to cannabis activities within jurisdictions that have legalized cannabis, cannabis activities continue to be illegal at the federal level.

There are no applicable federal regulations for land use and planning, because the Project is not located on federal lands.

State

The Compassionate Use Act

The Compassionate Use Act of 1996, which allows for the medical use of cannabis in California under State law, was passed through voter approval of ballot proposition 215. It allows patients with a valid doctor's recommendation, and the patients' designated primary caregivers, to possess and cultivate cannabis for personal medical use without facing criminal charges from the State. The Compassionate Use Act changed California's penal code to decriminalize the cultivation and possession of medical marijuana by a patient, or the patient's primary caregiver, for the patient's personal use, and to create a limited defense to the crimes of possessing or cultivating marijuana.

Medical Marijuana Program Act

The passage of Senate Bill (SB) 420 (Statutes of 2003), enacted the Medical Marijuana Program Act (SB No. 420, 2003). The Medical Marijuana Program Act clarifies the scope and application of the Compassionate Use Act and established the California medical marijuana program. Specially, this Act established a voluntary program for the issuance of identification cards to qualified patients and established procedures under which a qualified patient with an identification card may use marijuana for medical purposes to protect patients and their caregivers from arrest.

MEDICAL CANNABIS REGULATION AND SAFETY ACT

Originally referred to as the Medical Marijuana Regulation and Safety Act but renamed through subsequent amendments, the Medical Cannabis Regulation and Safety Act (MCRSA) consists of three separate bills that were enacted together in September 2015 (AB 266, AB 243, and SB 643). The bills created a comprehensive state licensing system for the commercial cultivation, manufacture, retail sale, transport, distribution, delivery, and testing of medical cannabis. All licenses must be approved by local governments. AB 266 established a new Bureau of Medical Cannabis Regulation under the Department of Consumer Affairs. The Bureau is tasked with establishing a comprehensive internet system to track licensees and report the movement of commercial cannabis and cannabis products. SB 643 and AB 243 establish the following responsibilities: the California Department of Food and Agriculture is responsible for regulating cultivation; the California Department of Public Health is responsible for developing standards for manufacture, testing, and production and labeling of edibles; the California Department of Pesticide Regulation is responsible for developing pesticide standards; and, the California Department of Fish and Wildlife (CDFW) and State Water Resources Control Board (SWRCB) are responsible for protecting water quality.

ADULT USE OF MARIJUANA ACT

On November 8, 2016, California voters approved Proposition 64, the California Marijuana Legalization Initiative, or the Adult Use of Marijuana Act (AUMA). Proposition 64 legalized the personal use and cultivation of marijuana in California as of November 9, 2016. However, the sale and subsequent taxation of recreational marijuana did not go into effect until January 1, 2018. The intent of the Act was to establish a comprehensive system to legalize, control, and regulate the cultivation, procession, manufacture, distribution, testing, and sale of non-medical marijuana products, for use by adults 21 years and older, and to tax the commercial growth and retail sale of marijuana for recreational use. Senate Bill 94, adopted in June 2017, reconciles conflicts in regulations between MCRSA and AUMA.

Regional

2018 REGIONAL TRANSPORTATION PLAN AND SUSTAINABLE COMMUNITIES STRATEGY

The 2014 Regional Transportation Plan (RTP) is a comprehensive assessment of all forms of transportation available in Fresno County and of the needs for travel and goods movement through the year 2042. The 2018 RTP update was accomplished within the framework of the Fresno Council of Governments (Fresno COG), which is the Regional Transportation Planning Agency and Metropolitan Planning Organization (MPO) for the Fresno County area. This process of intergovernmental cooperation, coordination, and long-range planning has included contributions from 15 cities, Fresno County, staff from related local public agencies, the Air District, Caltrans, and other State agencies, federal agencies, and the public. The 2018 RTP contains a Sustainable Communities Strategy (SCS) as required by California's Senate Bill 375. SB 375 requires each MPO to include an SCS that provides an integrated land use and transportation

plan in order to meet the California Air Resource Board's greenhouse gas emissions reduction targets.

Local

Fresno Yosemite International Airport Land Use Compatibility Plan (Fresno Yosemite International ALUCP)

The creation of airport land use commissions was first established under the California State Aeronautics Act in 1967. The purpose of the ALUC is to promote land use compatibility around airports and is expressed in the statute as - "…to protect public health, safety, and welfare by ensuring the orderly expansion of airports and the adoption of land use measures that minimize the public's exposure to excessive noise and safety hazards within areas around public airports to the extent that these areas are not already devoted to incompatible uses." Land Use Compatibility Maps for all airports in City of Fresno depict each airport's area of influence.

City of Fresno General Plan

The Project area is the City of Fresno. The use of land within the City for various activities such as residential, commercial, office, public facilities, mixed use, industrial, open space, agriculture, and other uses are guided by the City's General Plan.

California Government Code Section 65300, requires each planning agency to prepare and the legislative body of each county and city shall adopt a comprehensive, long-term general plan for the physical development of the county or city, and of any land outside its boundaries which in the planning agency's judgement bears relation to its planning. The City's General Plan ensures the daily planning and land use decision are made in conformance with the long-term goals designed to protect and further public interest. Comprehensively, a General Plan is not updated frequently. Select elements, i.e. the Housing Element, are updated in regard to a State mandate for periodical updates. Usually, General Plans are reviewed and updated periodically as the goals and requirements of the community evolve and change. The current City of Fresno General Plan was adopted December 18, 2014 with a horizon to the year 2035. Table 4.11-1 identifies the existing land uses and development by percentage within the Project area as of 2010.

Table 4.11-1
Existing Land Uses within the City of Fresno Project Area

Land Use	Existing Development du/msf (acres)	Percent of Project Area
Single-Family Residential	118,897 (26,147)	24.7
Multiple-Family Residential	67,943 (3,496)	3.3
Commercial/Office/Public Facility	66.4 (14,804)	14
Mixed Use	0.1 (10)	0
Industrial	72.8 (6,765)	6.4

Land Use	Existing Development du/msf (acres)	Percent of Project Area
Open Space	(12,288)	11.6
Agriculture	(11,714)	11
Vacant	(12,522)	11.8
Other	(18,281)	17.2
TOTAL	**(106,027)**	**100**

du – dwelling units
msf – million square feet
Source: City of Fresno General Plan Master EIR

The following is a summary description of the Fresno General Plan Land Use Designations applicable to the eligible sites within the Project area.

Downtown - Neighborhood

These areas include the Lowell neighborhood; much of the southwest and southeast neighborhoods; the L Street area and the Huntington Boulevard area east of Downtown Core; the Jefferson Neighborhood; areas south of Elm and B Streets in southwest; several southeast neighborhoods adjacent to State Route 180; and areas west of State Route 99, including the Jane Addams area. New buildings will be house scale, up to two stories in height, and some buildings may be up to two and one-half stories. All buildings will set back from the sidewalk to provide a buffer between the sidewalk and the dwellings. Living rooms, dining rooms, and other formal rooms will face and activate the street. Other house-scale buildings are compatible in these neighborhoods when scaled and massed in relation to the predominant single-family houses. Buildings will be occupied with residential uses, limited live/work uses, and home occupation activity.

Downtown – General

The Downtown Core is the cultural, civic, shopping, and transit center of Fresno and the region. This designation is applied to the traditional central business district of the City near the proposed High-Speed Rail station and oriented around the restored section of Fulton Street. New buildings will be up to 15 stories in height and will be located at or near the sidewalk. Ground floor spaces will have active frontages with commercial, retail, multi-family housing, and office activity to support active streetscapes and walking. Upper floors and the floor area behind storefronts will accommodate a wide variety of office, civic, lodgings, housing, or additional commercial uses.

Downtown – Core

The Downtown Core is the cultural, civic, shopping, and transit center of Fresno and the region. This designation is applied to the traditional central business district of the City near the proposed High-Speed Rail station and oriented around the restored section of Fulton Street. New buildings will be up to 15 stories in height and will be located at or near the sidewalk. Ground floor spaces will have active frontages with commercial, retail, multi-family housing, and office activity to

support active streetscapes and walking. Upper floors and the floor area behind storefronts will accommodate a wide variety of office, civic, lodgings, housing, or additional commercial uses.

Mixed-Use –Neighborhood

This designation allows a minimum of 50 percent residential uses and provides for mixed-use districts of local-serving, pedestrian-oriented commercial development, such as convenience shopping and professional offices in two- to three-story buildings. Development is expected to include ground-floor neighborhood retails uses and upper-level housing or offices, with a mix of small lot single family houses, townhomes, and multi-family dwelling units on side streets, in a horizontal or vertical mixed-use orientation. The built form will have a scale and character that is consistent with pedestrian-orientation, to attract and promote a walk-in clientele, with small lots and frequent roadway and pedestrian connections permitting convenient access from residences to commercial space. Automobile-oriented uses are not permitted. Residential densities range between 12 and 16 units per acre.

Mixed-Use – Corridor/Center

The Corridor/Center Mixed-Use designation is higher intensity than Neighborhood Mixed-Use and is intended to allow for horizontal and vertical mixed-use development in multiple story buildings along key circulation corridors where height and density can be easily accommodated. Ground-floor retail and upper-floor residential or offices are the primary uses, with personal and business services and public and institutional space as supportive uses. Development will facilitate the transformation of existing transportation corridors into vibrant, highly walkable areas with broad, pedestrian-friendly sidewalks, trees, landscaping, and local-serving uses with new buildings that step down in relationship to the scale and character of adjacent neighborhoods. This designation will largely apply along major roadways, at targeted locations between regional Activity Centers. Residential densities range between 16 and 30 units per acre with a minimum 40 percent residential uses.

Mixed-Use – Regional

The Regional Mixed-Use land use designation is intended to accommodate mixed-use development in urban-scale buildings and retail establishments that serve residents and businesses of the region at large. Medium-scale retail, residential, office, civic and entertainment uses, and shopping malls (with large format or “big-box” retail) are allowed, as are supporting uses such as gas stations and hotels in mixed-use or single use buildings. Design standards will support a pedestrian orientation within centers and along major corridors, with parking on the side or rear in general, but automobile-oriented uses also will be accommodated on identified streets and frontages. Residential densities range between 30 and 45 units per acre with a minimum 30 percent residential uses.

Commercial – Main Street

Main Street Commercial encourages a traditional Main Street character with active storefronts, outdoor seating and pedestrian-oriented design. This designation promotes primarily one to two story retail uses. It also preserves small-scale, fine-grain character in neighborhoods where single-family residential and townhomes are predominant.

Commercial – Community

Community Commercial is intended for commercial development that primarily serves local needs such as convenience shopping and small offices. Many of the City's current commercial districts fall into this designation. Specific uses allowed include medium scale retail, office, civic and entertainment uses, supermarkets, drug stores and supporting uses.

Commercial – Regional

The Regional Commercial designation is intended to meet local and regional retail demand, such as large-scale retail, office, civic and entertainment uses; shopping malls, with large format or "big-box" retail allowed; and supporting uses such as gas stations, and hotels. Buildings typically have relatively large footprints. Development and design standards will create a pedestrian orientation within centers and along major corridors.

Commercial – General

The General Commercial designation is intended for a range of retail and service uses that are not appropriate in other areas because of higher volumes of vehicle traffic and potential adverse impacts on other uses. Development such as strip malls fall into this designation. Examples of allowable uses include: building materials, storage facilities with active storefronts, equipment rental, wholesale businesses, and specialized retail not normally found in shopping centers.

Commercial – Highway & Auto

The Highway & Auto designation is intended for limited areas near SR-99 to accommodate uses that depend on or are supported by freeway access but do not generate a large volume of traffic. Hotels, restaurants, and auto malls are typical land uses.

Commercial – Recreation

The Recreation designation is intended for areas of private commercial recreation uses, such as bowling alleys and golf driving ranges.

Employment – Light Industrial

The Light Industrial designation accommodates a diverse range of light industrial uses, including limited manufacturing and processing, research and development, fabrication, utility equipment and service yards, wholesaling, warehousing, and distribution activities. Small-scale retail and

ancillary office uses are also permitted. Light Industrial areas may serve as buffers between Heavy Industrial and other land uses and otherwise are generally located in areas with good transportation access, such as along railroads and State routes.

Employment – Heavy Industrial

The Heavy Industrial designation accommodates the broadest range of industrial uses including manufacturing, assembly, wholesaling, distribution, and storage activities that are essential to the development of a balanced economic base. Small-scale commercial services and ancillary office uses are also permitted.

Employment – Office

The Office designation is intended for administrative, financial, business, professional, medical, and public offices. This designation is mainly intended to apply to existing office uses on smaller lots, generally located on arterial roadways. This designation is also considered compatible with existing residential neighborhoods given the smaller level of noise and traffic generated compared to commercial uses. Retail uses would be limited to business services, food services, and convenience goods for those who work in the area.

Employment – Business Park

The Business Park designation provides for office/business parks in campus-like settings that are well suited for large offices or multi-tenant buildings. This designation is intended to accommodate and allow for the expansion of small businesses. Given its proximity to residential uses, only limited outdoor storage will be permitted, while adequate landscaping is imperative to minimize the visual impacts. Typical land uses include research and development, laboratories, administrative and general offices, medical offices and clinics, professional offices, prototype manufacturing, testing, repairing, packaging, and printing. No free-standing retail is permitted, except for small uses serving businesses and employees.

The goals, objectives, policies, and implementation measures in regard to land use and planning, in relation to the Project, are provided below.

CHAPTER 3. URBAN FORM, LAND USE, AND DESIGN

Objective UF-6. Support new development in the Downtown through investment in public infrastructure.

Policy LU-1-b - Land Use Definition and Compatibility. Include zoning districts and standards in the Development Code that provide for the General Plan land use designations and create appropriate transitions or buffers between new development with existing uses, taking into consideration the health and safety of the community.

Goal LU-6. Retain and enhance existing commercial areas to strengthen Fresno's economic base and site new office, retail, and lodging use districts to serve neighborhoods and regional visitors.

Policy LU-6-a - Design of Commercial Development. Foster high quality design, diversity, and a mix of amenities in new development with uses through the consideration of guidelines, regulations, and design review procedures.

Goal LU-7. Plan and support industrial development to promote job growth.

Policy LU-7-c - Efficiency of Industrial Uses. Promote industrial land use clusters to maximize the operational efficiency of similar activities.

- Provide access to a range of transportation mode through plans and incentives, ensuring that local, regional, and national connections are available to industrial uses;
- Develop a strategy to promote rail-accessible sites for industries that need such capability; and
- Ensure timely access to the full range of urban services for industrial development by coordinating proposed plans with the annual and long-range City infrastructure planning.

Policy LU-7-e - Shared Parking for Industrial Uses. Promote use of shared surface parking and other arrangements necessary to meet industrial needs with updated parking regulations.

Policy D-4-c - Appropriate Day and Night Activity. Promote new residential, commercial and related forms of development that foster both day and appropriate nighttime activity; visual presence on the street level; appropriate lighting; and minimally obstructed view areas.

Policy D-4-d - Design for Safety. Continue to involve the City's Police Department in the development review process to ensure new buildings are designed with security and safety in mind.

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

Objective D-7. Continue applying local urban form, land use, and design policies to specific neighborhoods and locations.

CHAPTER 4. MOBILITY AND TRANSPORTATION

Policy MT-1-d - Integrate Land Use and Transportation Planning. Plan for and maintain a coordinated and a 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.

CHAPTER 7. RESOURCE CONSERVATION AND RESILIENCE

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.

City of Fresno Specific Plans

The City of Fresno has 11 Specific Plans. Specific Plans guide future development within its defined area. Plans lay out long-term goals, as well as an implementation plan for immediate and midterm actions. Policies assist in implementing these goals, provide a basis for urban and economic growth with the Plan Area. The Specific Plan and Community Plans are intended to be consistent with the General Plan. During the development of these plans, full implementation of the General Plan is intended.

City of Fresno Community Plans

The City of Fresno has nine Community Plans. Community Plans establish the City's statement of policy for the development of the specific area defined in the plan. Community Plans lay out the quality and character of future development, a service plan for distribution, extent, and capacity of public and private services, which are essential to the development of a community.

City of Fresno Neighborhood Plans

The City of Fresno has three Neighborhood Plans. Neighborhood Plans include the areas of Pinedale, El Dorado Park, and Old Fig Garden. A Neighborhood Plan can provide guidelines which depicts how a neighborhood grows by adopting policies pertaining to those certain goals. This provides a channel of communication between residents and the local agency by being engaged with the decision making as it affects the development of the neighborhood.

City of Fresno Development Code, Chapter 15

The purpose of the Development Code is to implement the General Plan and, if applicable, operative plans, to protect and promote the public health, safety, peace, comfort, convenience, prosperity, and general welfare of the City of Fresno. This includes allowable uses, building setback requirements, and development standards. Pursuant to State law, the zoning ordinance must be consistent with the Fresno General Plan. Below are descriptions of each zone district that the proposed Project will be allowed in.

DTG (Downtown General): The DTG District will support a high concentration of regional activity generators such as governmental buildings and convention centers within a pedestrian-oriented, mixed-use urban setting.

DTN (Downtown Neighborhood): The DTN District will create lively, walkable, mixed-use urban neighborhoods surrounding the Downtown Core.

DTC (Downtown Core): The DTC District will foster the enhancement of Fresno's business, shopping, and cultural heart by guiding the development of the densest, most active, and most interesting mixed-use urban center in the region.

NMX (Neighborhood Mixed-Use): The NMX District is intended to provide for mixed-use residential districts that include local-serving, pedestrian-oriented commercial development, such as smaller independent retail shops and professional offices in two- to three-story buildings. Development is expected to include ground-floor neighborhood retail uses and upper-level housing or offices, with a mix of small lot single-family houses, townhomes, and multi-family dwelling units on side streets, in a horizontal or vertical mixed-use orientation.

CMX (Corridor/Center Mixed-Use): The CMX District is intended to allow for either horizontal or vertical mixed-use development along key circulation corridors in the City where height and density can be easily accommodated. Ground-floor retail and upper-floor residential or offices are the primary uses, with residential uses, personal and business services, and public and institutional space as supportive uses.

RMX (Regional Mixed-Use): The RMX District is intended to support regional retail and mixed-use development in large-scale Activity Centers outside of Downtown, as identified by the General Plan. It accommodates urban-scale mixed-use development that serve residents and businesses of the region at large. Medium-scale retail, housing, office, civic and entertainment uses, and shopping malls with large-format or "big-box" retail are allowed, as are supporting uses such as gas stations, hotels, and residential in mixed-use or single-use buildings.

CMS (Commercial Main Street): The CMS District is intended to preserve or promote small-scale, fine-grain commercial development in neighborhoods where single-family residential and townhomes are predominant. A traditional “Main Street” character is achieved with active storefronts, outdoor seating and pedestrian-oriented design.

CC (Commercial Community): The CC District is intended for commercial development that primarily serves local needs such as convenience shopping and offices. Specific uses allowed include medium-scale retail, office, civic and entertainment uses, supermarkets, drug stores, and supporting uses.

CR (Commercial Regional): The CR District is intended to meet local and regional retail demand, such as large-scale retail, office, civic and entertainment uses, shopping malls with large-format or "big-box" retail and supporting uses such as gas stations and hotels. Buildings are typically larger-footprint and urban-scaled.

CG (Commercial General): The CG District is intended to accommodate a range of retail and service uses that are not appropriate in other areas because of higher volumes of vehicle traffic and potential impacts on other uses. Examples of allowable uses include: building materials,

storage facilities with active storefronts, equipment rental, wholesale businesses, and specialized retail not normally found in shopping centers.

CH (Commercial Highway and Auto): The CH District is intended for limited areas near the freeway to accommodate a range of retail and service uses that are not appropriate in other areas because of higher volumes of vehicle traffic and potential impacts on other uses. Examples of allowable uses include: building materials, storage facilities with active storefronts, equipment rental, wholesale businesses, and specialized retail not normally found in shopping centers, the focus of district development standards is to ensure structures fit into the surrounding development pattern and architectural or traffic conflicts are minimized.

CRC (Commercial Recreation): The CRC District is intended to provide areas for private commercial recreation uses where patrons usually pay to participate and to group commercial recreation uses into a planned, integrated center, including related service and commercial uses. Typical uses include bowling alleys, family entertainment centers, driving ranges, miniature golf courses, skating rinks, tennis courts, swimming pools, sports stadiums, arenas, and the County fairgrounds.

IL (Light Industrial): The IL District is intended to provide areas, as identified by the General Plan, for a diverse range of light industrial uses, including limited manufacturing and processing, research and development, fabrication, utility equipment and service yards, wholesaling, warehousing, and distribution activities. Small-scale retail and ancillary office uses are also permitted.

IH (Heavy Industrial): The IH District is intended to accommodate the broadest range of industrial uses on sites identified in the General Plan. It includes manufacturing, assembly, wholesaling, distribution, and storage, activities, that are essential to the development of a balanced economic base. Small-scale commercial services and ancillary office uses are also permitted.

O (Office): The O District is intended to provide sites for administrative, financial, business, professional, medical, and public offices, as identified by the General Plan. Retail uses would be limited to business services and food service and convenience goods for those who work in the area. This district is intended for locations where the noise or traffic generated by retail sales, restaurants, and service commercial may be incompatible with surrounding residential neighborhoods.

BP (Business Park): The BP District is intended to provide a campus-type office professional environment that is well suited for large offices or multi-tenant buildings on sites identified by the General Plan. This district is intended to accommodate and allow for the expansion of small businesses with limited outdoor storage screened with landscaping proximate to residential uses. Typical land uses include research and development, laboratories, administrative and general offices, medical offices and clinics, and professional offices. Small-scale retail and service uses serving local employees and visitors are permitted as secondary uses.

4.11.4 - IMPACTS AND MITIGATION MEASURES

This section analyzes the impacts associated with implementation of the Project related to land use and planning. The impact analysis describes the methods used to determine the Project's impacts and lists the thresholds used to conclude the significance of an impact. Measures to mitigate (avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion, as appropriate.

Methodology

For the purposes of this analysis, relevant documents, particularly the City of Fresno General Plan, City of Fresno Development Code were consulted. The proposed Project was assessed to determine whether it would conflict with any applicable land use plan, policy, or regulations. If the Project was determined to conflict with any relevant plans, a determination was then made as to whether the conflicts or inconsistencies would result in any significant physical environmental impacts that would otherwise be mitigated or avoided without the proposed Project.

Thresholds of Significance

Appendix G of the California Environmental Quality Act (CEQA) Guidelines as amended contain analysis guidelines related to the assessment of land use and planning impacts. A project would result in a significant impact 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.

Project Impacts

Impact 4.11-1: Physically Divide an Established Community

PROJECT USES

Table 4.11-2 below summarizes the commercial cannabis uses and their corresponding number of eligible sites for location, maximum number of permits to be issued, and maximum square footage for occupancy, all of which apply to the entire city limits.

Table 4.11-2
Commercial Cannabis Uses

Commercial Cannabis Uses	Eligible Sites	Max. Permits	Max. SF[1]
Cultivation, Distribution, and Manufacturing Within Cannabis Innovation Zone	591	8	700,000
Cultivation, Distribution, and Manufacturing Outside of Cannabis Innovation Zone	953	8	
Cannabis Retail Businesses	5,564	21	55,000
Testing Laboratories	13,807	Unlimited	100,000
Totals	**20,915**	**N/A**	**855,000**

[1]Maximum square foot used for analysis in DEIR

Of the total 20,915 project eligible sites for location, a small percentage of the sites are vacant infill lots that can support new development, all of which are located in existing commercial, mixed-use, and industrial zones and in urbanized areas. The majority of the Project eligible sites are fully serviced industrial and commercial lots that have been improved with industrial and commercial uses and buildings. The Project could involve limited new site development. All approved uses will be required to obtain a Commercial Cannabis License and a Conditional Use Permit from the City. Furthermore, sites will comply with all applicable plans, policies, code regulations, and the project development standards summarized below.

LOCATION AND DESIGN CRITERIA

Retail Cannabis Businesses:

- No more than two may be located in any one Council District.
- May not be located closer than 800-feet from any parcel containing a sensitive use, i.e. school, day care, youth center.
- Be within a fully enclosed building.
- Conform to all applicable plans and design requirements.
- Comply with all applicable zoning and related development standards.
- Be adequate in size and shape to accommodate the yards, walls, fences, parking and loading facilities, and landscaping.
- Be served by highways adequate in width and improved as necessary to carry the kind and quantity of traffic such use will generate.

- Be provided with adequate electricity, sewerage, disposal, water, fire protection and storm drainage facilities for the intended purpose.

- Demonstrate compatibility with the surrounding character of the neighborhood and blend in with existing buildings.

Commercial Cannabis Businesses:

- All cultivators, distributors, or manufacturers (expect within the Cannabis Innovation Zone) shall be located no closer than 1,000 feet from any parcel containing a residential zone, school, daycare, youth center.

- All Cannabis Innovation Hubs and cultivators, distributors, or manufacturers located outside the Cannabis Innovation Zone, shall be located no closer than 1,000 feet from any parcel containing a residential zone, school, daycare, youth center.

- Be within a fully enclosed building.

- Conform to all applicable plans and design requirements.

- Comply with all applicable zoning and related development standards.

- Be adequate in size and shape to accommodate the yards, walls, fences, parking and loading facilities, and landscaping.

- Be served by highways adequate in width and improved as necessary to carry the kind and quantity of traffic such use will generate.

- Be provided with adequate electricity, sewerage, disposal, water, fire protection and storm drainage facilities for the intended purpose.

- Demonstrate compatibility with the surrounding character of the neighborhood and blend in with existing buildings.

In addition to the use limitations, and the location and design criteria listed above, all commercial cannabis uses must also comply with all goals, objectives, and policies of all applicable plans and the City's Development Code, including the operational requirements below:

- No cannabis consumption on premises.

- No sale or consumption of alcoholic beverages on premises.

- No sale of tobacco products on premises.

- No visible depictions of cannabis or related products or outdoor storage.

- Businesses shall have a point-of-sale or management tracking system.
- All cannabis and products being transported must be done so in full compliance with State and local laws.
- Cannabis retail businesses and commercial cannabis businesses must provide the City with emergency contact information.
- Signage must comply with local codes and not obstruct any entrance. Each entrance shall be marked and be visible and clear. Signs must be posted regarding the prohibition of cannabis use on premises. Business identification signs shall be limited and not contain logos or advertisements. Signage shall not be illuminated. No banners, flags, billboards, or other prohibited signs may be used.
- No minors under the age of 21 may be on premises of any cannabis related business, except persons at least 18 may be allowed on the premises of a medicinal cannabis retail business.
- Best available odor control technology must be used for cannabis retail and commercial cannabis businesses as to not detect odors off-site.
- Commercial cannabis business permit must be posted inside the business.
- No loitering may occur outside the cannabis business or within 50 feet.
- Contact information must be provided to the City for the community relations person associated with each business. For all years of operation, the owner, manager, and community relations representative of each cannabis business must attend meetings with the City (upon request) to discuss cost, benefits, and other community issues. Each business must also develop an approved public outreach and educational program for youth organizations.
- Cannabis related businesses must maintain premises that are visually attractive and not dangerous to health.

In addition to the requirements noted above, the Regulatory Ordinance (Chapter 9, Article 33) provides specific requirements for Cannabis Retail Businesses (Section 9-3310), Distributor (9-3311), Cultivator (9-3312), Testing Laboratory (9-3313), and Manufacturer (9-3314). A full list of all requirements is in Appendix B.

Citywide, this project will permit a maximum of 21 cannabis retail businesses, 16 commercial cannabis businesses, and an unspecified number of testing laboratories. All commercial cannabis uses will be located in a commercial, industrial, or mixed-use zone in existing improved urbanized areas of the City. As noted above, all commercial cannabis uses must comply with site specific development standards, design criteria, and operational requirements to ensure that the

commercial cannabis uses will not impact, or physically divide an established community. Additionally, each commercial cannabis use will be required to comply with an approved neighborhood responsibility plan to ensure ongoing compliance with the public health, safety, convenience, and welfare of persons residing, working, visiting, and recreating in the surrounding neighborhood, and to ensure that it will not result in the creation of a nuisance. Failure to comply will result in the commercial cannabis use permit being revoked. Therefore, impacts will be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be *less than significant.*

Impact 4.11-2: Cause a Significant Environmental Impact Due to a Conflict with Any Land Use Plan, Policy, or Regulation Adopted for the Purpose of Avoiding or Mitigating an Environmental Effect

Development in accordance with amended Ordinance requires consistency with various federal, State, and local plans, policies, and regulations. Many of the plans, policies, and regulations are addressed in Section 4.11.3, *Regulatory Setting* (above), Impact 4.11-1 (above), Appendix B, and in various chapters of this EIR. Below is a discussion of certain land use plans, policies, and regulations that are applicable to the future development in accordance with the Project.

CITY OF FRESNO GENERAL PLAN

The policies within the Land Use Element were reviewed to determine the consistency of the proposed project with the existing policies. As identified in Table 4.11-3 below, the Project will fulfill policies regarding design standards, compatibility with surrounding sites and uses, ensuring adequate buffers are provided, and minimization of potential land use conflicts. Based on a review of the Land Use policies, the Project was determined to be consistent with the existing General Plan policies, and therefore less-than-significant impacts would occur.

AIRPORT LAND USE COMPATIBILITY PLANS

The compatibility of the land uses in proximity to the two public airports (Fresno-Yosemite International Airport and the Fresno-Chandler Downtown Airport) and the privately owned, public use general aviation airport (Sierra Sky Park) are discussed and evaluated in Section 4.9, *Hazards and Hazardous Materials* and Impacts 4.9-1 through 4.9-7.

Table 4.11-3
Project Consistency with Local Planning Documents

Goals	Proposed Project Consistency
CITY OF FRESNO GENERAL PLAN **Chapter 3. Urban Form, Land Use, and Design**	
Policy LU-1-b: Land Use Definition and Compatibility. Include zoning districts and standards in the Development Code that provide for the General Plan land use designations and create appropriate transitions or buffers between new development with existing uses, taking into consideration the health and safety of the community.	**Consistent.** All commercial cannabis uses will be located in commercial, industrial, or mixed-use zones and in existing improved urbanized areas of the City. All commercial cannabis uses must comply with site specific development standards, including setbacks from sensitive land uses, and a demonstrated compatibility with the surrounding neighborhood. Additionally, each commercial cannabis use will be required to comply with an approved neighborhood responsibility plan to ensure ongoing compliance with the public health, safety, convenience, and welfare of persons residing, working, visiting, and recreating in the surrounding neighborhood, and to ensure that it will not result in the creation of a nuisance.
Goal LU-6: Retain and enhance existing commercial areas to strengthen Fresno's economic base and site new office, retail, and lodging use districts to serve neighborhoods and regional visitors.	**Consistent.** All of the retail cannabis uses will be located in existing commercially zoned areas. This new proposed industry will fill vacancies within existing commercial centers and will provide an additional tax base for the City, which will strengthen Fresno's economic base. These new businesses will also serve neighborhoods and regional visitors.
Policy LU-6-a: Design of Commercial Development. Foster high quality design, diversity, and a mix of amenities in new development with uses through the consideration of guidelines, regulations, and design review procedures.	**Consistent.** Each individual entitlement process for a cannabis related business will need to abide by the corresponding development standards set forth by the General Plan, Specific, Community, or Neighborhood Plans, and the Fresno Municipal Code and the and proposed text amendment. This will ensure high quality design. The Project proposes several different zone

Goals	Proposed Project Consistency
	districts for allowance of cannabis businesses to operate. This will produce a diverse mix of amenities in new developments.
Goal LU-7: Plan and support industrial development to promote job growth.	**Consistent.** A component of the proposed Project will allow for development of commercial cannabis businesses in certain IL (Light Industrial) and IH (Heavy Industrial) zone districts. This will promote job growth within the City and increase tax revenue to fund future projects.
Policy LU-7-c: Efficiency of Industrial Uses. • Promote industrial land use clusters to maximize the operational efficiency of similar activities. • Provide access to a range of transportation mode through plans and incentives, ensuring that local, regional, and national connections are available to industrial uses; • Develop a strategy to promote rail-accessible sites for industries that need such capability; and • Ensure timely access to the full range of urban services for industrial development by coordinating proposed plans with the annual and long-range City infrastructure planning.	**Consistent.** All cultivation, distribution, and manufacturing cannabis use will be located in industrial zones clustered along the SR-99, SR-180, and within the Cannabis Innovation Zone. These clusters will maximize the operational efficiency of similar activities, by complying with the following project location and design requirements. • Be served by highways adequate in width and improved as necessary to carry the kind and quantity of traffic such use will generate. • Be provided with adequate electricity, sewerage, disposal, water, fire protection and storm drainage facilities for the intended purpose. • Conform to the General Plan, any applicable specific plans, master plans, and design requirements.
Policy LU-7-e: Shared Parking for Industrial Uses. Promote use of shared surface parking and other arrangements necessary to meet industrial needs with updated parking regulations.	**Consistent.** Cannabis Commercial Businesses will be located in a Cannabis Innovation Zone, Cannabis Innovation Hub, or Light Industrial/Heavy Industrial zones within proximity to local highways. All developments proposed will be subject to review by the City Planning and Development Department. During the review process, shared parking will be promoted in these certain uses.
Policy D-4-c: Appropriate Day and Night Activity. Promote new residential, commercial and related forms of development that	**Consistent.** Implementation of the Project will create new business opportunities in Downtown, Commercial, Industrial,

Goals	Proposed Project Consistency
foster both day and appropriate nighttime activity; visual presence on the street level; appropriate lighting; and minimally obstructed view areas.	and Mixed-Use zone districts. These new businesses will be required to abide by following operating hours: Retail – 6am-10pm, but non-sales can take place after hours. Distributor – 24 hour a day Cultivator – 24 hours a day Testing lab – 24 hours a day Manufacturer – 24 hours a day. All proposed businesses, except retail, may operate on a 24-hour work schedule, promoting increased day and night activity in the areas they are located.
Policy D-4-d: Design for Safety. Continue to involve the City's Police Department in the development review process to ensure new buildings are designed with security and safety in mind.	**Consistent.** Each cannabis related business will be subject to review by the City's Police Department. The Police Department will be involved in recommending to the City Council the number of additional Cannabis Retail Business licenses the City can accommodate. Also, during the Conditional Use Permit process the Police Department will review and comment on specific entitlements. Additionally, operating requirements for each type of cannabis business include security measures which the Police Department can use to monitor compliance.
Policy D-4-f: Design Compatibility with Residential Uses. Strive to ensure that all new non-residential land uses are developed and maintained in a manner complementary to and compatible with adjacent residential land uses, to minimize interface problems with the surrounding environment and to be compatible with public facilities and services.	**Consistent.** All commercial cannabis uses will be located in commercial, industrial, or mixed-use zones and in existing improved urbanized areas of the City. All commercial cannabis uses must comply with site specific development standards, including setbacks from sensitive land uses, and a demonstrated compatibility with the surrounding neighborhood. Additionally, each commercial cannabis use will be required to comply with an approved neighborhood responsibility plan to ensure ongoing compliance with the public health, safety, convenience, and welfare of persons residing, working, visiting, and recreating in the surrounding

Goals	Proposed Project Consistency
	neighborhood, and to ensure that it will not result in the creation of a nuisance.
Objective D-7: Continue applying local urban form, land use, and design policies to specific neighborhoods and locations.	**Consistent.** Implementation of the Project will be subject to design standards of the underlying zone district detailed in the Development Code, or Specific, Community, or Neighborhood Plans, when applicable.
Policy UF-6: Support new development in the Downtown through investment in public infrastructure.	**Consistent.** All cannabis related businesses permitted in downtown zoning districts will provide be subject to development fees to be used for public infrastructure.

CITY OF FRESNO COMMUNITY PLANS, SPECIFIC PLANS, AND OTHER PLANS

- Bullard Community Plan (renamed the Pinedale Neighborhood Plan)
- Sierra Sky Park Land Use Policy Plan
- Tower District Specific Plan
- Butler-Willow Specific Plan
- North Avenue Industrial Plan
- Sun Garden Acres Specific Plan
- Hoover Community Plan (renamed the El Dorado Park Neighborhood Plan)

The General Plan serves as a consolidated location for many current Community, Specific and other Plan types, and is consistent with the intent of the underlying purpose of the goals, policies and objectives of the portions of the Plans designed to avoid or mitigate environmental effects. While in a different format, the underlying goals, objectives and policies serving as mitigation for applicable environmental effects have been carried forward, incorporated or otherwise addressed in the General Plan. As such, implementation of the Project would not be inconsistent with these Plans, and potential impacts would be less than significant.

The Medicinal and Adult-Use Cannabis Regulation and Safety Act (MAUCRSA) requires that future cannabis related businesses are operated in an environmentally safe way. Certification of this EIR will ensure that all reasonable mitigation has been applied to reduce environmental impacts associated with the approval of the Project.

All requests for commercial cannabis use will require a Conditional Use Permit discretionary review, and approval by the City Planning Commission. The discretionary review process ensures compliance with all applicable land use plans, policies, and regulations adopted for the land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, the Project will not create a significant environmental impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be *less than significant*.

Cumulative Setting Impacts and Mitigation Measures

CUMULATIVE SETTING

The study area for the analysis of cumulative impacts is the City of Fresno and the unincorporated portions of Fresno County located adjacent to the city limits, as well as portions of the City of Clovis and the County of Madera adjacent to the City of Fresno. The applicable cumulative

projections include growth projections from the City of Fresno General Plan, Fresno County General Plan, Madera County General Plan, and the City of Clovis General Plan.

The City of Fresno General Plan was last adopted in the year 2014. Anticipated development within the General Plan includes 186,840 dwelling units, 66.4 million square feet (msf) of commercial/office/public facility, 100,000 sf of mixed uses, and 72.8 msf of industrial uses. The General Plan contains approximately 11,714 acres of agricultural land, 12,288 acres of open space, and 12,522 acres of vacant land. Existing agricultural land is primarily located in the southeastern and western portions of the General Plan.

The General Plan contains two major rail lines that generally traverse in a southeast to northwest direction. These railways include the Union Pacific Railroad line that is generally located along SR-99, and the BNSF Railway that diverges from the SR-99 in the southwest and travels through the Downtown to the northwest. There are three airports located within the City of Fresno including the Fresno-Yosemite International Airport located in the eastern portion of the Planning Area, the Fresno-Chandler Downtown Airport located west of Downtown, and Sierra Sky Park Airport that is located on the northern portion of the General Plan.

The County of Fresno General Plan was last adopted in the year 2000. The County General Plan was prepared to accommodate population growth through the year 2020, consistent with the California Department of Finance projection of 1.1 million by 2020. This represents an additional population of approximately 344,000, which includes the year 2020 projections outside the sphere of influences for cities within the East Valley area, which is located east of Interstate 5. Additional development projects are proposed northeast of the City of Fresno Project area including Friant Ranch that represents an additional population of approximately 164,693 through the year 2020.

The County of Madera General Plan was last adopted in the year 1995. The Madera County General Plan identifies population and employment growth projections through the year 2010 and includes 177,071 people and 61,866 employees. Since the adoption of Madera County's General Plan, substantial new development projects have been proposed in the southern portion of Madera County, some of which is proposed within close proximity of the City of Fresno Project area including Gateway, Gunner Ranch, Liberty Groves, North Fork Village, Tesoro Viejo, and River Ranch Estates. These projects include approximately 23,000 units, and supporting uses such as commercial, public facilities, parks, and open space.

The City of Clovis General Plan was last adopted in the year 2014. The Clovis General Plan forecasts the ultimate buildout of the entire Clovis General Plan area that is expected to occur for at least 70 years. The Clovis General Plan forecasts an additional 65,100 residential units, 179,300 population, and 38,250,000 square feet of buildings.

CUMULATIVE IMPACTS

With regard to conflicts with any land use plan, policies, or regulations of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental

effect (Impact 4.11-1), the proposed Project would regulate the location, operation, and establishment of cannabis cultivation, distribution, manufacturing and testing, in order to promote the health, safety, and general welfare of the citizens of the City.

All development projects within the City are reviewed on a case by case basis for consistency with the General Plan and other planning related documents. Future cannabis industry development within the City would comply with not only the City General Plan goals and policies, but also to comply with the proposed amendment to Sections 15-2739 and 15-2739.1 of the Fresno Municipal Code, amendment to Article 33 to Chapter 9 of the Fresno Municipal Code, and Article 21 to Chapter 12 of the Fresno Municipal Code, relating to adult use and medicinal cannabis retail business and commercial cannabis business. Therefore, implementation of the Project would not contribute to cumulative impacts; impacts associated with plan inconsistency would be considered less than significant.

CEQA Section 15130(a) states: An EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in Section 15065(a)(3). Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

The proposed Project would be consistent with the Fresno General Plan and related planning documents associated with the City of Fresno, as stated above. The proposed Project would not separate an established community. Therefore, the Project's impacts would not create an incremental effect that could be cumulatively considerable, and cumulative impacts would be considered less than significant.

Mitigation Measures

No cumulative mitigation measures are required.

Cumulative Level of Significance

Impacts would be *less than significant*.

4.12 - Mineral Resources

4.12.1 - INTRODUCTION

This section of the Environmental Impact Report has been prepared to identify and evaluate potential environmental impacts associated with the Proposed Regulation and Permitting of Commercial Cannabis Activities (Project), on the mineral resources, i.e. oil and gas, sand and gravel, and other mineral resources under applicable California Environmental Quality Act (CEQA) criteria. This section also describes the environmental and regulatory settings. California Geological Survey (CGS) (formerly the Department of Conservation Division of Mines and Geology), California Division of Oil, Gas and Geothermal Resources (DOGGR) and City of Fresno and Fresno County publications and maps were also used in preparation of this section. The Project is located in the incorporated City of Fresno, California.

4.12.2 - ENVIRONMENTAL SETTING

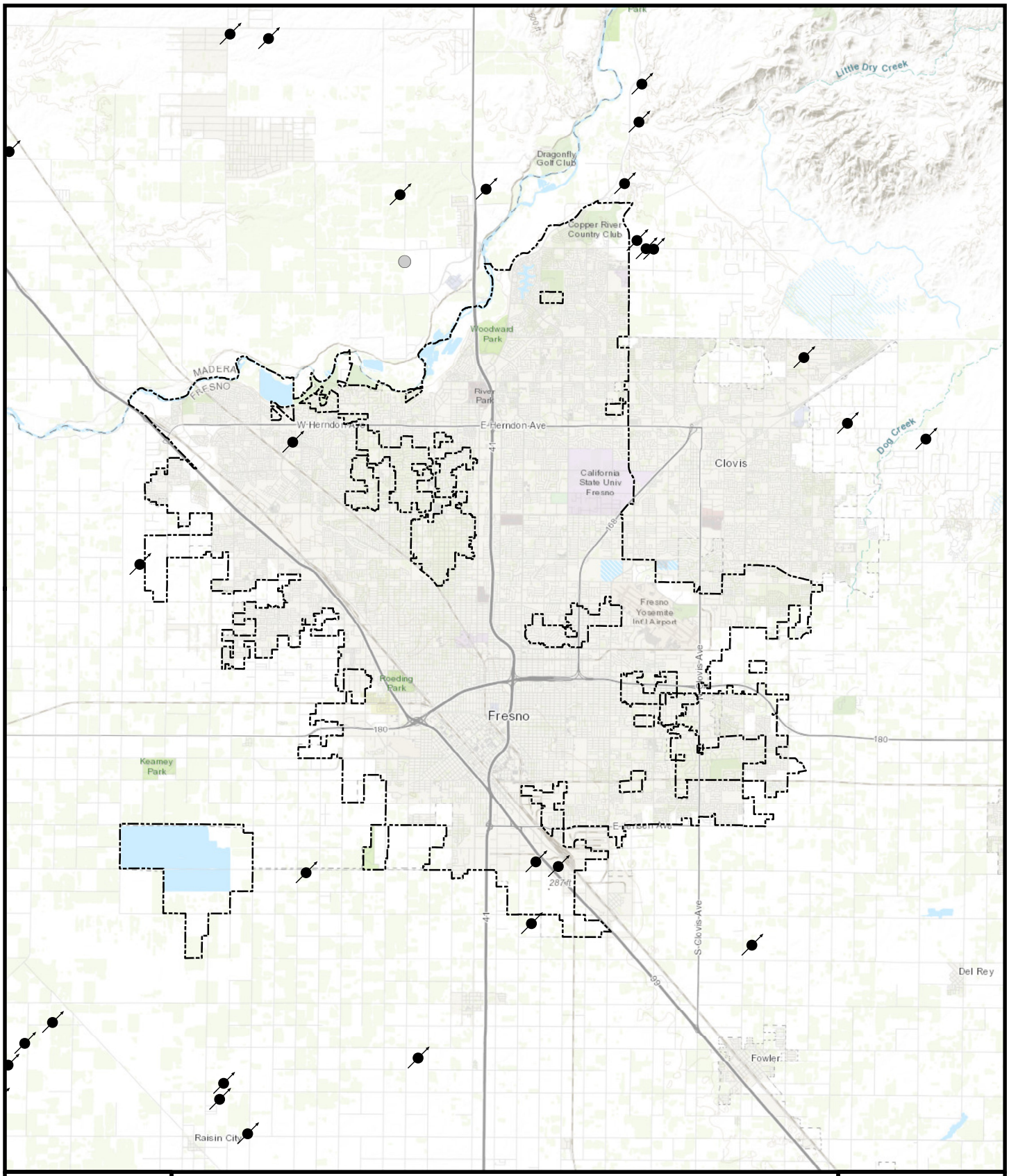
The non-renewable characteristic of mineral deposits necessitates the careful and efficient development of mineral resources in order to prevent the unnecessary waste of these deposits due to careless exploitation and uncontrolled urbanization. Management of these mineral resources will protect not only future development of mineral deposit areas but will also guide the exploitation of mineral deposits so that adverse impacts caused by mineral extraction will be reduced or eliminated. This section discusses the existing conditions related to mineral resources within the Project area and vicinity.

Regional

Fresno County has been a leading producer of minerals because of the abundance and wide variety of mineral resources that are present in the County. Extracted resources include aggregate products (sand and gravel), fossil fuels (oil and coal), metals (chromite, copper, gold, mercury, and tungsten), and other minerals used in construction or industrial applications (asbestos, high-grade clay, diatomite, granite, gypsum, and limestone). For the period of 1997-1998, there were 15 active mines and minerals producers in Fresno County (City of Fresno General Plan Background Report, 2002). Fluctuating markets have affected the rate of extraction, but the potential for meeting future market demand remains good for several of the minerals. Aggregate and petroleum are considered the County's most significant extractive mineral resources.

PETROLEUM RESOURCES

Oil production has been primarily located in western Fresno County, particularly in the Coalinga area. Extensive oil recovery operations are located mostly to the north of the City of Coalinga. According to California Department of Conservation, Division of Oil, Gas, and Geothermal Resources, there are several wells within or in proximity to the Project area, however, they are considered "plugged dry holes" (see Figure 4.12-1).



DOGGR Existing Wells

Idle Well Plugged Well City Limits

N

0 3 Miles

QK Sources: California Department of Conservation

Figure 4.12-1

SAND AND GRAVEL

Sand and gravel have been determined to be important resources for construction, development, and physical maintenance, from highways and bridges to swimming pools and playgrounds. The availability of sand and gravel affects construction costs, tax rates, and affordability of housing and commodities. The State of California has statutorily required the protection of sand and gravel operations. Because transportation costs are a significant portion of the cost of sand and gravel, the long-term availability of local sources of this resource is an important factor in maintaining the economic attractiveness of a community to residents, business, and industry. Within Fresno County, the primary area for mineral resources is located immediately adjacent to the City of Fresno Planning Area along the San Joaquin River Corridor, north of the Project site. These river deposits are removed via surface mining operations. These areas have been and are proposed to be designated as Open Space by Fresno County. The City anticipates that these uses will continue until the resources are substantially removed and is no longer feasible to mine the areas.

NATURAL GAS

Natural gas is lighter than air and is produced in two basic forms, associated gas and non-associated gas. Associated gas is produced along with crude oil while non-associated gas is produced from gas fields that do not produce any crude oil. Natural gas is found underground and then pumped from below ground and transported in large pipelines. Because natural gas usually has no odor and cannot be seen, it is mixed with a chemical that gives it an easy to detect smell in the event of an accidental leak. From the storage tanks, natural gas is sent through underground pipelines to its destination (consumer) to be used for cooking, heating, manufacturing and to power plants to make electricity.

OTHER MINERAL RESOURCES

Based on the U.S. Geological Survey's (USGS) data for 2018, California ranked fourth after Nevada, Arizona, and Texas in the value of mineral production other than oil and gas, accounting for approximately 5.54 percent of the nation's total mineral production (USGS, 2019).

Local

As noted in the City of Fresno General Plan Master Environmental Report and Fresno County General Plan Background Report, mineral resources are primarily found outside of the Project area, along the San Joaquin Corridor. The resource locations have been designated as Open Space. The Project area is currently not within any areas designated as mineral resource areas by the CGS or State Mining and Geology Board (SMGB). The mineral resources located along the San Joaquin Corridor consist of sand and gravel resources.

OTHER MINERAL RESOURCES

No other mineral resources have been designated as regionally or locally significant, are known to be locally or regionally significant, or have been classified as a Mineral Resource Zone classification within or immediately adjacent to the Project site, with the exception of the San Joaquin River Corridor.

4.12.3 - REGULATORY SETTING

Federal

There are no applicable federal regulations for mineral resources, because the proposed Project is not located on federal lands.

State

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES (DOGGR)

DOGGR is responsible for supervising the drilling, operation, maintenance, plugging, and abandonment of oil, gas, and geothermal wells. DOGGR's regulatory program promotes the sensitive development of oil, natural gas, and geothermal resources in California through sound engineering practices, prevention of pollution, and implementation of public safety programs. To implement this regulatory program, DOGGR requires avoidance of building over or near plugged or abandoned oil and gas wells or requires the remediation of wells to current DOGGR standards.

All oil and gas wells drilled and constructed in California must adhere to strict requirements. These requirements include general laws and regulations regarding the protection of underground and surface water, and specific regulations regarding the integrity of the well casing, the cement used to secure the well casing inside the bore hole, and the cement and equipment used to seal off the well from underground zones bearing fresh water and other hydrocarbon resources. (See California Public Resources (CPR) Code Sections 3106, 3203, 3211, 3220, 3222, 3224, 3255; Title 14 of the California Code of Regulations, Sections 1722.2, 1722.3, 1722.4, etc.). In addition, the DOGGR requires avoidance of building over or near plugged or abandoned oil and gas wells or requires the remediation of wells to current DOGGR standards.

DOGGR also has the authority under the CCR to adopt field rules for oil and gas pools or zones in a field when sufficient geologic and engineering data is available from previous drilling operations. The administrative boundaries of each pool or zone for which field rules have been adopted and geologic and engineering information is available to accurately describe subsurface conditions are designated through a ministerial process by DOGGR. Applicable field rules identify down hole conditions and well construction information that oil and gas operators should consider when drilling and completing onshore oil and gas wells. In addition to DOGGR facilities regulations, operators that have facilities in designated areas must have Spill

Prevention, Control and Countermeasure Plans per U.S. Environmental Protection Agency (EPA) requirements.

In California, wells that inject fluids associated with oil and natural gas production operations (Class II injection wells) are regulated by the DOGGR under the Underground Injection Control (UIC) Program. Injection operations regulated under the UIC Program include water flood, steam flood, cyclic steam, water disposal, gas storage, and other enhanced oil recovery projects. DOGGR's UIC Program is monitored and audited by the EPA because in 1982 DOGGR entered into a primacy agreement with the EPA for regulation of Class II injection wells under the Federal Safe Drinking Water Act (SDWA). The requirements of DOGGR's UIC Program are found in the Public Resources Code (PRC), the Safe Drinking Water Act, and in the State and federal regulations. The main features of the UIC Program include permitting, inspection, enforcement, mechanical integrity testing, plugging and abandonment oversight, data management, and public outreach.

SURFACE MINING AND RECLAMATION ACT OF 1975

The State Mining and Reclamation Act of 1975 (SMARA) mandates the initiation of mineral land classification by the State Geologist in order to help identify and protect mineral resources in areas within the State subject to urban expansion and other irreversible land uses that would preclude mineral extraction. SMARA also allowed the designation of lands containing mineral deposits of regional or statewide significance. SMARA was amended (1980) to provide for the classification of non-urban areas subject to land-use threats incompatible with mining. The classification of land within California takes place according to a priority list that was established by the SMGB in 1982, or when SMGB is petitioned to classify a specific area. The State Geologist's SMARA classification activities are carried out under a single program for urban and non-urban areas of the State.

Mineral lands are mapped using the California Mineral Land Classification System according to jurisdictional boundaries, mapping all mineral commodities at one time in the area, including aggregate, common clay, and dimensions stone. Priority is given to areas where future mineral resource extraction could be precluded by incompatible land use or to mineral resources likely to be mined during the 50-year period following their classification. Detailed mineral land classification and designation reports provided by SMGB are on file at the City of Fresno.

SMGB established Mineral Resource Zones (MRZ) to designate lands that contain mineral deposits. Accordingly, the MRZ classification system is used to evaluate an area's mineral resources pursuant to SMARA. A "resource" is a concentration of naturally occurring solid, liquid, or gaseous material in such form and amount that economic extraction of a commodity from the concentrations is currently potentially feasible. A "reserve" is that part of the resource base that could be economically extracted or produced within the foreseeable future. For any given mineral resource, an area may be classified as MRZ-1, MRZ-2, MRZ-3, or MRZ-4, as follows:

- **MRZ-1:** Areas where the available geologic information indicates that no significant mineral deposits are present, or where it is judged that no significant likelihood exists for their presence.

- **MRZ-2a:** Areas where the available geologic information indicates that significant mineral deposits are present.

- **MRZ-2b:** Areas where the available geologic information indicates that there is likelihood for the presence of significant mineral deposits.

- **MRZ-3a:** Areas where the available geologic information indicates that mineral deposits exist; the significance of which cannot be determined from available data.

- **MRZ-3b:** Areas where the available geologic information indicates that mineral deposits are likely to exist, the significance of which cannot be determined from available data.

- **MRZ-4:** Areas where available geologic information is inadequate for assignment into any other MRZ, or where there is not enough information available to determine the presence or absence of mineral deposits.

The MRZ classifications are applied based on available geologic information and on geologic appraisal of the mineral resource potential of the land, including geologic mapping and other information on surface exposures, drilling records, and mine data; and on socioeconomic factors such as market conditions and urban development patterns. As noted above, the Project site is not located within an MRZ.

CALIFORNIA GEOLOGICAL SURVEY (FORMERLY CALIFORNIA DIVISION OF MINES AND GEOLOGY)

The California Geological Survey (CGS, formerly the California Division of Mines and Geology within the State Department of Conservation) has responsibility for identifying and assisting in the utilization of mineral deposits, and identifying geological hazards, including fault locations. As noted above, the Project site has not been identified by the CGS as an area containing minerals.

Local

CITY OF FRESNO GENERAL PLAN

The Project site is located within the City of Fresno General Plan. The Project would be subject to applicable policies and measures of the General Plan. The Resource Conservation and Resilience Element of the General Plan includes the following, objectives and policies related to mineral resources that would apply to the Project.

Chapter 7. Resource Conservation and Resilience Element

SECTION 7.7 - MINERAL RESOURCES

Objective RC-10. Conserve aggregate mineral resources within the Planning Area, as identified by the Division of Mines and Geology, and allow for responsible extraction to meet Fresno's needs.

Policy RC-10-d. 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.

Policy RC-10-f. Work with the County of Fresno, the County of Madera, and the City of Clovis to develop uniform criteria applicable to existing, new and altered mineral extraction sites in the San Joaquin River bottom.

CITY OF FRESNO DEVELOPMENT CODE (CHAPTER 12, ARTICLE 5.5 OF THE MUNICIPAL DEVELOPMENT CODE)

Article 5.5 Surface Mining and Reclamation

This chapter of the Fresno Municipal Code contains the procedures and standards that apply to all mining and onsite mineral processing activities related to surface mining. This was proposed/adopted with Ordinance No. 99-37 on May 20, 1999. These procedures and standards pertain to certain areas within the City of Fresno, its Sphere of Influence, and in areas adjacent to the City and its Sphere of Influence, are classified by the State Geologist as containing regionally significant deposits of Portland Cement Concrete aggregate minerals. The purpose of this chapter is to promote the economic recovery surface minerals in a manner compatible with surrounding land uses and protection of the public health and safety.

4.12.4 - IMPACTS AND MITIGATION MEASURES

Methodology

The potential impacts of the Project were evaluated qualitatively by comparing the anticipated Project effects on mineral resources with existing conditions. The evaluation is based on a review of existing literature from CGS publications, an analysis of Project consistency with the goals and polices of the City of Fresno General Plan, and the significance criteria established by Appendix G of the CEQA Guidelines, which the City has determined to be appropriate criteria for this Draft EIR. Where additional information has been used to evaluate the potential impacts, the information has been referenced.

Thresholds of Significance

The following criteria, as establish in Appendix G of the CEQA Guidelines, will be utilized to determine if a project could potentially have a significant impact:

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; or

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.

Project Impacts

Impact 4.12-1: Result in the Loss of Availability of a Known Mineral Resource that Would be of Value to the Region and the Residents of the State

SAND AND GRAVEL

The Project is entirely located within the City of Fresno boundary area. Known mineral resources have been given an Open Space zone district classification, which does not allow for the development of cannabis businesses. The nearest mineral resources are found along the San Joaquin River corridor. These mineral resources are classified as sand and gravel by the Fresno County General Plan Background Report. Development of retail or commercial cannabis businesses on these sites would potentially reduce the availability of sand and gravel. However, the nearest site would be located approximately 1,500 feet away from the nearest General Plan-identified "Significant Construction Aggregate Resource Area." Under the Ordinance, this site could accommodate a testing laboratory. Due to the distance between the potential site and identified mineral resource areas, the potential for future buildout of this eligible site is not expected to result in a loss of availability of sand and/or gravel resources.

PETROLEUM RESOURCES

As mentioned in Section 4.12.2, oil production has been a major industry in western Fresno County, particularly in the Coalinga area. Extensive oil recovery operations are located mostly to the north of the City of Coalinga and not within the Project. There are no DOGGR identified oil fields or active wells within the Project (Department of Conservation Division of Oil, Gas & Geothermal Resources, 2019). Therefore, the Project would not result in the loss of petroleum resource availability.

NATURAL GAS

Natural gas and natural gas liquids occur in oils sands or with oil in an overlaying gas cap or as dry gas in separate zones in oilfields and in separate gas fields. There are no DOGGR identified gas fields or active wells within the Project (Department of Conservation Division of Oil, Gas & Geothermal Resources, 2019) Natural gas is not actively extracted in the City and is primarily captured as a by-product of oil extraction activities. Therefore, the Project would not result in the loss of natural gas resource availability.

OTHER MINERAL RESOURCES

As discussed above, known mineral resources have been given an Open Space zone district classification, which does not allow for the development of cannabis businesses. No other mineral resources have been designated as regionally or locally significant, are known to be locally or regionally significant, or have been classified as higher than MRZ-2a within or immediately adjacent to the Project boundary.

There will not be potentially significant impacts on mineral resources because there are no known designated mineral resource locations within the Project that would be of value to the region or residents of the State. Furthermore, during the development process, applications will be reviewed by the City Planning and Development Department for compliance with applicable Development Code regulations and General Plan policies, and will 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 (Policy RC-10-d).

The Project would allow for the continuation of oil and gas exploration and mineral extraction activities in a manner consistent with applicable local and State regulations. Impacts to known mineral resources are considered less than significant with the implementation of applicable Development Code regulations and General Plan policies.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be *less than significant.*

Impact 4.12-2: Result in the Loss of Availability of a Locally Important Mineral Resource Recovery Site Delineated on a Local General Plan, Specific Plan, or Other Land Use Plan

Regionally, Fresno County contains numerous mining operations that extract a variety of materials, including sand and gravel, asbestos, chromite, copper, diatomite, gold, granite, gypsum, limestone, mercury, and tungsten. There are sand and gravel deposits located along the San Joaquin River corridor.

According to the Resource Conservation and Resilience Element of the Fresno General Plan, compatible uses are promoted for development adjacent to mineral extraction areas. The Project area may contain a small portion of the San Joaquin River corridor mineral resource locations, but no extraction sites currently exist where potential development can occur. Therefore, the Project would not result in the loss of locally important mineral resource recovery sites as delineated on any applicable report or plan.

According to DOGGR, there are several plugged wells within or in proximity to the Project boundaries (see Figure 4.12-1). DOGGR is responsible for supervising the drilling, operation, maintenance, plugging, and abandonment of oil, gas, and geothermal wells. To implement this regulatory program, DOGGR requires avoidance of building over or near plugged or abandoned oil and gas wells or requires the remediation of wells to current DOGGR standards.

Therefore, impacts to locally important mineral resources are considered less than significant with the implementation of applicable Development Code regulations and General Plan policies.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be *less than significant*.

Cumulative Setting Impacts and Mitigation Measures

CUMULATIVE SETTING

The study area for the analysis of cumulative impacts is the City of Fresno and the unincorporated portions of Fresno County located adjacent to the city limits, as well as portions of the City of Clovis and the County of Madera adjacent to the City of Fresno. The applicable cumulative projections include growth projections from the City of Fresno General Plan, Fresno County General Plan, Madera County General Plan, and the City of Clovis General Plan.

The City of Fresno General Plan was last adopted in the year 2014. Anticipated development within the General Plan includes 186,840 dwelling units, 66.4 million square feet (msf) of commercial/office/public facility, 100,000 sf of mixed uses, and 72.8 msf of industrial uses. The General Plan contains approximately 11,714 acres of agricultural land, 12,288 acres of open space, and 12,522 acres of vacant land. Existing agricultural land is primarily located in the southeastern and western portions of the General Plan.

The General Plan contains two major rail lines that generally traverse in a southeast to northwest direction. These railways include the Union Pacific Railroad line that is generally located along SR-99, and the BNSF Railway that diverges from the SR-99 in the southwest and travels through the Downtown to the northwest. There are three airports located within the City of Fresno including the Fresno-Yosemite International Airport located in the eastern portion of the Planning Area, the Fresno-Chandler Downtown Airport located west of Downtown, and Sierra Sky Park Airport that is located on the northern portion of the General Plan.

The County of Fresno General Plan was last adopted in the year 2000. The County General Plan was prepared to accommodate population growth through the year 2020, consistent with the California Department of Finance projection of 1.1 million by 2020. This represents an additional

population of approximately 344,000, which includes the year 2020 projections outside the sphere of influences for cities within the East Valley area, which is located east of Interstate 5. Additional development projects are proposed northeast of the City of Fresno Project area including Friant Ranch that represents an additional population of approximately 164,693 through the year 2020.

The County of Madera General Plan was last adopted in the year 1995. The Madera County General Plan identifies population and employment growth projections through the year 2010 and includes 177,071 people and 61,866 employees. Since the adoption of Madera County's General Plan, substantial new development projects have been proposed in the southern portion of Madera County, some of which is proposed within close proximity of the City of Fresno Project area including Gateway, Gunner Ranch, Liberty Groves, North Fork Village, Tesoro Viejo, and River Ranch Estates. These projects include approximately 23,000 units, and supporting uses such as commercial, public facilities, parks, and open space.

The City of Clovis General Plan was last adopted in the year 2014. The Clovis General Plan forecasts the ultimate buildout of the entire Clovis General Plan area that is expected to occur for at least 70 years. The Clovis General Plan forecasts an additional 65,100 residential units, 179,300 population, and 38,250,000 square feet of buildings.

CUMULATIVE IMPACTS

CEQA Section 15130(a) states: An EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in Section 15065(a)(3). Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

Extracted resources within Fresno County include aggregate products (sand and gravel), fossil fuels (oil and coal), metals (chromite, copper, gold, mercury, and tungsten), and other minerals used in construction or industrial applications (asbestos, high-grade clay, diatomite, granite, gypsum, and limestone). For the period of 1997-2008, there were 15 active mines and minerals producers in Fresno County. There are no proposed mines and mineral producers, proposed during the analysis for this EIR.

The Project will not affect any regionally or locally significant rock, sand, metal or aggregate deposits. The Project may contain known mineral resources along the San Joaquin River corridor, however, access to the minerals would not be affected by the Project due to the specific locations of potential development. As discussed above, known mineral resources have been given an Open Space zone district classification, which does not allow for the development of cannabis businesses. Oil and gas exploration and extraction activities do not occur within the vicinity of the Project. However, the Project would not preclude any future oil and gas exploration and extraction activities. The Project would continue to accommodate oil and gas recovery operations in compliance with applicable federal, State and local laws and thereby address both oil and gas

mineral resources and protect adjacent land uses in addition to the incorporation of all applicable oil and gas performance standards.

Cumulative impacts to mineral resources would occur if the cumulative projects would result in the loss of oil or aggregate mineral resources. Impacts on mineral resources would not be cumulatively significant with the implementation of the Project. The number of potentially new development sites within the Project boundary is limited and given that known mineral resources have been given an Open Space zone classification. Future development would result in less-than-significant cumulative impacts to mineral resources of value to the region and residents of the State, or locally important resource recovery sites delineated in the General Plan, any Specific Plan, or other land use plan. Therefore, the implementation of the proposed Project would result in less-than-significant cumulative impacts.

Mitigation Measures

No mitigation measures are required.

Cumulative Level of Significance

Cumulative impacts would be *less than significant*.

4.13 - Noise

4.13.1 - INTRODUCTION

Noise can be defined as a sound or series of sounds that are intrusive, irritating, objectionable, or disruptive to daily life. Excessive noise may also cause actual physical harm and have adverse effects on health. Sound is produced by the vibration of sound pressure waves in the air. Sound pressure levels are used to measure the intensity of sound and are described in terms of decibels. The decibel (dB) is a logarithmic unit, which expresses the ratio of the sound pressure level being measured to a standard reference level. A-weighted decibels (dBA) approximate the subjective response of the human ear to a broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum; they are adjusted to reflect only those frequencies that are audible to the human ear. Typically, a 10-dBA increase is perceived as a doubling of the sound, while a 3-dBA increase is not noticeable to the human ear.

Acoustical Terminology

Ambient Noise Level: The composite of noise from all sources near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

Community Noise Equivalent Level (CNEL): The average equivalent sound level during a 24-hour day, obtained after addition of approximately five decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and 10 decibels to sound levels in the night before 7:00 a.m. and after 10:00 p.m.

Decibel (dB): A unit for describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).

Day/Night Average Sound Level (DNL/Ldn): The average equivalent sound level during a 24-hour day, obtained after addition of 10 decibels to sound levels in the night after 10:00 p.m. and before 7:00 a.m.

Equivalent Sound Level (Leq): The sound level containing the same total energy as a time varying signal over a given sample period. Leq is typically computed over one, eight and 24-hour sample periods. (NOTE: The CNEL and DNL represent daily levels of noise exposure averaged on an annual basis, while Leq represents the average noise exposure for a shorter time period, typically one hour).

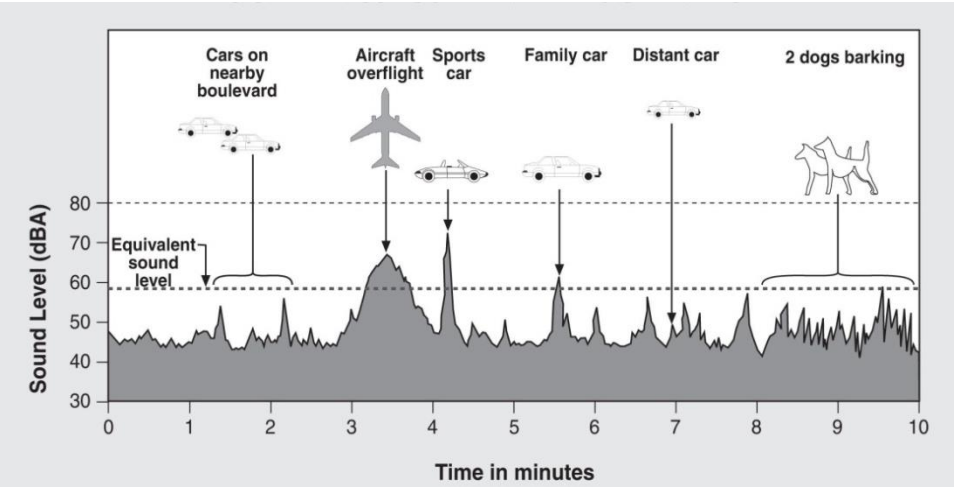
Lmax: The maximum noise level recorded during a noise event.

Ln: The sound level exceeded "n" percent of the time during a sample interval (L90, L50, L10, etc.). For example, L10 equals the level exceeded 10 percent of the time.

Noise Descriptors

One way to describe noise is to measure the maximum sound level (Lmax) (as represented by the 70-dBA noise level from the sports car in the example shown in Table 4.13-1, *Noise Metrics – Comparative Noise Levels*). The Lmax measurement does not account for the duration of the sound. Studies have shown that human response to noise involves the maximum level and its duration. For example, the aircraft in this case is not as loud as the sports car, but the aircraft sound lasts longer. For most people, the aircraft overflight would be more annoying than the shorter duration sports car event. Thus, the maximum sound level alone is not sufficient to predict reaction to environmental noise.

Table 4.13-1
Noise Metrics – Comparative Noise Levels



A-weighted sound levels can be measured or presented as equivalent sound pressure level (Leq). This is defined as the average noise level, on an equal-energy basis for a stated period of time and is commonly used to measure steady-state sound or noise that is usually dominant. Statistical measurements are typically denoted by Ln, where 'n' represents the percentile of time the sound level is exceeded. The measurement of L90 represents the noise level that is exceeded during 90 percent of the measurement period. Similarly, the L10 represents the noise level exceeded for 10 percent of the measurement period.

Human response to daytime and nighttime noise has been observed to vary. During the evening and nighttime, exterior background noises are generally lower than daytime levels; however, most household noise also decreases at night, and exterior noise becomes more noticeable. Furthermore, most people sleep at night and are sensitive to intrusive noises. To account for human sensitivity to evening and nighttime noise levels, the Day-Night Level (Ldn) was developed. The Ldn is a noise index that accounts for the greater annoyance attributed to noise during the evening and nighttime hours.

Ldn values are calculated by averaging hourly Leq sound levels for a 24-hour period and applying weighting factors to evening and nighttime Leq values. The weighting factor, which reflects the increased sensitivity to noise during nighttime hours, is added to each hourly Leq sound level before the 24-hour Ldn is calculated. For the purposes of assessing noise, the 24-hour day is divided into two time periods, with the following weightings:

- Daytime: 7:00 a.m. to 10:00 p.m. (15 hours), weighting factor of zero dB; and
- Nighttime: 10:00 p.m. to 7:00 a.m. (nine hours), weighting factor of 10 dB.

The time periods are then averaged (on an energy basis) to compute the overall Ldn value. For a continuous noise source, the Ldn value can be computed by adding 6.4 dB to the overall 24-hour noise level (Leq). For example, if the expected continuous noise level from a power plant were 60 dBA Leq for every hour, the resulting Ldn from the plant would be 66.4 dBA Ldn.

The community noise equivalent level (CNEL) metric is similar to the Ldn but with an additional five dB weighting factor between 7:00 p.m. and 10:00 p.m. and with a 10-dB weighing factor between 10:00 p.m. and 7:00 a.m. CNEL and Ldn measures are frequently used interchangeably. For a continuous noise source, the CNEL value can be computed by adding 6.7 dB to the overall 24-hour noise level (Leq), meaning that the plant in the previous example would be 66.7 dBA CNEL.

The effects of noise on people can be grouped into three general categories:

- Subjective effects of annoyance, nuisance, dissatisfaction;
- Interference with activities such as speech, sleep, learning;
- Physiological effects such as startling; and
- Physical effects such as hearing loss.

In most cases, environmental noise produces effects in the first two categories of subjective effects and interference with activities only; however, workers in industrial plants might experience physiological effects of noise. No satisfactory way exists to measure the subjective effects of noise, or to measure the corresponding reactions of annoyance and dissatisfaction. This lack of a common standard is due primarily to the wide variation in individual thresholds of annoyance and habituation to noise. Thus, an important way of determining a person's subjective reaction to a new noise is by comparison with the existing or "ambient" environment to which that person has adapted. In general, the more the level or the tonal (frequency) variations of a noise exceed the existing ambient noise level or tonal quality, the less acceptable the new noise will be, as judged by the exposed individual. When comparing sound levels from similar sources (for example, changes in traffic noise levels), a 3-dBA change is considered to be a just-perceivable difference; 5 dBA is clearly perceivable, and 10 dBA is considered a doubling in loudness.

Exterior Noise Distance Attenuation

Noise sources are classified in two forms: (1) point sources, such as stationary equipment or a group of construction vehicles and equipment working within a spatially limited area at a given time; and (2) line sources, such as a roadway with a large number of pass-by sources (motor vehicles). Sound generated by a point source typically diminishes (attenuates) at a rate of 6.0 dBA for each doubling of distance from the source to the receptor at acoustically "hard" sites and at a rate of 7.5 dBA for each doubling of distance from source to receptor at acoustically "soft" sites. Sound generated by a line source (i.e., a roadway) typically attenuates at a rate of 3 dBA and 4.5 dBA per doubling distance, for hard and soft sites, respectively. Sound levels can also be attenuated by manmade or natural barriers. For the purpose of a sound attenuation discussion, a "hard" or reflective site does not provide any excess ground-effect attenuation and is characteristic of asphalt or concrete ground surfaces, as well as very hard-packed soils. An acoustically "soft" or absorptive site is characteristic of unpaved loose soil or vegetated ground.

Structural Noise Attenuation

Sound levels can also be attenuated by manmade or natural barriers. Solid walls, berms, or elevation differences typically reduce noise levels by 5 to 10 dBA. Structures can also provide noise reduction by insulating interior spaces from outdoor noise. The outside-to-inside noise attenuation provided by typical structures in California ranges between 17 to 30 dBA with open and closed windows, respectively, as shown in Table 4.13-2, *Outside-to-Inside Noise Attenuation (dBA)*.

Table 4.13-2
Outside-to-Inside Noise Attenuation (dBA)

Building Type	Open Windows	Closed Windows[1]
Residences	17	25
Schools	17	25
Churches	20	30
Hospitals/Offices/Hotels	17	25
Theaters	17	25

Source: [1] Structures with closed windows can attenuate exterior noise by a minimum of 25 to 30 dBA

Vibration

Vibration is defined as the mechanical motion of earth or ground, building, or other type of structure, induced by the operation of any mechanical device or equipment located upon or affixed thereto. Vibration generally results in an oscillatory motion in terms of the displacement, velocity, or acceleration of the ground- or structure(s) that causes a normal person to be aware of the vibration by means such as, but not limited to, sensation by touch or visual observation of moving objects.

The effects of groundborne vibration include movements of building floors, rattling of windows, and shaking of items on shelves or hangings on the walls. In extreme cases, vibration can cause damage to buildings. The noise radiated from the motion of the room surfaces is called groundborne noise. The vibration motion normally does not provoke the same adverse human reactions as the noise unless there is an effect associated with the shaking of the building. In addition, the vibration noise can only occur inside buildings. Similar to the propagation of noise, vibration propagated from the source to the receptor depends on the receiving building (i.e., the weight of the building), soil conditions, layering of the soils, the depth of groundwater table, etc. However, the response of humans to vibration is very complex. However, it is generally accepted that human response is best approximated by the vibration velocity level associated with the vibration occurrence.

Heavy equipment operation, including stationary equipment that produces substantial oscillation or construction equipment that causes percussive action against the ground surface, may be perceived by building occupants as perceptible vibration. It is also common for groundborne vibration to cause windows, pictures on walls, or items on shelves to rattle. Although the perceived vibration from such equipment operation can be intrusive to building occupants, the vibration is seldom of sufficient magnitude to cause even minor cosmetic damage to buildings.

When evaluating human response, groundborne vibration is usually expressed in terms of root mean square (RMS) vibration velocity. RMS is defined as the average of the squared amplitude of the vibration signal. As for sound, it is common to express vibration amplitudes in terms of decibels.

To avoid confusion with sound decibels, the abbreviation VdB is used for vibration decibels. The vibration threshold of perception for most people is around 65 VdB. Vibration levels in the 70 to 75 VdB range are often noticeable but generally deemed acceptable, and levels in excess of 80 VdB are often considered unacceptable.

4.13.2 - ENVIRONMENTAL SETTING

Local

STUDY AREA FOR PROJECT IMPACTS

The topography of the City is relatively flat with little topographic variation. It occurs at an elevation of approximately 328 feet above mean sea level (AMSL). The surrounding land is relatively flat with a sharp rise towards the foothills of the Sierra Nevada Mountain Range to the east. State Route (SR) 99 runs northwest-southeast on the western edge of the City, connecting it with Sacramento and Bakersfield. SR-41 runs north-south through the heart of the City, connecting it with Yosemite National Park. SR-168 links the Downtown to Clovis, and SR-180 runs east-west within the southern portion of the City.

STUDY AREA FOR CUMULATIVE IMPACTS

The study area for cumulative noise impacts is the City of Fresno 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 could combine with development under the proposed Project and result in cumulative noise impacts.

EXISTING NOISE ENVIRONMENT

Within the City of Fresno city limits, noise levels are typically dominated by transportation noise sources (roadway traffic, railroad operations and aircraft operations) and, to a lesser extent, noise from stationary sources, including industrial and commercial noise sources and heating-ventilation-air-conditioning (HVAC) equipment (both residential and commercial).

TRANSPORTATION NOISE SOURCES

The three main sources of transportation noise within the City of Fresno are roadway noise, railroad noise and aircraft noise. Roadway noise exists throughout the City and is a factor of proximity to major transportation routes and is dependent on vehicle speed, vehicle volume and the overall percentages of truck traffic in relation to vehicle volume. Other factors include existing shielding (noise barriers) and topography. Railroad noise is generally limited to two main corridors, with numerous spur lines. Three airports are associated with aircraft noise throughout the City.

Roadway Noise

There are four State highways within the City of Fresno (State Route 99, State Route 41, State Route 180 and State Route 168). Additionally, vehicle traffic occurs throughout the City on surface roads (arterials, collectors, local roads, etc.). Traffic noise exposure levels vary widely throughout the City, based upon proximity to major roadways, vehicle speeds, truck percentages, existing shielding, topography and roadway conditions.

Railroad Noise

The Union Pacific Railroad and the BNSF Railroad represent the two major railroad corridors within the City of Fresno. The BNSF mainline carries approximately 40 train operations per day while the Union Pacific mainline carries approximately 15 train operations per day. Additionally, numerous spur lines carry infrequent train operations throughout the City of Fresno. Train noise exposure levels are affected by numerous varying factors (in addition to the number of daily operations) including train speed, train length, existing noise barriers, topography and proximity to an at-grade roadway crossing. Train engineers are required to sound their warning horns before a grade crossing, typically at a distance of approximately one-fourth mile before the grade crossing (although certain noise-sensitive areas may be classified as quiet zones). Where noise-sensitive land uses are located in proximity to railroad grade crossings, train horn noise represents a significant source of noise.

Aircraft Noise

Fresno Yosemite International Airport represents the dominant source of aircraft noise levels throughout the City. Fresno Yosemite International Airport accounts for numerous daily operations including commercial air carrier operations, military operations and private aircraft operations. In addition to the Fresno Yosemite International Airport, two municipal airports are located within the City of Fresno, the Fresno Chandler Executive Airport and Sierra Sky Park Airport.

STATIONARY NOISE SOURCES

Non-transportation noise sources within the City of Fresno are predominantly associated with industrial land uses, but also include community noise sources such as HVAC equipment, landscaping activities and other commercial sources.

Industrial Noise Sources

Sources of industrial noise located within the City of Fresno are generally located in industrial and commercially zoned portions of the City, and typically not in the vicinity of residential land uses or other noise-sensitive land uses. While industrial sources of noise are located throughout several pockets within the City, they tend to be located near major transportation corridors such as State Route 99, State Route 41 as well as the Union Pacific and BNSF mainline railroad corridors. Such areas are consistent with the Cannabis Innovation Zone, described above.

Industrial noise may be contained within buildings and structures and it may also represent sources of exterior noise, generally associated with exhaust fans, HVAC equipment, agricultural processing activities or onsite truck movements. Due to zoning regulations, sources of industrial noise are generally located away from noise-sensitive land uses such as residential, schools, places of worship and hospitals or nursing homes.

Community Noise Sources

Sources of community noise may include HVAC equipment and landscaping activities, which may vary widely based upon time of year and time of day (climatic conditions). Other sources of community noise include commercial activities, including car washes, automotive repair shops, retail stores with loading docks and trash compactors, parking lot activities, parks, outdoor sports facilities and other outdoor recreational activities.

4.13.3 - REGULATORY SETTING

Noise regulations are addressed through the efforts of various federal, State, and local government agencies. The agencies responsible for regulating noise are discussed below.

Federal

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972, which serves three purposes:

- Promulgating noise emission standards for interstate commerce;
- Assisting state and local abatement efforts; and
- Promoting noise education and research.

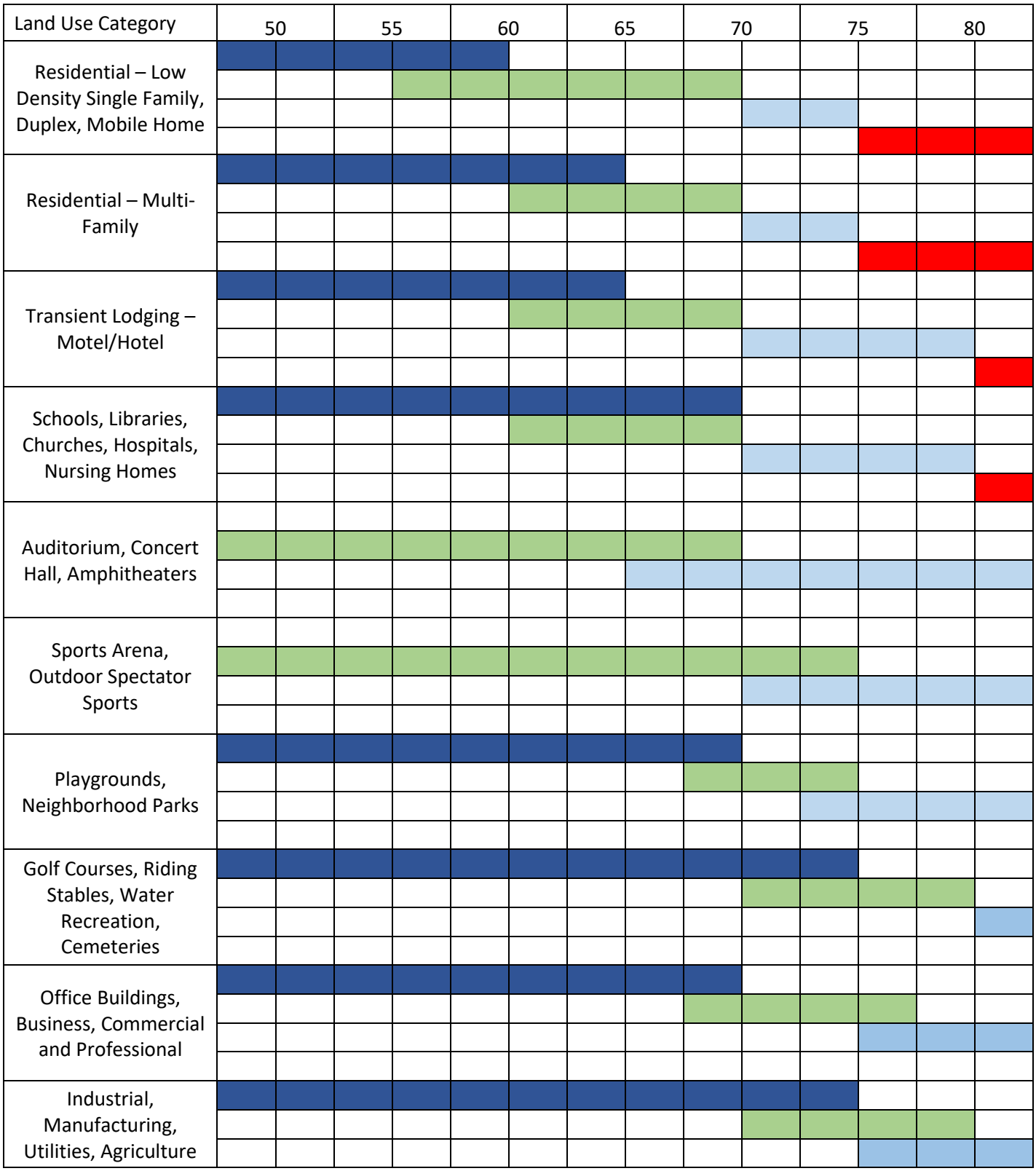
The Federal Office of Noise Abatement and Control (ONAC) was initially tasked with implementing the Noise Control Act. However, ONAC has since been eliminated, leaving the development of federal noise policies and programs to other federal agencies and interagency committees. For example, the Occupational Safety and Health Administration (OSHA) Agency limits noise exposure of workers to 90 dB Leq or less for eight continuous hours, or 105 dB Leq or less for one continuous hour. The Department of Transportation (DOT) assumed a significant role in noise control through its various operating agencies. The Federal Aviation Administration (FAA) regulates noise of aircraft and airports. Surface transportation system noise is regulated by a host of agencies, including the Federal Transit Administration (FTA). Transit noise is regulated by the Federal Urban Mass Transit Administration (UMTA), while freeways that are part of the Interstate Highway System are regulated by the Federal Highway Administration (FHWA). Finally, the federal government actively advocates that local jurisdictions use their land use regulatory authority to arrange new development in such a way that "noise sensitive" uses are either prohibited from being sited adjacent to a highway or, alternately, that the developments are planned and constructed in such a manner that potential noise impacts are minimized.

Since the federal government has preempted the setting of standards for noise levels that can be emitted by the transportation sources, local jurisdictions are limited to regulating the noise generated by the transportation system through nuisance abatement ordinances and land use planning.

State

Established in 1973, the California Department of Health Services Office of Noise Control (ONC) was instrumental in developing regularity tools to control and abate noise for use by local agencies. One significant model, which is shown in Table 4.13-3, the "Land Use Compatibility for Community Noise Environments Matrix," which allows a local jurisdiction to clearly delineate compatibility of sensitive uses with various incremental levels of noise.

Table 4.13-3
Community Noise Exposure - Ldn or CNEL (dBA)



	Normally Acceptable	Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements
	Conditionally Acceptable	New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
	Normally Unacceptable	New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirement must be made and needed noise insulation features included in the design.
	Clearly Unacceptable	New construction or development generally should not be undertaken.

Source: State of California, Governor's Office of Planning and Research, 2003.

Title 24, Chapter 1, Article 4 of the California Administrative Code (California Noise Insulation Standards) requires noise insulation in new transient (e.g., hotels, motels) and multifamily dwellings (other than single-family detached housing) that provides an annual average noise level of no more than 45 dB CNEL. When such structures are located within a 60 dB CNEL (or greater) noise contour, an acoustical analysis is required to ensure that interior levels do not exceed the 45 dB CNEL annual threshold. In addition, Title 21, Chapter 6, Article 1 of the California Administrative Code requires that all habitable rooms, hospitals, convalescent homes, and places of worship shall have an interior CNEL of 45 dB or less due to aircraft noise.

Government Code Section 65302 mandates that the legislative body of each county and city in California adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines published by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable.

Local

The existing City of Fresno regulations regarding noise and vibration are presented below.

City of Fresno General Plan

The City of Fresno General Plan Noise Element provides noise level criteria for land use compatibility for transportation (non-aircraft) noise sources. The General Plan sets noise compatibility standards for transportation noise sources in terms of the Day-Night Average Level (Ldn). The Ldn represents the time-weighted energy average noise level for a 24-hour day, with a 10-dB penalty added to noise levels occurring during the nighttime hours (10:00 p.m. - 7:00 a.m.). The Ldn represents cumulative exposure to noise over an extended period of time and are

therefore calculated based upon annual average conditions. Table 4.13-4 provides the General Plan noise level standards for transportation noise sources.

Table 4.13-4
General Plan Noise Level Standards for Transportation Noise Sources

Noise-Sensitive Land Use	Outdoor Activity Areas[2] Ldn/CNEL, dB	Interior Spaces Ldn/CNEL, dB	Interior Spaces Leq dB[3]
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

1 Where the location of the outdoor activity areas is unknown or is not applicable, the exterior noise level standard shall be applied to the
property line of the receiving land use.
2 As determined for a typical worst-case hour during periods of use.
Source: City of Fresno 2035 General Plan

The City of Fresno General Plan Noise Element contains goals, objectives, and policies that address noise. The following General Plan goals, objectives, and policies are applicable to the proposed Project:

Objective NS-1. Protect the citizens of the City from the harmful and annoying effects of exposure to excessive noise.

Policy NS-1-a - Desirable and Generally Acceptable Exterior Noise Environment. Establish 65 dBA Ldn 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 Ldn or CNEL (measured at the property line) for noise generated by stationary sources impinging upon residential and noise sensitive uses. Maintain 65 dBA Ldn or CNEL as the maximum average exterior noise levels for non-sensitive commercial land uses, and maintain 70 dBA Ldn 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 Ldn or require appropriate noise reducing mitigation measures as determined by a

site specific acoustical analysis to comply with the desirable and conditionally acceptable exterior noise level and the required interior noise level standards set in Table 9-2.

Policy NS-1-c - Generally Unacceptable Exterior Noise Exposure Range. Establish the exterior noise exposure of greater than 65 dB Ldn or CNEL to be generally unacceptable for residential and other noise sensitive uses for noise generated by sources in Policy NS-1-a, and study alternative less noise-sensitive uses for these areas if otherwise appropriate. Require appropriate noise reducing mitigation measures as determined by a site-specific acoustical analysis to comply with the generally desirable or generally acceptable exterior noise level and the required 45 dB interior noise level standards set in Table 9-2 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-e - Update Noise Ordinance. Update the Noise Ordinance to ensure that noise exposure information and specific standards for both exterior and interior noise and measurement criteria are consistent with this General Plan and changing conditions within the City and with noise control regulations or policies enacted after the adoption of this element.

Policy NS-1-f - Performance Standards. Implement performance standards for noise reduction for new residential and noise sensitive uses exposed to exterior community noise levels from transportation sources above 65 dB Ldn or CNEL, as shown on Figure NS-3: Future Noise Contours, or as identified by a project-specific acoustical analysis based on the target acceptable noise levels set in Tables 9-2 and Policies NS-1-a through NS-1-c.

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 Ldn 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 9-2 and 9-3 to determine impacts, and require developers to mitigate these impacts in conformance with Tables 9-2 and 9-3 as a condition of permit approval through appropriate means.

Noise mitigation measures may include:

- The screening of noise sources such as parking and loading facilities, outdoor activities, and mechanical equipment;
- Providing increased setbacks for noise sources from adjacent dwellings;
- Installation of walls and landscaping that serve as noise buffers;
- Installation of soundproofing materials and double-glazed windows; and
- Regulating operations, such as hours of operation, including deliveries and trash pickup.

Alternative acoustical designs that achieve the prescribed noise level reduction may be approved by the City, provided a qualified Acoustical Consultant submits information demonstrating that the alternative designs will achieve and maintain the specific targets for outdoor activity areas and interior spaces. As a last resort, developers may propose to construct noise walls along roadways when compatible with aesthetic concerns and neighborhood character. This would be a developer responsibility, with no City funding.

Policy NS-1-j - 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 Ldn 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-l - Enforcement. Continue to enforce applicable State Noise Insulation Standards and Uniform Building Code noise requirements, as adopted by the City.

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.

Policy NS-1-p - Airport Noise Compatibility. Implement the land use and noise exposure compatibility provisions of the adopted Fresno Yosemite International Airport Land Use Compatibility Plan, the Fresno-Chandler Executive Airport Master and Environs Specific Plan, and the Sierra Sky Park Land Use Policy Plan to assess noise compatibility of proposed uses and improvements within airport influence and environs areas.

CITY OF FRESNO MUNICIPAL CODE

Chapter 10, Article 1

Noise Ordinance of the City of Fresno establishes excessive noise guidelines and exemptions. The following portions of the Municipal Code are applicable to the proposed Project:

Section 10-102 – Definitions

b. "Ambient noise" is the all-encompassing noise associated with a given environment, being usually a composite of sounds from many sources near and far. For the purpose of this ordinance, ambient noise level is the level obtained when the noise level is averaged over a period of fifteen minutes, without inclusion of the offending noise, at the location and time of day at which a comparison with the offending noise is to be made. Where the ambient noise level is less than that designated in this section, however, the noise level specified herein shall be deemed to be the ambient noise level for that location (see Table 4.13-5).

Table 4.13-5
Ambient Noise Levels

District	Time	Sound Level (dB Leq)
Residential	10:00 p.m. to 7:00 a.m.	50
Residential	7:00 p.m. to 10:00 p.m.	55
Residential	7:00 a.m. to 7:00 p.m.	60
Commercial	10:00 p.m. to 7:00 a.m.	60
Commercial	7:00 a.m. to 10:00 p.m.	65
Industrial	anytime	70

Section 10-105 – Excessive Noise Prohibited

No person shall make, cause, or suffer or permit to be made or caused upon any premises or upon any public street, alley, or place within the City, any sound or noise which causes discomfort or annoyance to any reasonable person of normal sensitiveness residing or working in the area, unless such noise or sound is specifically authorized by or in accordance with this article. The provisions of this section shall apply to, but shall not be limited to, the control, use, and operation of the following noise sources:

a. Radios, musical instruments, phonographs, television sets, or other machines or devices used for the amplification, production, or reproduction of sound or the human voice.

b. Animals or fowl creating, generating, or emitting any cry or behavioral sound.

c. Machinery or equipment, such as fans, pumps, air conditioning units, engines, turbines, compressors, generators, motors or similar devices, equipment, or apparatus.

d. Construction equipment or work, including the operation, use or employment of pile drivers, hammers, saws, drills, derricks, hoists, or similar construction equipment or tools.

Section 10-106 – Prima Facie Violation

Any noise or sound exceeding the ambient noise level at the property line of any person offended thereby, or, if a condominium or apartment house, within any adjoining living unit, by more than five decibels shall be deemed to be prima facie evidence of a violation of Section 8-305.

Section 10-107 – Schools, Hospitals, and Churches

No person shall create any noise on any street, sidewalk, or public place adjacent to any school, institution of learning, or church while the same is in use, or adjacent to any hospital, which noise unreasonably interferes with the workings of such institution or which disturbs or unduly annoys patients in the hospital, provided conspicuous signs are displayed in such street, sidewalk, or public place indicating the presence of a school, church, or hospital.

Section 10-109 – Exceptions

The provisions of this article shall not apply to:

a. Construction, repair or remodeling work accomplished pursuant to a building, electrical, plumbing, mechanical, or other construction permit issued by the City or other governmental agency, or to site preparation and grading, provided such work takes place between the hours of 7:00 a.m. and 10:00 p.m. on any day except Sunday;

b. Emergency work; or

c. Any act or acts which are prohibited by any law of the State of California or the United States.

4.13.4 - IMPACTS AND MITIGATION MEASURES

Methodology

An Environmental Noise Assessment was completed by WJV Acoustics for the proposed Project.

Thresholds of Significance

In accordance with CEQA, the effects of a project are evaluated to determine if they will result in significant adverse impacts on the environment. The criteria used to determine the significance of an impact to noise are based on the Environmental Checklist in Appendix G of the State CEQA Guidelines and identified below. Accordingly, noise impacts resulting from the proposed Project are considered significant if the project would result in:

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;

b) Generation of excessive groundborne vibration or groundborne noise levels; or

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.

Project Impacts

Impact 4.13-1: Generation of a Substantial Temporary or Permanent Increase in Ambient Noise Levels in the Vicinity of the Project in Excess of Standards Established in the Local General Plan or Noise Ordinance, or Applicable Standards of Other Agencies

Depending on proximity to existing noise-sensitive land uses, Project implementation and the establishment of commercial and retail cannabis businesses could potentially result in noise levels that exceed the City's applicable noise level standards. Sources of cannabis related noise could include (but are not limited to) construction activities, operational noise levels associated with specialty equipment used in the cultivation, harvesting, processing, packaging and distribution of cannabis products, HVAC equipment, as well as project-related increases in traffic noise exposure at existing noise-sensitive land uses. The exact types of equipment and their associated noise levels will be assessed for each eligible site and reviewed for full compliance with the City's Noise Ordinance and applicable General Plan policies.

CONSTRUCTION NOISE

Construction noise could occur at various locations within the Project area. During construction, noise from construction activities could potentially impact noise-sensitive land uses if such uses are located in the immediate area. Eight of the maximum 16 cannabis cultivators, distributors or manufacturers would be permitted outside of the Cannabis Innovation Zone. These eight would be required to setback from sensitive receptors. The other eight cannabis cultivators, distributors or manufacturers permitted within the Cannabis Innovation Zone could be located less than 1,000 feet from a sensitive receptor. These sensitive receptors are located east of S. Parallel Ave. and west of S. Golden State Blvd. Additionally, construction of cannabis retail and testing laboratories could be located within 1,000-foot of a sensitive receptor.

During construction, noise from construction activities could potentially impact noise-sensitive land uses if such uses are located in the immediate area. However, due to required setback distances established for the Project, it is unlikely that construction noise levels would result in an impact at noise-sensitive land uses within the City. Activities involved in construction would generate noise levels at distances of 100, 200, 300 and 500 feet as indicated by Table 4.13-6.

Typically, construction work would occur during the hours of 7:00am and 10:00 pm. The City's Noise Ordinance requires noise levels not to exceed an hourly equivalent sound level (Leq) of 60 dB on commercially zoned sites and 70 dB on industrially zoned sites. At 500 feet, dBA levels reach a maximum of 70 dBA. Although noise levels are not anticipated to exceed allowable levels during construction, all cannabis related businesses would be required to comply with City of Fresno noise level standards and the implementation of Mitigation Measure MM 4.13-1 to mitigate these short-term construction impacts.

Additionally, all construction equipment shall be properly maintained and muffled to minimize noise generation at the source; Noise-producing equipment shall not be operating, running, or idling while not in immediate use by a construction contractor; All noise-producing construction equipment shall be located and operated, to the extent possible, at the greatest possible distance from any noise-sensitive land uses; and, Signs shall be posted at the construction site displaying hours of construction activities and a contact phone number. The implementation and adherence to these requirements will ensure temporary noise from construction activities are mitigated to a less-than-significant level.

Table 4.13-6
Typical Construction Equipment Maximum Noise Levels, dBA

Type of Equipment	100 Ft.	200 Ft.	300 Ft.	500 Ft.
Backhoe	72	66	62	58
Concrete Saw	84	78	74	70
Crane	75	69	65	61
Excavator	75	69	65	61
Front End Loader	73	67	63	59
Jackhammer	83	77	73	69
Paver	71	65	61	57
Pneumatic Tools	79	73	69	65
Dozer	76	70	66	62
Rollers	74	68	64	60
Trucks	80	74	70	66
Pumps	74	68	64	60
Scrapers	81	75	71	67
Portable Generators	74	68	64	60
Front Loader	80	74	70	66
Backhoe	80	74	70	66
Excavator	80	74	70	66
Grader	80	74	70	66

OPERATIONAL NOISE

Noise associated with commercial and retail cannabis businesses may include (but is not limited to) specialty equipment used in the cultivation, harvesting, processing, packaging and distribution of cannabis products, HVAC equipment, ventilation fans, generators, pumps, trash compactors, loading dock activities and onsite vehicle and truck movements. Noise levels associated with such sources vary widely based upon equipment size, type and manufacturer. These noise generators are associated with cannabis cultivators, distributors or manufacturers. Noise levels associated with such activities, at a reference distance of 100 feet from the noise source, can be generalized as follows:

- Passing car in parking lot: 55-60 dB
- HVAC equipment: 50-70 dB
- Ventilation fans: 25-45 dB
- Loading dock activities: 70-80 dB
- Trash compactor: 50-55 dB
- Truck movements: 60-70 dB
- Idling refrigerated truck trailers: 50-55 dB
- Irrigation Pumps: 60-70 dB
- Diesel Generator: 65-75 dB

Noise levels generated by the project are considered a significant impact if any of the following conditions would be expected to occur:

- The project will cause noise levels exterior to any noise-sensitive receptor to exceed an hourly equivalent sound level (Leq) of 50 dB during the daytime hours (7:00 a.m.-10:00 p.m.) or 45 dB during the nighttime hours (10:00 p.m.-7:00 a.m.).

- The project will cause noise levels exterior to any noise-sensitive receptor to exceed an hourly maximum sound level (Lmax) of 70 dB during the daytime hours (7:00 a.m.-10:00 p.m.) or 60 dB during the nighttime hours (10:00 p.m.-7:00 a.m.).

- The project will cause transportation-related noise levels exterior at any noise-sensitive receptor location to exceed 65 dB Ldn. Noise-sensitive uses include residential, transient lodging, churches, meeting halls, theaters, auditoriums or music Halls.

- The project will cause noise levels within interior spaces to exceed 45 dB Ldn for residential, transient lodging, hospitals or nursing homes or exceed an hourly Leq noise level of 45 dB for churches, meeting halls, office buildings, schools, libraries or museums, or 35 dB hourly Leq for theaters, auditoriums and music halls.

As noted, eight of the maximum 16 cannabis cultivators, distributors or manufacturers would be permitted outside of the Cannabis Innovation Zone. These eight would be required to setback from sensitive receptors. The required setbacks between these commercial cannabis businesses and specific noise-sensitive land uses (i.e. 1,000 ft) would preclude potential noise impacts associated with these businesses.

The other eight cannabis cultivators, distributors or manufacturers permitted within the Cannabis Innovation Zone could be located less than 1,000 feet from a sensitive receptor. These sensitive receptors are located east of S. Parallel Ave. and west of S. Golden State Blvd. Mitigation Measure MM 4.13-2 requires businesses located within 1,000-foot of a sensitive receptor to comply with site-specific reductions of noise levels for HVAC equipment, loading docks, and onsite truck activities.

Retail locations, along with testing laboratories are similar in use to existing pharmacies or other retail stores. Noise generated from these facilities are minimal and are associated with traffic noise. Commercial and employment zone districts in proximity to residential uses must comply with all City ordinances for noise generation. Section 9-3310 of Article 33 of the Fresno Municipal Code requires that cannabis retail businesses operate during the hours of 6:00 a.m. to 10:00 p.m., including delivery.

PROJECT-RELATED INCREASES IN TRAFFIC NOISE EXPOSURE

The Project could result in localized increases in traffic noise levels in the vicinity of commercial and retail cannabis businesses, specifically, cannabis retail locations. However, has further discussed in Section 4.17, *Transportation,* Project related traffic impacts would not be considered

likely. Further, the amount of heavy-duty trucks is minimal, as it is anticipated that most deliveries will be made via small and medium duty vehicles. Generally speaking, Project related traffic volumes would likely contribute (increase over existing) a small portion of existing traffic on local roadways and would therefore be unlikely to account for any measurable increase over existing traffic noise exposure at existing noise-sensitive land uses. Compliance with City of Fresno noise level standards and the implementation of Mitigation Measures MM 4.13-1 and MM 4.13-2 would further ensure noise level standards are not exceeded.

Mitigation Measures

MM 4.13-1: The following mitigation measures shall be implemented during construction of Cannabis related facilities:

1. Per the City of Fresno Municipal Code, construction activities should not occur outside the hours of 7:00 a.m. to 10:00 p.m., Monday through Saturday. Construction activities should not occur during any hours on Sunday. If construction is permitted outside of these hours, all sensitive receptors within 1,000 feet from any property boundary containing a residence, school, daycare or youth center shall be notified at least one week prior;

2. All construction equipment shall be properly maintained and muffled to minimize noise generation at the source;

3. Noise-producing equipment shall not be operating, running, or idling while not in immediate use by a construction contractor;

4. All noise-producing construction equipment shall be located and operated, to the extent possible, at the greatest possible distance from any noise-sensitive land uses; and

5. Signs shall be posted at the construction site displaying hours of construction activities and a contact phone number.

MM 4.13-2: As part of the application submittal for a conditional use permit for all new commercial cannabis businesses, located in the Cannabis Innovation Zone and within 1,000 feet from any property boundary containing a residence, school, daycare or youth center, the applicant shall submit a site-specific acoustical analysis to ensure operational noise compliance with applicable City of Fresno noise level standards. The following mitigation measures shall be implemented to ensure operational noise compliance with applicable City of Fresno noise level standards, in areas within the Cannabis Innovation Zone, if Cannabis-related activities are to be located within 1,000 feet of a sensitive receptor:

1. All ground- and roof-amounted HVAC equipment HVAC equipment located within 300 feet of a sensitive receptor shall be properly screened to provide acoustic shielding of associated noise levels. This may include the implementation of roof parapets, solid screening walls or the placement of the unit as such to block line-of-sight of sensitive receptors.

2. Daytime (7:00 a.m. to 10:00 p.m.) loading dock activities shall not occur within 350 feet of a sensitive receptor and Nighttime (10:00 p.m. to 7:00 a.m.) loading dock activities shall not occur within 1,000 feet of a sensitive receptor, without the preparation of a site-specific acoustical analysis.

3. Daytime (7:00 a.m. to 10:00 p.m.) generator activities shall not occur within 200 feet of a sensitive receptor and Nighttime (10:00 p.m. to 7:00 a.m.) generator activities shall not occur within 600 feet of a sensitive receptor, without the preparation of a site-specific acoustical analysis. Daytime (7:00 a.m. to 10:00 p.m.) on-site truck movements shall not occur within 100 feet of a sensitive receptor and Nighttime (10:00 p.m. to 7:00 a.m.) onsite truck movements shall not occur within 325 feet of a sensitive receptor, without the preparation of a site-specific acoustical analysis.

Level of Significance

Impacts would be *less than significant after mitigation*.

Impact 4.13-2: Generation of Excessive Groundborne Vibration or Groundborne Noise Levels

The City of Fresno does not have regulations that define acceptable levels of vibration. Vibration from construction activities could be detected if there are sensitive uses located near a construction site. Typical vibration levels at a reference distance of 100 feet and 300 feet are summarized by Table 4.13-7. The vibration levels described below at a distance of 100 feet and 300 feet are below the thresholds of annoyance or damage. Vibration levels exceeding the threshold levels associated with annoyance or damage are not expected to occur as a result of the Project.

Table 4.13-7
Typical Vibration Levels During Construction

Equipment	PPV (in/sec)	
	@ 100’	@300’
Bulldozer (Large)	0.011	0.006
Bulldozer (Small)	0.0004	0.00019
Loaded Truck	0.01	0.005
Jackhammer	0.005	0.002
Vibratory Roller	.03	0.013
Caisson Drilling	.01	.006

Source: Caltrans

Vibration from operational sources could occur as a result of vehicle and truck movements, trash collection, loading dock activities, HVAC equipment or other cannabis-specific equipment associated with the processing, packaging and manufacturing of cannabis products. However, these vibration levels are temporary in nature and at low levels are typically localized. As such,

vibrations would not be felt at the required setback distances at sensitive receptor locations. Impacts would be considered less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be *less than significant*.

Impact 4.13-3: For a Project Located Within the Vicinity of a Private Airstrip or an Airport Land Use Plan or, Where Such a Plan has not been Adopted, Within Two Miles of a Public Airport or Public Use Airport, Would the Project Expose People Residing or Working in the Project Area to Excessive Noise Levels

Commercial and retail cannabis businesses could locate within the vicinity of a private airstrip or within the jurisdiction of an Airport Land Use Compatibility Plan (and within the 65 dB CNEL contours). As described above, there are three airports located within the City of Fresno, the Fresno Yosemite International Airport, the Fresno Chandler Executive Airport and the Sierra Sky Park Airport. Each airport has its own Airport Land Use Compatibility Plan (ALUCP) which provides guidelines in regard to land use compatibility criteria for specific land use designations to be located within close proximity to each airport. In addition, each ALUCP provides existing noise level contours, in terms of the CNEL noise level metric. Therefore, commercial and retail cannabis businesses proposed within the boundaries of an airport ALUCP, will require compliance with the applicable ALUC, as well as compliance with the City's development code and applicable General Plan policies.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be *less than significant*.

Cumulative Setting Impacts and Mitigation Measures

CUMULATIVE SETTING

The study area for the analysis of cumulative impacts is the City of Fresno and the unincorporated portions of Fresno County located adjacent to the city limits, as well as portions of the City of Clovis and the County of Madera adjacent to the City of Fresno. The applicable cumulative projections include growth projections from the City of Fresno General Plan, Fresno County General Plan, Madera County General Plan, and the City of Clovis General Plan.

The City of Fresno General Plan was last adopted in the year 2014. Anticipated development within the General Plan includes 186,840 dwelling units, 66.4 million square feet (msf) of commercial/office/public facility, 100,000 square feet of mixed uses, and 72.8 msf of industrial uses. The General Plan contains approximately 11,714 acres of agricultural land, 12,288 acres of open space, and 12,522 acres of vacant land. Existing agricultural land is primarily located in the southeastern and western portions of the General Plan.

The General Plan contains two major rail lines that generally traverse in a southeast to northwest direction. These railways include the Union Pacific Railroad line that is generally located along SR-99, and the BNSF Railway that diverges from the SR-99 in the southwest and travels through the Downtown to the northwest. There are three airports located within the City of Fresno including the Fresno-Yosemite International Airport located in the eastern portion of the Planning Area, the Fresno-Chandler Downtown Airport located west of Downtown, and Sierra Sky Park Airport that is located on the northern portion of the General Plan.

The County of Fresno General Plan was last adopted in the year 2000. The County General Plan was prepared to accommodate population growth through the year 2020, consistent with the California Department of Finance projection of 1.1 million by 2020. This represents an additional population of approximately 344,000, which includes the year 2020 projections outside the sphere of influences for cities within the East Valley area, which is located east of Interstate 5. Additional development projects are proposed northeast of the City of Fresno Project area including Friant Ranch that represents an additional population of approximately 164,693 through the year 2020.

The County of Madera General Plan was last adopted in the year 1995. The Madera County General Plan identifies population and employment growth projections through the year 2010 and includes 177,071 people and 61,866 employees. Since the adoption of Madera County's General Plan, substantial new development projects have been proposed in the southern portion of Madera County, some of which is proposed within close proximity of the City of Fresno Project area including Gateway, Gunner Ranch, Liberty Groves, North Fork Village, Tesoro Viejo, and River Ranch Estates. These projects include approximately 23,000 units, and supporting uses such as commercial, public facilities, parks, and open space.

The City of Clovis General Plan was last adopted in the year 2014. The Clovis General Plan forecasts the ultimate buildout of the entire Clovis General Plan area that is expected to occur for at least 70 years. The Clovis General Plan forecasts an additional 65,100 residential units, 179,300 population, and 38,250,000 square feet of buildings.

CUMULATIVE IMPACTS

CEQA Section 15130(a) states: An EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in Section 15065(a)(3). Where a lead agency is examining a project with an incremental effect that is not "cumulatively

considerable," a lead agency need not consider that effect significant but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

The noise cumulative impacts analysis considered whether the Project, in combination with the approved or proposed projects identified in the City of Fresno General Plan Master EIR, would cause excess noise in relation to the City of Fresno's projected buildout of the General Plan.

Buildout of the Project area, along with construction of related projects in the vicinity, would introduce construction activities to the Project area that could potentially result in temporary or periodic increases in ambient noise levels. Construction activities would typically occur intermittently and vary depending upon the nature or phase of construction, although noise ranges are usually similar across all construction phases. The City's Noise Ordinance requires noise levels not to exceed an hourly equivalent sound level (Leq) of 60 dB on commercially zoned sites and 70 dB on industrially zoned sites. At 500 feet, dBA levels reach a maximum of 70 dBA. Although noise levels are not anticipated to exceed allowable levels during construction, all cannabis related businesses would be required to comply with City of Fresno noise level standards and the implementation of Mitigation Measure MM 4.13-1 to mitigate these short-term construction impacts. Mitigation Measure MM 4.13-2 requires businesses located within 1,000-foot of a sensitive receptor to comply with site-specific reductions of noise levels for possible operational noise generated by HVAC equipment, loading docks, and onsite truck activities.

As stated above, site preparation, grading, and other construction activity conducted pursuant to a building or other construction permit issued by the City of Fresno or other governmental agency would be exempt for the provisions of Chapter 10, Article 1 - Noise Ordinance of the City of Fresno, provided such work occurs between 7:00 a.m. and 10:00 p.m., excluding Sunday. Additionally, the Counties of Fresno and Madera and the City of Clovis have established similar provisions that exempt construction noise within their jurisdictions from their respective noise ordinances during daytime hours. As a result, construction noise generated from the Project area and emanating into neighboring jurisdictions, and vice versa, should be excluded from both the noise provisions set forth by the City of Fresno and the surrounding jurisdictions, granted construction activities occur within specific parameters of each particular exception. Therefore, with the implementation of MM 4.13-1 and MM 4.13-2, the proposed Project contributions to cumulative construction noise would be less than cumulatively considerable and thus would result in a less-than-significant cumulative impact.

Traffic noise resulting from the operation of future cannabis-related facilities could generate noise at adjacent sensitive receptors sites. Traffic volumes would be a small percentage of existing traffic on existing roadways, resulting in minimal cumulative changes to the noise environment from the development of an individual traffic noise generator, as discussed in further detail in Section 4.17, *Transportation.*

Vibration from operational sources could occur as a result of equipment associated with the processing, packaging and manufacturing of cannabis products. However, these vibration levels

are temporary in nature, and commonly generated by the existing businesses in the surrounding area. However, these vibration levels are temporary in nature and at low levels are typically localized. As such, vibrations would not be felt at the required setback distances at sensitive receptor locations. Therefore, cumulative impacts would be considered less than significant.

Mitigation Measures

Implement Mitigation Measures MM 4.13-1 and 4.13-2.

Cumulative Level of Significance

Cumulative impacts would be *less than significant with mitigation*.

4.14 - Population and Housing

4.14.1 - INTRODUCTION

This section addresses potential impacts of the Proposed Regulation and Permitting of Commercial Cannabis Activities (Project) on population, housing, and employment within the Project area, and provides an overview of current population estimates, projected population growth, current housing, employment trends, and the regulatory setting.

Sources of information and data provided in this section include, but are not limited to, the City of Fresno General Plan and Housing Element, and the City of Fresno General Plan Update Master EIR.

4.14.2 - ENVIRONMENTAL SETTING

The City of Fresno (City) is located in Fresno County and is situated in the central portion of the San Joaquin Valley, in the State of California. The City encompasses approximately 113 square miles. Fresno is the largest city in Fresno County and has a current estimated population of 536,683 residents (California Department of Finance, 2019). Fresno County is California's sixth largest county in land area and encompasses approximately 6,011 square miles.

Population Trends

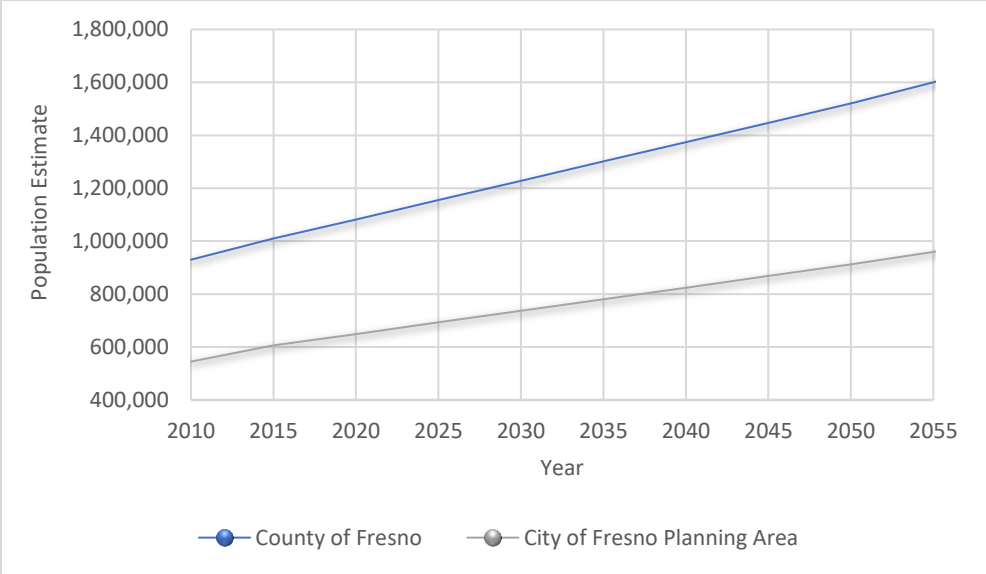
Fresno was incorporated in 1885 and had a population of 10,000 by 1890. Fresno is now the fifth largest city in the State of California. Centrally located, Fresno is the financial, industrial, trade, and commercial capital in the Central San Joaquin Valley.

Population projections for Fresno County were identified in the San Joaquin Valley Demographic Forecasts 2010 to 2050, which were prepared for the Fresno Council of Governments in 2012. The population estimates for the County are provided in Table 4.14-1 below. The San Joaquin Valley Demographic Forecasts 2010 to 2050 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, and to project the population for one additional year to 2056.

The forecast for the City of Fresno Project area was based on the County's population forecast. The 2010 population estimate for the Project area was 545,000. Given that the City of Fresno's population from the 2010 U.S. Census was approximately 495,000, the remaining area within the Project area (unincorporated areas) contained approximately 50,000 persons.

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 forecast the population within the Project area after 2010. Table 4.14-1 provides a population forecast for the Project area.

Table 4.14-1
Population Forecast for the Project Area



4.14.3 - REGULATORY SETTING

State

CALIFORNIA HOUSING ELEMENT LAW

State law requires each city and county to adopt a general plan for future growth. This plan must include a housing element that identifies housing needs for all economic segments and provides opportunities for housing development to meet that need. At the State level, the California Department of Housing and Community Development estimates the relative share of California's projected population growth that could occur in each county in the State based on California Department of Finance (DOF) population projections and historic growth trends. Where there is a regional Council of Governments, as in Fresno County, the California Department of Housing and Community Development provides information regarding the regional housing need to the Council. Locally, Fresno Council of Governments (COG) then assigns a share of the regional housing need to each of its cities and the County. The process of assigning shares provides cities and counties the opportunity to comment on the proposed allocations. The California Department of Housing and Community Development oversees the process to ensure that the Council of Governments distribute their share of the State's projected housing need.

Each city and county must update its general plan housing element on a regular basis and identify potential sites that could accommodate the city's share of the regional housing need. Before adopting an update to its housing element, the city or county must submit a draft to the California Department of Housing and Community Development for review. The department advises the local jurisdiction as to whether its housing element complies with the provisions of California housing element law (Government Code Sections 65580-65589.8, 1980).

REGIONAL HOUSING NEED ALLOCATION PROCESS

Regional Housing Need Allocation (RHNA) is the state-mandated process to identify the total number of housing units (by affordability level) that each jurisdiction must accommodate in its housing element of the general plan. As part of this process, the California Department of Housing and Community Development identifies statewide housing need and assigns the county a share in a manner that is consistent with the development pattern included in the Sustainable Communities Strategy (SCS) of the 2018 Regional Transportation Plan (RTP) that was adopted in July 2018. This process was revised with the approval of Senate Bill (SB) 375 which amended the RHNA schedule and methodology requiring due dates for local governments to update their housing elements no later than 18 months from the date that Fresno COG adopts the RTP, which occurred on July 26, 2018 (Government Code Sections 65580-65589.8, 1980). Fresno County RHNA Plan for January 1, 2013 to December 31, 2023, was approved on July 31, 2014.

Local

CITY OF FRESNO GENERAL PLAN

The applicable regulations within the Planning Area are provided within the City of Fresno Urban Form Element and Housing Element. The applicable goals, objectives, and policies are provided below.

Urban Form Element

Objective UF-1. Emphasize the opportunity for a diversity of districts, neighborhoods, and housing types.

Objective UF-2. Enhance the unique sense of character and identity of the different subareas of the Downtown neighborhoods.

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.

Objective UF-13. Locate roughly one-half of future residential development in the growth areas – defined as unincorporated land as of December 31, 2012 SOI – which are to be developed with complete neighborhoods that include housing, services, and recreation; mixed-use centers; or along future BRT corridors.

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

2015-2023 Housing Element

Objective H-1. Provide adequate sites for housing development to accommodate a range of housing by type, size, location, price, and tenure.

Policy H-1-a. Implement land use policies and standards that allow for a range of residential densities and products that will enable households of all types and income levels the opportunity to find suitable ownership or rental housing.

Policy H-1-b. Encourage development of residential uses in strategic proximity to employment, recreational facilities, schools, neighborhood commercial areas, and transportation routes.

Policy H-1-c. Promote the development of affordable and special needs housing near transit and/or smart growth areas.

Objective H-2. Assist in the development of adequate housing to meet the needs of extremely low, very low, low, and moderate-income households.

Policy H-2-a. Facilitate housing development that is affordable to extremely low, very low, low and moderate-income households by providing technical assistance, regulatory incentives and concessions, and financial resources as funding permits.

Policy H-2-b. Encourage both the private and public sectors to produce or assist in the production of housing, with particular emphasis on housing affordable to persons with disabilities, elderly, large families, female-headed households with children, and people experiencing homelessness.

Policy H-2-c. Continue to utilize federal and State subsidies to the fullest extent to meet the needs of lower-income residents, including extremely low-income residents.

Policy H-2-d. Support regional efforts to address homelessness, including the Fresno-Madera Continuum of Care.

Policy H-2-e. Support and coordinate with agencies and service providers offering foreclosure services.

Policy H-2-f. Promote and encourage sustainable development and green building practices for all new residential development and for the retrofitting of existing housing.

Objective H-3. Address, and where possible, remove any potential governmental constraints to housing production and affordability.

Policy H-3-a. Review and adjust as appropriate residential development standards, regulations, ordinances, departmental processing procedures, and residential fees related to rehabilitation and construction that are determined to be a constraint on the development of housing.

Policy H-3-b. Educate applicants on how to navigate the development approval process and otherwise facilitate building permit and development plan processing for residential construction.

Policy H-3-c. Facilitate timely development plan and building permit processing for residential construction.

Policy H-3-d. Provide incentives and regulatory concessions for residential projects constructed specifically for lower and moderate-income households.

Policy H-3-e. Encourage the new construction of housing in the Central City, Inner City, and other targeted areas.

Policy H-2-f. Prioritize infrastructure improvements, code enforcement, and public services provision in high-need areas.

Objective H-4. Conserve and improve the condition of Fresno's existing housing stock.

Policy H-4-a. Enforce adopted code requirements that set forth acceptable health and safety standards for the occupancy of existing housing.

Policy H-4-b. Advocate and facilitate the conservation and rehabilitation of substandard residential properties by homeowners and landlords.

Policy H-4-c. Utilize code compliance resources to bring substandard units into compliance with City codes and to improve overall housing conditions in Fresno.

Policy H-4-d. Educate the public regarding the need for property maintenance and rehabilitation, code enforcement, crime watch, neighborhood conservation and beautification, and other related issues.

Policy H-4-e. Continue to facilitate access to rehabilitation programs that provide financial and technical assistance to low and moderate-income households for the repair and rehabilitation of existing housing with substandard conditions.

Policy H-4-f. Facilitate the removal of existing housing – including illegal, non-conforming, and blighted properties – that poses serious health and safety hazards to residents and adjacent structures.

Policy H-4-g. Assist in the preservation of all units at risk of converting from affordable housing to market rate housing.

Objective H-5. Continue to promote equal housing opportunity in the City's housing market regardless of age, disability/medical condition, race, sex, marital status, ethnic background, source of income, and other factors.

Policy H-5-a. Prohibit discrimination in the sale, rental, or financing of housing based on race, color, ancestry, religion, national origin, sex, sexual orientation, gender identity, age, disability/medical condition, familial status, marital status, source of income, or any other arbitrary factor.

Policy H-5-b. Assist in the enforcement of fair housing laws by providing support to organizations that can receive and investigate fair housing allegations, monitor compliance with fair housing laws, and refer possible violations to enforcing agencies.

Policy H-5-c. Provide equal access to housing for special needs residents such as people experiencing homelessness, elderly individuals, and persons with disabilities.

Policy H-5-d. Promote the provisions of disabled-accessible units and housing for persons with mental and physical disabilities.

Policy H-5-e. Ensure that all development applications are considered, reviewed, and approved without prejudice to the proposed residents, contingent on the development application's compliance with all entitlement requirements.

Policy H-5-f. Accommodate persons with disabilities who seek reasonable waiver or modification of land use controls and/or development standards pursuant to procedures and criteria set forth in the Development Code.

Policy H-5-g. Create equitable and affordable housing options throughout the City that provide incentives to residents for finding housing in high opportunity areas and to developers for building affordable housing in high-opportunity areas.

Policy H-5-h. Consult with a wide range of groups throughout the community and consider environmental justice issues in the development and update of regulations, guidelines and other local programs.

Policy H-5-i. Increase or maintain resources to establish and support outreach, public education and community development activities through community-based and neighborhood organizations.

4.14.4 - IMPACTS AND MITIGATION MEASURES

Methodology

Population, housing, and employment in the Project area were evaluated by reviewing the most current data available from the U.S. Census Bureau, EDD, DOF, 2018 RHNA, Fresno COG, and the Employment Density Guide (Homes and Communities Agency, 2015) .

PROJECT USES

Table 4.14-2 below summarizes the commercial cannabis uses and their corresponding number of eligible sites for location, maximum number of permits to be issued, and maximum square footage for occupancy, all of which apply to the entire city limits.

Table 4.14-2
Commercial Cannabis Uses

Commercial Cannabis Uses	Eligible Sites	Max. Permits	Max. SF
Cultivation, Distribution, and Manufacturing Within Cannabis Innovation Zone	591	8	700,000
Cultivation, Distribution, and Manufacturing Outside of Cannabis Innovation Zone	953	8	
Cannabis Retail Businesses	5,564	21	55,000
Testing Laboratories	13,807	Unlimited	100,000
Totals	**20,915**	**N/A**	**855,000**

Of the total 20,915 project eligible sites for location, a small percentage of the sites are vacant infill lots that can support new development, all of which are located in existing commercial, mixed-use, and industrial zones and in urbanized areas. The majority of the Project eligible sites are fully serviced industrial and commercial lots that have been improved with industrial and commercial uses and buildings. The Project could involve limited new site development. All approved uses will be required to obtain a Commercial Cannabis License and a Conditional Use Permit from the City.

JOB CREATION

Job creation estimates were developed using the CounterPlan job creation calculator tool to calculate the number of jobs that are potentially created by that use based on the floorspace occupied by a specific use (Homes and Communities Agency, 2015). The calculator uses this baseline, together with other data and research regarding working practices to calculate the number of jobs. The calculator includes working and operating practices that have an impact on the potential number of employees per floor area, which in turn determines the level of economic impact created by a development project. Using the data provided in Table 4.14-3 below, the Counter Plan job creation calculator tool estimates the following full time equivalent (FTE) jobs for the Project.

Table 4.14-3
CounterPlan Estimated Jobs for Cannabis Activity

CounterPlan – Building Occupancy/Use	Floorspace	FTE Jobs
Industrial Manufacturing	700,000 sf	1,711
Street Retail	55,000 sf	243
Research and Development	100,000 sf	160
Total	**855,000 sf**	**2,114**

Thresholds of Significance

In accordance with CEQA, the effects of a project are evaluated to determine if they will result in significant adverse impacts on the environment. The criteria used to determine the significance of an impact to population and housing are based on the Environmental Checklist in Appendix G of the State CEQA Guidelines and identified below. Accordingly, population and housing impacts resulting from the proposed project are considered significant if the project 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.

Project Impacts

Impact 4.14-1: Induce Substantial Unplanned Population Growth in an Area, Either Directly or Indirectly

The Project would introduce a new industry to the City of Fresno that has not previously been allowed or regulated. This could result in the creation of additional economic opportunities provided within the City of Fresno and could introduce new jobs. An increase in employment opportunities could directly or indirectly induce substantial unplanned population growth, if the amount of jobs created would exceed the planned growth of the area.

EMPLOYMENT

Table 4.14-4, below, provides the most recently adjusted employed labor force data in the Fresno Metropolitan Statistical Area (MSA) for industries that could include future cannabis-related activities.

Table 4.14-4
Industry Employment and Labor Force for Fresno, MSA (Fresno County)

Industry	Employed Labor Force (August 2019)	Percent of Total Civilian Employed Labor Force
Civilian Labor Force	454,400	100%
Total Farm	53,400	11.8%
Manufacturing	29,000	6.4%
Nondurable Goods	19,700	4.3%
Food Manufacturing	14,800	3.3%
Private Service Providing	241,500	53.1%
Wholesale Trade	14,700	3.2%
Retail Trade	39,000	8.6%

Industry	Employed Labor Force (August 2019)	Percent of Total Civilian Employed Labor Force
Food and Beverage Stores	8,100	1.8%
General Merchandise	8,200	1.8%
Other Services	12,100	2.7%

Source: California Employment Development Department

The total civilian labor force for the Fresno MSA in August 2019 was 454,400. The estimated total jobs created by the proposed Project would be 2,114 (Table 4.14-3). The total increase in jobs would be 0.05 percent. Table 4.14-5 compares the current labor force with the industries and jobs that could be created by the proposed Project.

Table 4.14-5
Labor Force and CounterPlan Estimated Jobs Distribution

Industry	Employed Labor Force (August 2019)	CounterPlan Estimated Jobs	Percent Increase
Civilian Labor Force	454,400	2,114	0.05%
Total Farm	53,400	855[1]	1.6%
Manufacturing	29,000	427[2]	1.5%
Nondurable Goods	19,700		
Food Manufacturing	14,800		
Private Service Providing	241,500		
Wholesale Trade	14,700	427[3]	2.9%
Retail Trade	39,000	243	0.6%
Food and Beverage Stores	8,100		
General Merchandise	8,200		
Other Services	12,100	160	1.3%

Source: California Employment Development Department
[1]Estimated 50% of total CounterPlan Industrial Manufacturing Jobs
[2]Estimated 25% of total CounterPlan Industrial Manufacturing Jobs
[3]Estimated 25% of total CounterPlan Industrial Manufacturing Jobs

As shown in Table 4.14-5, once the estimated 2,114 jobs created by the proposed Project are distributed within the current civilian labor force, the largest increase in any one industry would be wholesale trade, with a potential to increase by 2.9 percent. Based on the October 18, 2019 report from the California Employment Development Department (Calfornia Employment Development Department, 2019), total industry employment increased by 1,500 jobs between August 2019 and September 2019. Further, the report indicated the current unemployment rate in Fresno County is 5.3 percent, which is higher than the California unemployment rate of 3.5 percent and the national unemployment rate of 3.3 percent.

POPULATION AND HOUSING

Population forecasts for the City of Fresno indicate growth for the City to include 1,373,700 persons by the year 2040. This is an increase of 379,300 persons over the current U.S. Census Bureau 2018 population estimate of 994,400.

According to the 2015-2023 Fresno General Plan Housing Element, the City of Fresno has enough land to meet and exceed the identified housing needs for the 2013-2023 Regional Housing Needs Assessment (RHNA) reporting period, as established by Fresno COG. This vacant land includes parcels zoned for residential, mixed-use, and commercial. As the population in the City and the Fresno MSA continues to grow, housing units for all incomes will continue to be built to meet demand. As required by California law, the City of Fresno has adopted a General Plan for the City. This plan is the guiding document to encourage and ensure that future development within the City is completed in an orderly and efficient manner.

The Project does not include residential uses, nor does it include typical elements that would directly or indirectly affect population or housing (i.e. extension of roads or other infrastructure). The proposed Project would add approximately 2,114 new jobs, which accounts for a 0.05 percent increase in the number of jobs in the Fresno MSA. The jobs created by these industries will primarily employ persons living within the City. The educational and professional criteria for cannabis industry workers are similar to those of other industrial and commercial industries that currently operate within the City. These jobs range from highly technical and well paid (master growers and extractors, quality control inspectors) to low-skill, low wage jobs (budtenders, trimmers/harvesters/cultivators, retail clerks, etc.). Ancillary jobs that support cannabis businesses, such as human resources managers, information technology, security, accounting, and marketing would also be created. It is anticipated that the majority of the jobs will be filled by existing City or County residents; some employees would come from the region and commute, while a small number would relocate to the City.

For the reasons stated above, the proposed Project will not Induce Substantial Unplanned Population Growth in an Area, Either Directly or Indirectly and impacts are considered lee than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be *less than significant*.

Impact 4.14-2: Displace Substantial Number of Existing People or Housing Necessitating the Construction of Replacement Housing Elsewhere

Implementation of the proposed Project could potentially result in development of new buildings and sites, and occupancy of existing buildings and sites. However, the Project area is limited to mixed-use, commercial, and industrial zones and does not include the development of any new or replacement housing and will not displace people or housing. Cultivation, manufacturing, and distribution facilities outside of the Cannabis Innovation Zone are required to be located 1,000-feet from residential areas. Facilities within the Cannabis Innovation Zone may be located closer to residential areas; however, this EIR contains specific mitigation measures to protect these residential areas from impacts associated with the proposed Project. Additionally, the proposed text amendment and regulatory Ordinance have specific requirements for all cannabis related businesses, including attending meetings with the local residents and the City during the first year of operation to ensure complaints or concerns are addressed. Therefore, the proposed Project would not displace substantial numbers of existing people or housing, and impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be *less than significant*.

Cumulative Setting Impacts and Mitigation Measures

CUMULATIVE SETTING

The study area for the analysis of cumulative impacts is the City of Fresno and the unincorporated portions of Fresno County located adjacent to the city limits, as well as portions of the City of Clovis and the County of Madera adjacent to the City of Fresno. The applicable cumulative projections include growth projections from the City of Fresno General Plan, Fresno County General Plan, Madera County General Plan, and the City of Clovis General Plan.

The City of Fresno General Plan was last adopted in the year 2014. Anticipated development within the General Plan includes 186,840 dwelling units, 66.4 million square feet (msf) of commercial/office/public facility, 100,000 sf of mixed uses, and 72.8 msf of industrial uses. The General Plan contains approximately 11,714 acres of agricultural land, 12,288 acres of open space, and 12,522 acres of vacant land. Existing agricultural land is primarily located in the southeastern and western portions of the General Plan.

The General Plan contains two major rail lines that generally traverse in a southeast to northwest direction. These railways include the Union Pacific Railroad line that is generally located along SR-99, and the BNSF Railway that diverges from the SR-99 in the southwest and travels through

the Downtown to the northwest. There are three airports located within the City of Fresno including the Fresno-Yosemite International Airport located in the eastern portion of the Planning Area, the Fresno-Chandler Downtown Airport located west of Downtown, and Sierra Sky Park Airport that is located on the northern portion of the General Plan.

The County of Fresno General Plan was last adopted in the year 2000. The County General Plan was prepared to accommodate population growth through the year 2020, consistent with the California Department of Finance projection of 1.1 million by 2020. This represents an additional population of approximately 344,000, which includes the year 2020 projections outside the sphere of influences for cities within the East Valley area, which is located east of Interstate 5. Additional development projects are proposed northeast of the City of Fresno Project area including Friant Ranch that represents an additional population of approximately 164,693 through the year 2020.

The County of Madera General Plan was last adopted in the year 1995. The Madera County General Plan identifies population and employment growth projections through the year 2010 and includes 177,071 people and 61,866 employees. Since the adoption of Madera County's General Plan, substantial new development projects have been proposed in the southern portion of Madera County, some of which is proposed within close proximity of the City of Fresno Project area including Gateway, Gunner Ranch, Liberty Groves, North Fork Village, Tesoro Viejo, and River Ranch Estates. These projects include approximately 23,000 units, and supporting uses such as commercial, public facilities, parks, and open space.

The City of Clovis General Plan was last adopted in the year 2014. The Clovis General Plan forecasts the ultimate buildout of the entire Clovis General Plan area that is expected to occur for at least 70 years. The Clovis General Plan forecasts an additional 65,100 residential units, 179,300 population, and 38,250,000 square feet of buildings.

CUMULATIVE IMPACTS

CEQA Section 15130(a) states: An EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in Section 15065(a)(3). Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable. Direct population growth in the Project area will not occur due to any new development under the proposed Project. New manufacturing, cultivation, testing, distribution, and retail jobs may be created in the Project area.

The Project does not include residential uses, nor does it include elements that would directly or indirectly affect population or housing (i.e. extension of roads or other infrastructure). The Project would add approximately 2,114 new jobs, which accounts for a 0.05 percent increase in the number of jobs in the project area and would not create a substantial increase in unplanned population growth or displace substantial numbers of people or housing. Cumulatively these

impacts have been addressed in the individual General Plans adopted by the jurisdictions within the Fresno MSA and have concluded that growth in the region would not create a substantial increase in unplanned population growth or displace substantial numbers of people or housing. Therefore, the Project would result in less-than-significant cumulative impacts on population and housing.

Mitigation Measures

No mitigation measures are required.

Cumulative Level of Significance

Impacts would be *less than significant.*

4.15 - Public Services

4.15.1 - INTRODUCTION

This section addresses potential impacts to public services such as police protection, fire protection, schools, courts, libraries, and hospitals resulting from implementation of the Proposed Regulation and Permitting of Commercial Cannabis Activities (Project). Information obtained from the various service providers has been used to determine the existing public services setting within the Project area.

Impacts to parks and recreational facilities are analyzed in Section 4.16, *Recreation*. This section also describes relevant environmental and regulatory settings and discusses mitigation measures to reduce impacts, where applicable. The Project would potentially increase demand on public services. Therefore, it is the purpose of this section to ascertain if the potential increase in demand would exceed the capacity of existing public services, which may result in the need for additional personnel or require construction of new facilities.

4.15.2 - ENVIRONMENTAL SETTING

Study Area for Project Impacts

The study area for Project impacts regarding public services is the City of Fresno because potential development under the Project, is limited to areas within the city limits.

Study Area for Cumulative Impacts

The study area for the analysis of public services impacts is the area served by the service provider. Some of the services such as police protection and parks/recreation are provided within the Project area. In addition, there are some service providers that provide services beyond the Project area. These include fire protection, schools, and other public facilities such as courts, libraries, and hospitals.

Fire Protection

CITY OF FRESNO FIRE DEPARTMENT

The City of Fresno Fire Department offers the following services within the City of Fresno's city limits: fire prevention, fire suppression, hazardous material mitigation, rescue, and emergency medical services. The City has instant aid agreements with surrounding agencies and districts within Fresno County whereby the nearest fire station responds to an emergency regardless of the jurisdiction within which it is located. These agreements, in addition to the City of Fresno's own resources, provide a high quality of fire suppression and emergency medical care services. Emergency medical service are provided to all City residents by the Fire Department; however, emergency transport is provided by private carriers (such as private ambulance companies).

The City of Fresno Fire Department employs 302 uniformed firefighters and serves a population of more than 570,000 in the City of Fresno and the Fig Garden Fire Protection District (FGFPD), covering an area of 115 square miles with 20 fire stations, 19 of which are located in the City of Fresno. In addition, the department provides staffing for the Airport Rescue Fire Fighting. The companies are divided into four battalions, each supervised by a Battalion Chief. Daily staffing consists of 80 firefighters in the City of Fresno and FGFPD.

The Department's target response time is four minutes from the time the station receives notification of an emergency. In 2019, the City of Fresno had a staffing level of 0.62 firefighters per 1,000 people and the State average was 0.81. In addition to responding to calls, the Fire Department reviews building permits and subdivision maps to ensure proper location and access to fire suppression equipment. Additionally, the Department conducts annual business safety inspections. The City requires that all new residential development be within a three-mile "running distance" of a fire station. Table 4.15-1 provides Fire Department statistics from 1980 to 2019.

Table 4.15-1
City of Fresno Fire Department Statistics, 1980-2019

Year	1980	1990	2000	2010	2019
Firefighters	273	221	243	282	302
Calls for Service	15,887	28,780	23,792	30,001	45,978
Fire Fighters per 1,000 Residents	1.3	0.71	0.6	0.6	0.6
Minimum Daily Staffing	88	N/A	N/A	66	80
Engine Units	12	14	16	16	19
Truck Units	5	4	5	4	5

Sources:
Fresno General Plan Update Master EIR
Fresno Fire Department 2018 Annual Report

City of Fresno Fire Hazards

Although the City of Fresno is proximate to high and very high fire hazard designated areas, the City itself 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 in the northern portion of the City of Fresno are prone to wildfire due to the relatively steep terrain and vegetation and are classified as having a high fire hazard.

North Central and Fresno County Fire Protection Districts

The North Central Fire Protection District (NCFPD) serves approximately 240 square miles and includes four fire stations, none of which are located within the project area. There are four fire stations (Station No. 55, 56, 57, and 58). These stations are located west of the Project area.

Five Special Districts provide fire protection to the unincorporated areas of Fresno County. The Fresno County Fire Protection District (FCFPD) is the largest of the five districts covering 2,655 square miles, or over 50 percent of the County that includes the Cities of Parlier, Mendota, Huron, San Joaquin and the rural communities of Tranquility, Del Rey, Caruthers, Easton, Malaga, Friant, Cantua Creek, Calwa, Prather, Sand Creek and Wonder Valley. The FCFPD in cooperation with the California Department of Forestry and Fire Protection (CAL FIRE), provides all risk emergency services from 14 District Staffed Fire Stations and four District Paid Call Firefighter Stations. The District operates its fire engine companies with a minimum of two to three career There are 48 firefighters on duty daily providing fire suppression, emergency medical service, rescue and fire prevention and education to approximately 220,000 people.

FCFPD Station 87 is located in the southern portion of the Project area. Station 89 is located south of the Project area and provides service to residents and businesses within the unincorporated areas south of the Project area.

Table 4.15-2 shows the 20 fire stations operated by the City of Fresno Fire Department. Each are located within the Project area.

Table 4.15-2
Existing City of Fresno Fire Stations

Station No.	Address (Fresno)	Equipment/Personnel
1.	1264 North Jackson	Engine No. 1 - The engine is operated by a crew of three. Truck No. 1 - The truck is operated by a crew of four. Hazmat No. 1 - Staffed by a member of Truck No. 1's crew. Battalion No. 1 - Chevrolet 2500 Pickup command vehicle.
2.	7114 North West	Engine No. 2 - The engine is operated by a crew of three. Water Tender No. 2- The water tender holds 2,000 gallons of water and is staffed by a crewmember from Engine 2.
3.	1406 Fresno Street	The block occupied by Station No. 3 is also home to the Fresno Fire Department's Training Section and Drill Tower Engine No. 3 - The engine is operated by a crew of four. Truck No. 3 - The truck is operated by a crew of Three Water Tender No. 3 - The water tender holds 3,000 gallons of water and is staffed by a firefighter from Station 3.
4.	3065 East Iowa	Engine No. 4 - The engine is operated by a crew of four.
5.	3131 North Fresno Street	Engine No. 5 - The engine is operated by a crew of four
6.	4343 East Gettysburg	Engine No. 6 - The engine is operated by a crew of three.
7.	2571 South Cherry	Engine No. 7 - The engine is operated by a crew of three.

Station No.	Address (Fresno)	Equipment/Personnel
8.	1428 South Cedar	Engine No. 8 - The engine is operated by a crew of four. Brush Rig No.8- Staffed by the crew of engine 8.
9.	2340 North Vagedes	Engine No. 9 - The engine is operated by a crew of four. Truck No. 9 - The engine is operated by a crew of three. Battalion 4- Ford 250 HD Pickup command vehicle.
10.	5545 Air Terminal	Engine No. 10 - The engine is operated by a crew of three.
11.	5544 North Fresno	Engine No. 11 - The engine is operated by a crew of three. Truck No. 11 - The engine is operated by a crew of four. Rescue No. 211- The rescue truck is staffed by a firefighter engineer from the truck crew. Battalion No.3- Chevrolet 2500 Pickup command vehicle.
12.	2874 West Acacia	Engine No. 12 - The engine is operated by a crew of four.
13.	815 East Nees	Engine No. 13 - The engine is operated by a crew of three.
14.	6239 North Polk	Truck No. 14 - The engine is operated by a crew of three. Brush rig No. 14- The brush rig is operated by the truck crew.
15.	5630 East Park Circle	Engine No. 15 – The engine is operated by a crew of three. OES No. 314- This engine is used for "The Office of Emergency Services" or as a reserve engine when needed.
16.	2510 North Polk	Engine No. 16 - The engine is operated by a crew of three.
17.	10512 North Maple	Engine No. 17 –The engine is operated by a crew of three. Patrol Rig No. 17- Used for vegetation fires and is staffed by the engine crew.
18.	5938 North La Ventana	Engine No. 18 – The engine is operated by a crew of three Permanent station 18 is currently under construction. Estimated to be open in two years.
19.	3187 West Belmont	Engine No. 19 – The engine is operated by a crew of four. Battalion No. 2 – Chevrolet 2500 Pickup command vehicle..
20.	4537 North Wishon (Fig Garden Fire Protection District)	Engine No. 20 – The engine is operated by a crew of three.

Source: City of Fresno Fire Department Station Locations, 2019.
Website -http://www.fresno.gov/Government/DepartmentDirectory/Fire/AboutFresnoFire/StationLocations/default.htm

Police Protection

Within the Project area, there are numerous agencies that provide police protection services. These agencies include 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 Departments provide a full range of law enforcement and prevention services, including uniformed patrol response to calls for service, crime prevention, tactical crime enforcement (i.e. gang/violent crime suppression), as well as traffic enforcement and accident prevention. The Department also contains the Investigative Services Division, which investigates crimes against persons and property, collects intelligence information, and deals with vice/narcotics control and enforcement. Patrol services are divided into five policing districts.

1. The Southwest Policing District is located south of McKinley Avenue and west of East Avenue and SR-99.

2. The Northwest Policing District is located north of McKinley Avenue to the San Joaquin River and west of Blackstone Avenue to the western city limits.

3. The Southeast Policing District is located south of Ashland Avenue (east of Clovis Avenue), south of McKinley Avenue between East Avenue and Clovis Avenue, east of SR-99 south of Church Avenue to the southern city limits.

4. The Northeast Policing District is north of McKinley Avenue to the San Joaquin River and east of Blackstone Avenue to the City of Clovis.

5. The Central Policing District is north of Belmont Avenue, east of Hwy 99, south of Ashlan Avenue, and west of First Street.

The Fresno Police Department (FPD) operates six police stations within the City, listed below:

1. Headquarters: 2323 Mariposa Street, Fresno CA 93721
2. Southwest: 1211 Fresno Street, Fresno, CA 93706
3. Southeast: 1617 South Cedar Avenue, Fresno, CA 93702
4. Northeast: 1450 East Teague Avenue, Fresno, CA 93720
5. Northwest: 3074 West Shaw Avenue, Fresno, CA 93711
6. Central: 3502 North Blackstone Avenue, Fresno, CA 93726

The Fresno Police Department also operates Specialized Units and Services that support the Department. These units and services include Traffic, Skywatch (aerial support), Mounted Patrol, K-9 Units, Explosive Ordinance Disposal (EOD) and Specialized Weapons and Tactics (SWAT); and are maintained within the Patrol, Support and Investigations Divisions.

FRESNO COUNTY SHERIFF'S OFFICE

The Fresno County Sheriff's Office provides law enforcement and crime prevention to the unincorporated portions of the metropolitan area and Fresno County. These unincorporated communities include Calwa, Malaga, Mayfair, Sunnyside, Fig Garden, and Tarpey. The Project area is located within Patrol Area 2 of the County of Fresno Sherriff's Department. Area 2

extends from the San Joaquin River south to American Avenue and from McCall Avenue west to Chateau Fresno which is immediately west of the Project area. The Area 2 Sheriff's Department office is located at 5717 East Shields Avenue, which is located in the southeast portion of the Project area.

OTHER LAW ENFORCEMENT AGENCIES

Other law enforcement services that are provided within the Project area include the California Highway Patrol, Fresno State Police Department, and Fresno City College Police Department. The California Highway Patrol (CHP) provides law enforcement services with relation to the State Highway System and assists the City of Fresno by providing enforcement within the City under special programs. The CHP offices that serve the Project area include the CHP Central Division located at 5179 North Gates Avenue, and the CHP area office located at 1380 East Fortune Avenue. The Division office oversees the area offices that are located throughout the San Joaquin Valley. The Fresno State Police Department provides safety and security for students, staff, faculty, and visitors of the campus community 24 hours a day and seven days a week and their authority extend one mile beyond the University's boundary. The campus of the California State University at Fresno is located in the northeast portion of the Project area. The Fresno City College Police Department serves the school campus community that is located north of Downtown Fresno. They provide a full range of police-related services including immediate response to all medical and fire emergencies.

Schools

The Project area includes various schools that provide primary, secondary, and post-secondary education.

PRIMARY AND SECONDARY SCHOOLS (KINDERGARTEN THROUGH TWELFTH GRADES)

The Project area is served by a number of school districts that provide kindergarten through twelfth grade classes because school boundaries do not mirror the City of Fresno Project area. Combined, the school districts can serve up to 163,325 school aged children in kindergarten through twelfth grades.

Each school district is described below. The Fresno Unified School District (FUSD) is a consolidated district that contains seven sub-districts. FUSD is the fourth largest school district in California and has an enrollment of 73,000 students dispersed among 103 existing schools.

Clovis Unified School District (CUSD) serves northeast and north-central Fresno and is the City's second largest school district, serving 43,000 students in 51 existing schools. Approximately 40 percent of students in CUSD are residents of Fresno. This school district predominantly serves Fresno's new growth areas. The district is in the early planning stages of its newest educational complex in the northern portion of South East Growth 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 serves 16,286 students in 22 existing schools.

Sanger Unified School District (Sanger USD) serves the southeast portion of the City. High school students living in Fresno and within the Sanger USD currently attend Sanger High School, which is located several miles east of Fresno. Currently, the Sanger USD serves 11,360 students in 23 existing schools.

The southwest portion of the City was served by the West Fresno School District, which contained an elementary school and a middle school. However, in July 2011 West Fresno USD merged into and became a part of the Washington Unified School District.

Orange Center School District consists of an elementary school located at 3530 South Cherry Avenue, south of Fresno city limits. According to its 2018 School Accountability Report Card, the district enrolled 301 students from kindergarten through eighth grade during the 2017-2018 school year.

POST-SECONDARY SCHOOLS

Post-secondary schools provide education after the twelfth grade and are also referred to as higher education. The schools that provide higher education within the Project area include California State University Fresno (Fresno State University), Fresno Pacific University, Fresno City College, San Joaquin Valley College, Heald College, UEI College, Willow International Community College Center, and a wide variety of vocational and technical schools that prepare students for the workplace.

Fresno State University is part of the California State University system and enrolled more than 22,221 students in the 2018-2019 academic year. The school offers a wide range of advanced undergraduate and graduate degrees at its 388-acre main campus and its 1,011-acre University Farm are located at the northeast edge of the City. Fresno Pacific University is a private college offering both undergraduate and graduate degrees. The main Fresno campus had an enrollment of 2,785 students in the fall of 2019. Fresno City College is a comprehensive learning institution providing a curriculum ranging from general education coursework for students intending to transfer to an undergraduate university to vocational programs. Current enrollment at Fresno City College is approximately 23,900 students. Willow International Community College Center is part of the State Center Community College District. It offers programs in general education to students who intend to transfer to a four-year institution or obtain a Certificate or Associates Degree. Willow International is one of three State Center Community College District educational centers, and all three combined enroll approximately 8,300 students.

Other Public Facilities

COURTS

State and federal courts are provided in the City of Fresno Project area. The State courts include the Fresno County Superior Court (trial court) and the Appellate Court. The federal court is the U.S. District Court for the Eastern District of California, Eastern Division.

LIBRARIES

The Fresno County Public Library provides collections and services through its Central Resource Library and 34 branches. The County Library is part of the San Joaquin Valley Library System, which is a cooperative network of ten public library jurisdictions in the Counties of Fresno, Kern, Kings, Madera, Mariposa, Merced, and Tulare. County of Fresno Library System has the Central Library, three regional libraries, six branch libraries, and two other libraries within the City of Fresno Project area.

HOSPITALS

There are nine hospitals located within the City of Fresno Project area that provide a variety of medical services. There are four hospitals that provide emergency services and one hospital that provides trauma service.

4.15.3 - REGULATORY SETTING

Federal

There are no applicable federal regulations for public services.

State

CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION

Under Title 14 of the California Code of Regulations, CAL FIRE has the primary responsibility for implementing wildfire planning and protection for the SRA. CAL FIRE develops fire safe regulations and issues fire safe clearances for land within a fire district of the SRA. More than 31 million acres of California's privately-owned wildlands are under the jurisdiction of the CAL FIRE.

In addition to wildland fires, CAL FIRE's planning efforts involve responding to other types of emergencies that may occur on a daily basis, including residential or commercial structure fires, automobile accidents, heart attacks, drowning victims, lost hikers, hazardous material spills on highways, train wrecks, floods, and earthquakes. Through contracts with local government, CAL FIRE provides emergency services in 36 of California's 58 counties (CAL FIRE, 2016).

SENATE BILL 50

The Leroy F. Greene School Facilities Act of 1998, or Senate Bill 50 (SB 50), authorizes school districts to levy developer fees to finance the construction or reconstruction of school facilities. In January 2015, the State Allocation Board (SAB) approved maximum Level 1 developer fees at $0.54 per square foot of enclosed and covered space in any commercial or industrial development, and $3.36 per square foot for residential development (SAB, 2014). These fees are intended to address the increased educational demands on the school district resulting from new development. Public school districts can, however, impose higher fees than those established by the SAB, provided they meet the conditions outlined in the act. Private schools are not eligible for fees collected pursuant to SB 50.

The payment of school mitigation impact fees authorized by SB 50 is deemed to provide full and complete mitigation of project impacts on school facilities. SB 50 provides that a State or local agency may not deny or refuse to approve the planning, use, or development of real property on the basis of a developer's refusal to provide mitigation in amounts in excess of that established by SB 50.

Local

POLICE PROTECTION

City of Fresno

The City of Fresno includes various police protection policies as part of the Fresno General Plan.

Objective PU-1. Provide the level of law enforcement and crime prevention services necessary to maintain a safe, secure, and stable urban living environment through a Police Department that is dedicated to providing professional, ethical, efficient and innovative service with integrity, consistency and pride.

Policy PU-1-a - Integration of Crime Data. Develop a mechanism to share pertinent crime data from multiple sources with other law enforcement agencies as a means of improving service delivery, officer safety, and providing a safer community for the citizens of Fresno.

Policy PU-1-b - Involvement in General Plan. Facilitate Police Department participation in the implementation of General Plan policies, including citizen participation efforts and the application of crime prevention design measures to reduce the exposure of neighborhoods to crime and to promote community security.

Policy PU-1-c - Safety Considerations in Development Approval. Continue to identify and apply appropriate safety, design and operational measures as conditions of development approval, including, but not limited to, street access control measures, lighting and visibility of access points and common areas, functional and secure onsite recreational and open space improvements within residential developments, and use of State licensed, uniformed security.

Policy PU-1-d - New Police Station Locations. Consideration will be given to collocating new police station facilities with other public property including, but not limited to, schools, parks, playgrounds, and community centers to create a synergy of participation in the neighborhood with the potential result of less vandalism and promotion of a better sense of security for the citizens using these facilities.

Policy PU-1-e - Communication with Public. Maximize communication and cooperative efforts with residents and businesses in order to identify crime problems and optimize the effectiveness of crime prevention measures and law enforcement programs.

Policy PU-1-f - Law Enforcement Collaboration. Collaborate with community-based public, non-profit and private agencies to:

- Develop comprehensive narcotics and violence prevention programs designed to discourage delinquent behavior and narcotics abuse and to encourage viable alternative behaviors.

- Develop a more concentrated understanding of how to assist and support citizens with a variety of disabilities, especially those with cognitive and developmental auditory disabilities.

- Maintain active involvement in youth development and delinquency prevention activities.

Policy PU-1-g - Plan for Optimum Service. Create and adopt a program to provide targeted police services and establish long-term steps for attaining and maintaining the optimum levels of service - 1.5 unrestricted officers per 1,000 residents.

Policy PU-1-h - Retail Conversion. Assist community groups seeking information on conversion of establishments with offsite or onsite liquor sales licenses to other retail products that better meet community needs.

Policy PU-1-I - Crime and Nuisances. Assist community and neighborhood groups seeking to reduce crime and nuisances they associate with high concentrations of establishments with off-sale or on-sale liquor licenses through Police Department consultations, other available services, and programs such as Neighborhood Watch.

Policy PU-1-j - Lighting and Safety. Ensure adequate lighting at off-sale liquor stores to help deter crime and to promote a more inviting and safer atmosphere around them.

FIRE PROTECTION

City of Fresno

The City of Fresno includes various fire protection policies as part of the Fresno General Plan.

Objective PU-2. Ensure that the Fire Department's staffing and equipment resources are sufficient to meet all fire and emergency service level objectives and are provided in an efficient and cost-effective manner.

Policy PU-2-a - Unify Fire Protection. Pursue long-range transfer of fire protection service agreements with adjacent fire districts that, in concert with existing automatic aid agreements, will lead to the eventual unification of fire protection services in the greater Fresno area.

Policy PU-2-b - Maintain Ability. Strive to continually maintain the Fire Department's ability to provide staffing and equipment resources to effectively prevent and mitigate emergencies in existing and new high-rise buildings and in other high-density residential and commercial development throughout the City.

Policy PU-2-c Rescue Standards. Develop appropriate standards, as necessary, for rescue operations, including, but not limited to, confined space, high angle, swift water rescues, and the unique challenges of a high-speed train corridor.

Policy PU-2-d - Station Siting. Use the General Plan, community plans, Specific Plans, neighborhood plans, and Concept Plans, the City's Geographic Information Systems (GIS) database, and a fire station location program to achieve optimum siting of future fire stations.

Policy PU-2-e - Service Standards. Strive to achieve a community wide risk management plan that 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 five 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 nine minutes and 20 seconds from the time of unit alert to arrival. The effective response force is measured as 15 firefighters for low risk fire incidents and 21 firefighters for high risk fire incidents and is the number of personnel necessary to complete specific tasks required to contain and control fire minimizing loss of life and property.

Policy PU-2-f - Plan for Optimum Service. Create and adopt a program to provide appropriate number of employees to effectively respond to call volume and type; and establish a long-term plan to attain a level of service of 0.81 firefighters per 1,000 residents.

Policy PU-2-g - Community Facilities District for Emergency Services. Develop strategies on the formation of Community Facilities Districts in new development areas to fund emergency services.

Objective PU-3. Enhance the level of fire protection to meet the increasing demand for services from an increasing population.

Policy PU-3-a - Fire Prevention Inspections. Develop strategies to enable the performance of annual fire and life safety inspection of all industrial, commercial, institutional, and multi-family residential buildings, in accordance with nationally recognized standards for the level of service necessary for a large metropolitan area, including a self-certification program.

Policy PU-3-b - Reduction Strategies. Develop community risk reduction strategies that target high service demand areas, vulnerable populations (e.g. young children, older adults, non-English speaking residents, persons with disabilities, etc.), and high life hazard occupancies.

Policy PU-3-c - Public Education Strategies. Develop strategies to re-establish and enhance routine public education outreach to all sectors of the community.

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 onsite and offsite 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.

Policy PU-3-h - Annexations. Develop annexation strategies to include the appropriate rights-of-way and easements necessary to provide cost effective emergency services.

Policy PU-3-I - New Fire Station Locations. Consideration will be given to co-locating new Fire Station facilities with other public property including, but not limited to, police substations, schools, parks, playgrounds, and community centers to create a synergy of participation in the neighborhood with the potential result of less vandalism and promotion of a better sense of security for the citizens using these facilities.

SCHOOLS

The following General Plan policies are applicable to schools within the Project area.

Objective POSS-8 - Work cooperatively with school districts to find appropriate locations for schools to meet the needs of students and neighborhoods.

Policy POSS-8-a - Support School Districts' Programs. Support strategies and programs of school districts and the Fresno County Office of Education to provide access to and use of the highest quality educational programs and support services.

Policy 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.

Policy 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.

Objective POSS-9. Work with California State University, Fresno, and other institutions of higher learning in Fresno, to enhance the City's workforce, job creation, and economic development, as well as its image and desirability as a place to live.

Policy POSS-9-a - Economic Potential of Institutions of Higher Education in Fresno. Seek to leverage the human capital, research pursuits, and economic potential of California State University, Fresno (Fresno State), and all of Fresno's institutions of higher education, whenever possible in economic development and land use decisions.

Policy POSS-9-b - Regular Coordination with Institutions of Higher Education in Fresno. Encourage regular meetings with Fresno State, FPU and SCCCD leadership, including the Facilities Planning and Housing divisions.

Policy POSS-9-c - University Neighborhood Planning. Partner with Fresno State, FPU and SCCCD leadership to find funding for, develop, and implement a Specific Plan for the neighborhoods around the primary campuses of these and other higher education institutions in Fresno.

LIBRARY

The City of Fresno does not have policies within the General Plan regarding library services.

HOSPITAL

The City of Fresno does not have policies within the General Plan regarding hospitals.

4.15.4 - IMPACTS AND MITIGATION MEASURES

Methodology

Public service systems were evaluated by reviewing the most current data available from State and Fresno County department websites.

Thresholds of Significance

In accordance with CEQA, the effects of a project are evaluated to determine if they will result in significant adverse impact on the environment. The criteria used to determine the significance of an impact to public services are based on the Environmental Checklist in Appendix G of the State CEQA Guidelines as identified below. Accordingly, public services impacts resulting from the proposed Project are considered significant if the project would:

Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

a) Fire protection?
b) Police protection
c) Schools?
d) Parks?
e) Other public facilities?

Project Impacts

Impact 4.15-1: Result in Substantial Adverse Physical Impacts Associated with the Provision of New or Physically Altered Governmental Facilities, Need for New or Physically Altered Governmental Facilities, the Construction of Which Could Cause Significant Environmental Impacts in order to Maintain Acceptable Service Ratios, Response Times, or Other Performance Objectives for Fire Protection

This section discusses the fire protection and emergency medical service facility impacts and response times. Impacts related to hazardous materials fire risk, and wildland fires, are discussed in Section 4.9, *Hazards and Hazardous Materials* and Section 4.20, *Wildfire*.

A community's requirements for fire protection services and facilities are based on the number of residents and employees in the primary service area. Service demand is primarily tied to the size of the population being served, not land use activity, because emergency medical calls typically make up the majority of responses provided by a fire department. As the number of residents and employees increase, so does the number of emergency medical calls. In general, service demands per employee are less than service demands per resident; therefore, population growth in a given area increases the demand on fire protection services and facilities.

Table 4.15-3 below summarizes the commercial cannabis uses and their corresponding number of eligible sites for location, maximum number of permits to be issued, and maximum square footage for occupancy, all of which apply to the entire city limits.

Table 4.15-3
Commercial Cannabis Uses

Commercial Cannabis Uses	Eligible Sites	Max. Permits	Max. SF[1]
Cultivation, Distribution, and Manufacturing Within Cannabis Innovation Zone	591	8	700,000
Cultivation, Distribution, and Manufacturing Outside of Cannabis Innovation Zone	953	8	
Cannabis Retail Businesses	5,564	21	55,000
Testing Laboratories	13,807	Unlimited	100,000
Totals	**20,915**	**N/A**	**855,000**

[1]Maximum square foot used for analysis in DEIR

Of the total 20,915 project eligible sites for location, a small percentage of the sites are vacant infill lots that can support new development, all of which are located in existing commercial, mixed-use, and industrial zones and in urbanized areas. The majority of the Project eligible sites are fully serviced industrial and commercial lots that have been improved with industrial and commercial uses and buildings. The Project could involve limited new site development. All approved uses will be required to obtain a Commercial Cannabis License and a Conditional Use Permit from the City. Furthermore, sites will comply with all applicable plans, policies, code regulations, and site-specific development standards.

Fires could occur at any commercial cannabis facility, i.e. cultivation, distribution, and manufacturing facilities, due to equipment malfunctions, improper handling of combustible materials, natural disaster, or proximity to another structure that catches fire. Commercial cannabis businesses have the potential to contain combustible and/or hazardous materials and are more likely to be impacted by human error or mechanical malfunction. Retail and testing laboratories are not expected to create fire hazards beyond the typical rate of other retail and general office businesses.

The Final PEIR for CalCannabis Cultivation Licensing (California Department of Food and Agriculture, 2017), concluded a less-than-significant impact related to fire protection. The PEIR determination was based on literature research that indicated there was an elevated risk of fire that occurred with illegal or unpermitted indoor cannabis cultivation activity. The main cause of these fires was identified as being due to electrical systems and buildings constructed without permits that did not meet local or State building codes or regulations. It was noted that applicants requesting cultivation licenses through the State would be required to "meet all relevant state and local codes and requirements, including those of the building and electrical codes, and the proposed regulations require that modifications to electrical systems at licensed facilities be performed by a licensed electrician." The PEIR concluded that some jurisdictions may limit the wattage or number of grow lights used in indoor cultivation operations and/or impose other requirements that serve to limit potential for electrical fires. The use of merging technologies

such as LED lighting may also reduce electrical loads and levels of heat generation, reducing the potential fire risk.

The Initial Study/Negative Declaration (IS/ND) for Commercial Cannabis Business Licensing Program (Bureau of Cannabis Control, 2017), also concluded a less-than-significant impact to fire protection. The IS/ND made a similar determination regarding the elevated risk of fire in indoor cannabis cultivation. Additionally, there was no literature cited to suggest that other cannabis business operations (retail, manufacturing, distribution, and laboratory testing), as permitted by the Bureau would have increased fire risk. Similarly, the IS/ND concluded that "Cannabis business operators under the Proposed Program would be required to obtain electricity legally and use facilities that meet applicable codes, including electrical, building, and fire codes. In addition, the types of facilities and structures used for the activities regulated the Bureau's Proposed Program would not differ substantially in their operations from other commercial facilities and structures typically permitted by local jurisdictions in a manner that would cause an increased fire risk." (Bureau of Cannabis Control, 2017) .

The Fresno Fire Department provided the following information regarding calls for service:

Table 4.15-4
Fresno Fire Department Calls for Service

Incident Type	2015	2016	2017	2018	2019	2020	Total
Fires	12	12	4	4	4		36
EMS Arrivals	14	8	18	9	14	4	67
Hazardous Conditions			3	1	1		5
Service Call	1	2		1	1		5
False Alarms		4			2		6
Other	1		1	3			5
Total	**28**	**26**	**26**	**18**	**22**	**4**	**124**

Based on this analysis, licensed operations would be anticipated to have a substantially reduced risk of fire compared to baseline conditions. Unpermitted, indoor cultivation inside a residence may present unique fire safety challenges, but compliance with building and electrical codes as required would adequately address fire risk for all licensed operations, and thereby prevent the need for construction of any additional fire protection facilities or an increase in fire prevention personnel.

The City of Fresno Fire Department includes a Hazardous Materials Response Team (HMRT). Significant impacts could occur if the HMRT does not have sufficient firefighting personnel or equipment to extinguish the type of fires that could be associated with commercial cannabis businesses. However, all new commercial cannabis uses would be required to comply with federal, State, and local health and safety regulations, development standards, building codes, and other laws and regulations that govern fire protection. Included in these regulations are the adopted National Fire Protection Association (NFPA) Fire Code, referred to as NFPA 1 (National

Fire Protection Association, 2018). NFPA 1 was recently updated in 2018 to include Chapter 38 (Marijuana Growing, Processing, and Extraction Facilities), specifically to address fire and safety related issues for cannabis facilities. This chapter includes specific requirements relating to ozone generators used for odor control, fumigation, pesticide application, egress and ingress, rooms used for cannabis extraction (including LPG extraction), gas detection systems, storage, and flammable and combustible liquid extraction.

In addition, Section 4.9, *Hazards and Hazardous Materials,* include specific mitigation to reduce the threat of chemical fire and exposure. These mitigations measures include:

MM 4.9-1: As part of the Conditional Use Permit Application, all commercial cannabis related businesses which may utilize hazardous materials, shall include a Hazardous Materials Business Plan (HMBP) and a Waste Management Plan (WMP), approved by the Fresno County Environmental Health Department. The HMBP shall include, at a minimum, floor plans of the facility and business conducted at the site; an inventory of hazardous materials that are handled or stored onsite; and an Emergency Response and Training Plan. The WMP shall include a list of all byproducts associated with cannabis manufacturing, and a plan for proper disposal, at an approved facility.

MM 4.9-2: For cannabis processing operations with systems that use solvents that are potentially flammable or toxic, the project applicant shall provide written verification to the Fresno County Environmental Health Department and the City of Fresno Planning and Development Department that the cannabis operations meet the following requirements:

1. Use a closed-loop system that will prevent off-gassing;

2. Use solvents that are recognized as safe pursuant to the Federal Food, Drug and Cosmetic Act;

3. Have a licensed engineer certify that the system was commercially manufactured, is safe for its intended use, and was built to codes of recognized and generally accepted good engineering practices, including, but not limited to, the American Society of Mechanical Engineers, the American National Standards Institute, Underwriters Laboratories, the American Society for Testing and Materials, or Occupational Safety and Health Administration Nationally Recognized Testing Laboratories;

4. Have a certification document that includes the unit's serial number and is signed by a professional engineer;

5. Receive and maintain approval from local fire officials for the closed-loop system, other equipment, the extraction operation and the facility; and

6. Adhere to federal, State and local fire protection standards.

MM 4.9-3: Volatile Manufacturing Employee Training Plan. Cannabis activities dealing in volatile manufacturing shall develop a Volatile Manufacturing Employee Training Plan (Training Plan) and submit to the City as part of the permitting and licensing process. Volatile manufacturing means to compound, blend, extract, infuse, or otherwise make or prepare a cannabis product with the use of volatile solvents or substances including but not limited to, butane and ethanol. The Training Plan shall detail how the licensed volatile manufacturing operators will train their employees on the proper use of equipment and on the proper hazard response protocols in the event of equipment failure, per established OSHA standards. The Training Plan shall include a log, identifying trained employees and the date upon which training was completed.

As part of the processing of site-specific conditional use permits for commercial cannabis businesses, the Fresno Fire Department – Fire Prevention and Investigation Unit will review each proposal and related construction permits to ensure that all codes and regulations pertaining to fire safety are complied with. Based on current staffing levels and the limited number of permits that will be processed, there is not an anticipated need for additional staffing resources for processing. In addition, based on the current staff levels and the current fire station locations in proximity to proposed commercial cannabis businesses, it is not anticipated that additional staffing resources are needed for emergency response.

Therefore, with the implementation of mitigation measures and adherence to all codes and regulations, future commercial cannabis uses would not result in the need for new or physically altered government 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. Therefore, impacts to fire protection services and facilities are considered less than significant with mitigation.

Mitigation Measures

Implement Mitigation Measures MM 4.9-1 through MM 4.9-3.

Level of Significance

Impacts would be l*ess than significant with mitigation*.

Impact 4.15-2: Result in Substantial Adverse Physical Impacts Associated with the Provision of New or Physically Altered Governmental Facilities, Need for New or Physically Altered Governmental Facilities, the Construction of Which Could Cause Significant Environmental Impacts in order to Maintain Acceptable Service Ratios, Response Times, or Other Performance Objectives for Police Protection Services

The Final PEIR for CalCannabis Cultivation Licensing (California Department of Food and Agriculture, 2017), concluded a less-than-significant impact to police protection. The PEIR determination was based on literature research an elevated risk of crime associated with cannabis cultivation activity, including a Colorado news story that concluded licensed cannabis

facilities in Denver, experiences 6.5 times more burglaries than liquor stores (California Department of Food and Agriculture, 2017). It was noted that under existing conditions, police throughout the State spent considerable time and resources dealing with cannabis cultivation–related issues, such as investigating and abating unpermitted grow houses, and detecting and eradicating unpermitted trespass grows on State and federal lands. The PEIR went on to cite risk factors such as, the high retail value of cannabis and the dealing in cash transactions due to federal prohibitions placed on insurance requirements of banking institutions.

The PEIR also cited reported armed robberies committed at cannabis grow operations, including an incident that occurred in Fresno County in 2014. The PEIR stated that many of these incidents were at unpermitted/illegal cultivation operations and the security protocols used were not sanctioned under the CalCannabis Cultivation Program. Further, the PEIR cited two reports that concluded that laws allowing for medicinal cannabis were not associated with increased crime rates and may actually reduce incidents of homicide and assault. The results of these reports also indicated that surveillance systems and private security may act as an effective deterrent to crime. (California Department of Food and Agriculture, 2017)

The PEIR determined that "the information contained in the literature and from available news stories suggests that cannabis cultivation is potentially at elevated risk for crime; however, an elevated risk of crime is not a significant impact under CEQA unless it can be tied to a physical impact on the environment." The PEIR concluded that many existing cannabis operations would likely seek licensing, and there was reason to believe that implementation of the Proposed Program may decrease pressure on police protection resources.

With the Proposed Program, the PEIR concluded it was reasonable to assume that some of the cultivators not currently operating in compliance with local requirements would apply for local approval and become lawful businesses, reducing the enforcement needs for these operations. With a legal pathway for cannabis cultivation and increased supply of legally grown cannabis, there also may be less opportunity or incentive for criminal organizations to introduce black market product into the supply chain, thus decreasing the need for police resources to address these issues. The track-and-trace system, by creating a mechanism for tracing cannabis products, would further impede interference by the black market in lawful cannabis commerce.

In areas of California that would experience a large number of new cannabis cultivation businesses under the Proposed Program, it is possible that existing police protection services could be strained to provide resources beyond their existing capacities. However, it was noted that there was not enough information available, nor could it speculate, as to where such growth might trigger the need for new or additional police facilities (California Department of Food and Agriculture, 2017).

The PEIR concluded that while some crime associated with licensed cannabis cultivation activities is likely to continue, no data indicated that the proposed cannabis Program would increase law enforcement needs overall compared to baseline conditions. If anything, demand may decrease due to a large number of lawful cultivators willing to coordinate and cooperate with law

enforcement authorities. Furthermore, it is speculative to link an increase in demand for law enforcement, or to associate the need for new or additional police facilities in any particular location, the construction of which could cause significant environmental effects. Such actions would need to be addressed by law enforcement agencies on a case-by-case basis, and the agency undertaking the development of any new or expanded facilities would be required to comply with CEQA to address potentially significant impacts (California Department of Food and Agriculture, 2017).Based on this analysis, it was determined that impacts would be less than significant related to police protection.

The Initial Study/Negative Declaration (IS/ND) for Commercial Cannabis Business Licensing Program, (Bureau of Cannabis Control, 2017), also concluded a less-than-significant impact to police protection. The IS/ND made a determination regarding the elevated risk of crime associated with cannabis cultivation activity as well as operations (retail). Under existing conditions, police departments throughout the state spend considerable time and resources dealing with cannabis business operation issues, such as investigating and abating unpermitted dispensaries. Similar to the analysis in the PEIR, the IS/ND concluded that increased security, such as, alarm systems, limits access, 24-hour video surveillance; and commercial-grade door locks on entrances, exits, would further reduce criminal activity.

The IS/ND noted many unlicensed cannabis business operations would likely seek licensing under the Proposed Program, and there is reason to believe that implementation could decrease pressure on police protection resources. With a legal pathway for cannabis business operations and increased supply of legally grown cannabis, there also may be less opportunity or incentive for criminal organizations to introduce black market cannabis products into the supply chain, thus decreasing the need for police resources to address these issues. As such, there is no evidence or information in the available literature about where such growth could trigger the need for new or additional police facilities (Bureau of Cannabis Control, 2017). Based on this analysis, the IS/MND determine less-than-significant impacts to police protection.

The Fresno County Sheriff's office reported 40 incidents of marijuana related crime that occurred in Fresno County from April 2012 through October 2013 (Fresno County Sheriff's Office, n.d.). Incidents included home invasion robbery, burglary at cannabis grow sites, and homicide. To manage the incidents associated with commercial cannabis activities, the Fresno County Sheriff's office created a Marijuana Enforcement Team that is responsible for the enforcement of marijuana related regulations. This team is responsible for investigating everything from the illegal cultivation and smuggling/transportation of marijuana on public lands to ensuring that participants in the medical marijuana program are in compliance with State law. These investigations are conducted using current surveillance techniques, examining financial records and utilizing citizen informants and undercover detectives to determine if violations have occurred. Due to the differing regulations related to marijuana at the State and federal levels, the Marijuana Enforcement Team works in partnership with other local, State, and federal law enforcement agencies to ensure that marijuana regulations are enforced consistently across the board. The Fresno PD currently staffs a Major Narcotics Unit, which is responsible for investigating all illegal drug cases, not specifically Cannabis related only. Since July 2019, Fresno

PD has received 45 Crime Stoppers Tips, 30 PG&E and Code Enforcement Tips, and 60 Calls for Service related to suspected illegal cannabis operations.

The majority of the incidents reported by the Fresno Sheriff's Office and the City of Fresno occurred at illegal cannabis facilities. As noted in the PEIR and IS/ND prepared for the State of California cannabis licensing programs, Illegal operations are havens for criminals and often produce the greatest number of reported incidents. If approved, the proposed Project will permit up to 16 commercial cannabis businesses and up to 21 retail cannabis businesses. The proposed Project includes development standards and operational requirements and requires approvals from City Departments that will review each application to ensure compliance with all applicable City codes and requirements. In addition, the existing regulatory ordinance for cannabis activities contains specific requirements for additional security measures. These measures include mandatory locked premises and secured lobbies, 24-hour surveillance cameras, lighting, armed private security personnel, designated security representatives, and a security plan submitted to Police Department. These requirements will ensure that the proposed Project does not significantly affect police protection. Therefore, the Project would result in a less-than-significant impact.

Under CEQA, to create a significant environmental impact, a project must result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for police protection services. As new regulated cannabis businesses are approved in the City, the amount of illegal operations will likely diminish. Crimes associated with the illegal operations will be mitigated through the enforcement of the regulatory ordinance and should not be prevalent at the new facilities. The City Police Department currently exceeds the policy of 1.5 officers per 1,000 City residents established in the General Plan. Although additional officers may be assigned to the newly developed businesses, these new businesses are not expected to create impacts that would require new governmental facilities to be constructed or altered. As such, impacts associated with the proposed Project are considered less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be *less than significant.*

Impact 4.15-3: Result in Substantial Adverse Physical Impacts Associated with the Provision of New or Physically Altered Governmental Facilities, Need for New or Physically Altered Governmental Facilities, the Construction of Which Could Cause Significant Environmental Impacts in order to Maintain Acceptable Service Ratios, Response Times, or Other Performance Objectives for School Services

Of the total 20,915 Project eligible sites for location, a small percentage of the sites are vacant infill lots that can support new development, all of which are located in existing commercial, mixed-use, and industrial zones and in urbanized areas. The majority of the Project eligible sites are fully serviced industrial and commercial lots that have been improved with industrial and commercial uses and buildings. The Project could involve limited new site development. All approved uses will be required to obtain a Commercial Cannabis License and a Conditional Use Permit from the City. Furthermore, all sites will comply with all applicable plans, policies, code regulations, and site-specific project development standards, including setbacks to 800 feet to 1000 feet from all schools (located outside the Cannabis Innovation Zone).

Impacts on schools are determined by analyzing the projected increase in demand for schools as a result of future residential development projected under the proposed Project. As explained in Section 4.14, *Population and Housing*, the Project will not result in a substantial unplanned increase in population, or an increased demand for housing within the Project area.

School fees are collected for new residential and commercial buildings. Fees are typically higher for residential uses, as these uses are associated with increased population growth, leading to increased student population at existing schools. Commercial building permits pay a smaller share of these fees and are typically not considered direct growth inducers. All requests for commercial cannabis use will require a discretionary Conditional Use Permit review., As Project applications are filed, the project review process will ensure that all school related fees are paid by each applicant. These requirements will ensure that the proposed Project does not significantly affect school facilities. Therefore, the Project would result in a less-than-significant impact.

Mitigation Measures

No mitigation is required.

Level of Significance

Impacts would be *less than significant.*

Impact 4.15-4: Result in Substantial Adverse Physical Impacts Associated with the Provision of New or Physically Altered Governmental Facilities, Need for New or Physically Altered Governmental Facilities, the Construction of Which Could Cause Significant Environmental Impacts in order to Maintain Acceptable Service Ratios, Response Times, or Other Performance Objectives for Park Services

According the General Plan Update Master EIR, build-out of the General Plan would result in a potential population increase of approximately 425,000 additional residents within the City and result in an increase in the demand for parks and recreational facilities. Based on the proposed standard of five acres of public parkland per 1,000 residents, the build-out of the General Plan would require 4,850 acres of parkland and associated recreational amenities to serve all residents.

As explained in Section 4.16, *Recreation*, impacts on parks and recreational facilities are determined by analyzing the projected increase in demand for these facilities as a result of future residential development and corresponding population increase projected under the proposed Project. The proposed Project will occur in existing commercial, industrial, and mixed-use zones. As explained in Section 4.14, *Population and Housing*, the Project will create approximately 2,114 new jobs, which represents a total increase in jobs of 0.05 percent. Table 4.14-5 compares the current labor force with the industries and jobs that could be created by the proposed Project. These jobs range from highly technical and well paid to low-skill, low wage jobs, entry level jobs, as well as ancillary jobs. It is anticipated that the majority of the jobs will be filled by existing City or County residents; some employees would come from the region and commute, while a small number would relocate to the City. Therefore, the Project would not result in a substantial unplanned increase in population, or an increased demand for housing within the Project. Therefore, the build-out of the proposed Project would not result in an increase in residential development or population increase, or the need for additional parks and recreational facilities. Therefore, the Project would not result in any impacts to park services. Therefore, the Project would result in a less-than-significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be *less than significant.*

Impact 4.15-5: Result in Substantial Adverse Physical Impacts Associated with the Provision of New or Physically Altered Governmental Facilities, Need for New or Physically Altered Governmental Facilities, the Construction of Which Could Cause Significant Environmental Impacts in order to Maintain Acceptable Service Ratios, Response Times, or Other Performance Objectives for Other Public Facilities

Impacts on other public facilities such as court, libraries, and hospitals are determined by analyzing the projected increase in demand for these facilities. The buildout of the proposed Project is not anticipated to result in an increase in residential development that would increase demand for additional library services. As noted in Impact 4.15-2, above, the majority of law enforcement activities occurred at illegal cannabis facilities, and a Marijuana Enforcement Team has been created to handle the enforcement of marijuana related regulations. The Project will regulate legal cannabis businesses in the City and is not expected to significantly increase the current case load in the City Court system. The City has nine hospitals, emergency care facilities and a public trauma service. The Project is not expected to significantly increase directly or indirectly the utilization of emergency medical services.

As discussed in Section 4.10, *Hydrology and Water Quality*, and Section 4.19, *Utilities and Service Systems*, with the incorporation of mitigation measures, the proposed Project would not directly or indirectly result in significant impacts related to water quality and water availability. The City

of Fresno's water usage is approximated at 120,000 acre-feet per year. The incremental water usage of cannabis facilities is estimated to be approximately 72.9-acre feet per year, which represents less than one percent (0.06 percent) of the City's usage. This section also discusses the impacts to wastewater infrastructure. Mitigation Measure MM 4.10-1 would require impermeable flooring and the submittal of a Wastewater Control Plan, which will require quantification of wastewater contaminants and proper pretreatment prior to disposal submitted concurrently with an application for a condition use permit for a cannabis cultivation facility.

> **MM 4.10-1:** Concurrent with submittal of a conditional use permit for any cultivation facility, the applicant shall submit to the City Planning and Development Department a Wastewater Control Plan (WCP). The WCP shall include best management practices for capture and treatment of runoff (including recycling systems for capture and reuse of produced water, disclosure of pesticides to be used, and amounts of individual contaminate concentrates that will be disposed of through public wastewater treatment facilities. If contaminate concentrations exceed wastewater standards, pretreatment of wastewater will be required, prior to disposal. The plan shall also outline the materials to be used to create impermeable flooring surfaces and containment directly beneath all cultivation areas and associated walkways.

As discussed in Section 4.14, *Population and Housing*, the proposed Project would not cause a direct impact to population increase; however, there may be indirect impacts related to the increased employment opportunities for new workers. It is expected that the majority of workers will come from existing population of the City and surrounding areas. There may be a small number of workers who come from other parts of the U.S. seeking new opportunities for employment. It is not expected that the relocation of persons would substantially affect existing public facilities, as these potential new workers would live in existing available housing. The relocation of persons as a direct result of the Project from outside the Project area is expected to be minimal and would therefore result in less-than-significant impacts to public services.

As discussed in Section 4.19, *Utilities and Services*, new commercial cannabis facilities would generate a total of 1,350 pounds of solid waste per day upon full build-out. All cannabis activities permitted would be in compliance with all applicable State and local regulations and policies related to solid waste. Therefore, impacts related to solid waste generation would be less than significant.

Therefore, impacts associated with the provision of other additional public services would be less than significant.

Mitigation Measures

Implement Mitigation Measure MM 4.10-1.

Level of Significance

Impacts would be *less than significant with mitigation*.

Cumulative Setting Impacts and Mitigation Measures

CUMULATIVE SETTING

The study area for the analysis of cumulative impacts is the City of Fresno and the unincorporated portions of Fresno County located adjacent to the city limits, as well as portions of the City of Clovis and the County of Madera adjacent to the City of Fresno. The applicable cumulative projections include growth projections from the City of Fresno General Plan, Fresno County General Plan, Madera County General Plan, and the City of Clovis General Plan.

The City of Fresno General Plan was last adopted in the year 2014. Anticipated development within the General Plan includes 186,840 dwelling units, 66.4 million square feet (msf) of commercial/office/public facility, 100,000 sf of mixed uses, and 72.8 msf of industrial uses. The General Plan contains approximately 11,714 acres of agricultural land, 12,288 acres of open space, and 12,522 acres of vacant land. Existing agricultural land is primarily located in the southeastern and western portions of the General Plan.

The General Plan contains two major rail lines that generally traverse in a southeast to northwest direction. These railways include the Union Pacific Railroad line that is generally located along SR-99, and the BNSF Railway that diverges from the SR-99 in the southwest and travels through the Downtown to the northwest. There are three airports located within the City of Fresno including the Fresno-Yosemite International Airport located in the eastern portion of the Planning Area, the Fresno-Chandler Downtown Airport located west of Downtown, and Sierra Sky Park Airport that is located on the northern portion of the General Plan.

The County of Fresno General Plan was last adopted in the year 2000. The County General Plan was prepared to accommodate population growth through the year 2020, consistent with the California Department of Finance projection of 1.1 million by 2020. This represents an additional population of approximately 344,000, which includes the year 2020 projections outside the sphere of influences for cities within the East Valley area, which is located east of Interstate 5. Additional development projects are proposed northeast of the City of Fresno Project area including Friant Ranch that represents an additional population of approximately 164,693 through the year 2020.

The County of Madera General Plan was last adopted in the year 1995. The Madera County General Plan identifies population and employment growth projections through the year 2010 and includes 177,071 people and 61,866 employees. Since the adoption of Madera County's General Plan, substantial new development projects have been proposed in the southern portion of Madera County, some of which is proposed within close proximity of the City of Fresno Project area including Gateway, Gunner Ranch, Liberty Groves, North Fork Village, Tesoro Viejo, and

River Ranch Estates. These projects include approximately 23,000 units, and supporting uses such as commercial, public facilities, parks, and open space.

The City of Clovis General Plan was last adopted in the year 2014. The Clovis General Plan forecasts the ultimate buildout of the entire Clovis General Plan area that is expected to occur for at least 70 years. The Clovis General Plan forecasts an additional 65,100 residential units, 179,300 population, and 38,250,000 square feet of buildings.

CUMULATIVE IMPACTS

CEQA Section 15130(a) states: An EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in Section 15065 (a)(3). Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable. Significant cumulative impacts would occur if the other projects identified would overburden utilities and service systems or if agencies would be unable to provide adequate services, thereby resulting in significant combined impacts related to the need for development of new facilities.

Population growth, in general, is anticipated to increase demand for police and fire protection services and will result in the need for construction of new or expanded facilities in certain locations. This need is typically addressed through general plan processes, which include planning for public services to accommodate anticipated future growth.

Cannabis-related businesses would not generally increase demand for parks, schools, or other public services. Implementation of the proposed Project may include development of new buildings and properties, and changes to occupancies of existing buildings and sites, which may result in impacts on wastewater services. Development of these sites would require the payment of appropriate development fees to the City. Development fees, along with increased property and sales tax revenue would assist the City in paying for any additional services needed by the Project. Additionally, mitigation measures have been proposed to reduce impacts on wastewater treatment facilities, and public health and safety to a less-than-significant level. As such, the Project would not make a contribution to a cumulative impact related to the need for construction of new or expanded public facilities.

Regarding fire protection services, it was noted that unpermitted indoor cultivation operations have resulted in fires, primarily as a result of faulty or substandard wiring and the high electrical loads associated with indoor growing equipment. With implementation of the Project, cannabis business would become licensed and be required to construct their operations in compliance with local and State building codes and regulations, thereby reducing the impacts to fire protection services.

Similarly, it was noted that cultivation activities permitted by the Project would reduce the burden on police services, as currently unlicensed operations would obtain licenses and increasingly comply with applicable laws and other requirements. Additionally, by creating a legal

pathway for cultivation and allowing for more lawfully grown cannabis to enter the market, the Proposed Program may reduce incentives or opportunities for criminals to engage in unlicensed cannabis cultivation. Therefore, it is anticipated that there would be a reduction in the demand for police protection services.

As such, the Project would make a beneficial contribution to cumulative impacts on police and fire protection by reducing demands that could lead to construction of new or expanded police or fire protection services. Therefore, cumulative impacts would be less than significant.

Mitigation Measures

Implement Mitigation Measures MM 4.9-1 through MM 4.9-3, and MM 4.10-1.

Cumulative Level of Significance

Cumulative impacts would be *less than significant with mitigation.*

4.16 - Recreation

4.16.1 - INTRODUCTION

This section addresses potential Project impacts on parks and recreational facilities within the Project area. This section also describes the environmental and regulatory settings and discusses mitigation measures to reduce impacts, where applicable.

4.16.2 - ENVIRONMENTAL SETTING

Study Area for Project Impacts

The City of Fresno (City) is located in Fresno County and is situated in the central portion of the San Joaquin Valley, in the State of California. The City encompasses approximately 113 square miles. Fresno is the largest city in Fresno County and has a current estimated population of 536,683 residents (California Department of Finance, 2019). Fresno County is California's sixth largest county in land area and encompasses approximately 6,011 square miles.

The study area for project impacts regarding recreation services is the City of Fresno because potential development under the City's Proposed Regulation and Permitting of Commercial Cannabis Activities (Project) is limited to areas within the city limits.

Regional

Fresno County is home to 12 regional parks and a variety of recreational facilities including two fishing access areas and a boat-launch/parking facility at Shaver Lake. The regional parks located in Fresno County include Avocado Lake, Choinumni, Courthouse, Kearney, Laton-Kingston, Los Gatos Creek, Lost Lake, Skaggs Bridge, Winton, China Creek, Kings River Green Belt, and Thornburn.

These regional recreation facilities are used for picnicking, fishing, hiking, jogging, bird watching, nature study, non-organized sports, barbecues, softball, soccer, volleyball, overnight camping, passive recreation and more.

Local

PARKS/RECREATION

The City's park system contains several classes of park space, including trails, regional parks, neighborhood parks, educational facilities, dual use ponding basins, etc. The City of Fresno has 607 acres of regional/open space/special use parks and 367 acres of pocket/neighborhood/community parks. The City contains over 4,000 acres of open space and maintains approximately 1,617 acres of open space and nearly 230,000 square feet of building space dedicated to recreational/educational purposes. Additionally, the City maintains nine community pools, four splash parks, 518 picnic tables, 153 barbeque grills, three amphitheaters,

54 baseball/softball fields, 53 football/soccer fields, 40 basketball courts, 11 volleyball courts, 40 tennis courts, seven skate parks, and five dog parks.

Table 4.16-1 below identifies the various parks and community facilities that are maintained by the City of Fresno. As shown in Table 4.16-1, regional parks comprise a majority of the City's parkland, followed by neighborhood parks.

Table 4.16-1
City of Fresno Maintained Parks and Community Facilities

Facility	Acreage	Number of Sites
Dual Use Ponding Basin (maintenance only)	128	16
Community center	31	6
City owned golf course	206	2
Neighborhood center	71	12
Neighborhood park	307	32
Community park	20	1
Pocket park	27	21
Regional park	725	3
Paths and Trails	115	11
Future parks	70	6
Total	**1,698**	**110**

Source: City of Fresno General Plan Update Master EIR

The park system also provides 34 acres of off-road trails for pedestrians and cyclists. Schools augment the City's park system because they provide additional opportunities through joint use agreements. However, not all schools are open during non-school hours, which limit their ability to be used for recreational purposes. Ponding basins comprise a majority of the open space in the City, followed by parks. Ponding basins account for 1,273 acres within the City and are owned by the Fresno Metropolitan Flood Control District (FMFCD). All basins serve as ponding basins for storm drainage, while some also are utilized as year-round groundwater recharge basins. Whenever feasible, FMFCD and the City partner to develop parks at basins with play equipment and sports fields.

Currently, the Project area includes approximately 545,000 people. Based on the existing City of Fresno parks standard that includes three acres of parkland to be provided per 1,000 residents, approximately 1,635 acres of parkland would need to be provided to currently meet this standard. As shown above, there are currently 1,625 acres of parkland within the Project area. Based on the current population within the Project area, approximately 3.28 acres of parkland is provided per 1,000 residents, which is just over the City's current park standard. This includes ponding basins with park space maintained by the City of Fresno.

Federal

NATIONAL PARKS

Several national parks are located in California's Central Valley which are accessible from the City of Fresno. These include Yosemite National Park, Sequoia National Park, Kings Canyon National Park, Death Valley National Park, and Mojave National Preserve.

NATIONAL FORESTS

Sequoia National Forest

The Sequoia National Forest encompasses approximately 1.2 million acres. Sequoia National Forest has approximately 626,000 visitors annually. In general, of the total estimated annual site visits at Sequoia National Forest, the majority are visits to overnight use developed sites, estimates at 274,000 visits annually. The Giant Sequoia National Monument is also within the Sequoia National Forest. The Sequoia National Forest provides for a variety of recreational pursuits, including:

- Wildlife and nature viewing;
- Hiking, equestrian, and off-road vehicle trails;
- Individual and group camping sites;
- Swimming, fishing, day use, picnic use;
- Whitewater rafting;
- Kayaking;
- Cave tours; and
- Cross-country skiing.

State

There are no State parks or recreational areas in proximity to the Project site. Millerton Lake State Recreation Area is located 27 miles north of the City. The Project will not generate impacts to State parks.

4.16.3 - REGULATORY SETTING

Federal

There are no federal regulations that apply to the Project.

State

There are no State regulations that apply to the Project.

Local

RECREATION

City of Fresno

The City of Fresno includes various recreation objectives and policies as part of the Fresno General Plan.

Objective POSS-1. Provide an expanded, high quality and diversified park system, allowing for varied recreational opportunities for the entire Fresno community.

Policy 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 and trails.

Policy POSS-1-b - Parks Implementation Planning. Conduct ongoing planning to implement park policies established in this General Plan and continue to strive for well-maintained and fully accessible playgrounds, with accessible amenities, throughout the City.

Policy POSS-1-c - Public Input in Park Planning. Continue to provide opportunities for public participation in the planning and development of park facilities and in creation of social, cultural, and recreational activities in the community.

Policy POSS-1-d - Additional parkland in certain areas. Strive to obtain additional parkland of sufficient size to adequately serve underserved neighborhood areas and along BRT corridors in support of new and intense residential and mixed-use infill development.

Policy POSS-1-e - Criteria for Parks in Development Areas. Continue to use park size and service area criteria for siting new parks and planning for parks in development areas.

Policy POSS-1-f - Parks and Open Space Diagram. Require parks to be sited and sized as shown on the Parks and Open Space Diagram (Figure POSS-1) of the General Plan.

Policy POSS-1-g - Regional Urban Forest. Maintain and implement incrementally, through new development projects, additions to Fresno's urban forest to delineate corridors and the boundaries of urban areas, and to provide tree canopy for bike lanes, sidewalks, parking lots, and trails.

Objective POSS-2. Ensure that adequate land, in appropriate locations, is designated and acquired for park and recreation uses in infill and growth areas.

Policy POSS-2-a. Identify opportunities to site, develop and co-locate fire and police stations with needed parks and open space as joint-use facilities.

Policy POSS-2-b - Park and Recreation Priorities. Use priorities and guidelines in acquiring and developing parks and recreation facilities.

Policy 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 the City's General Plan.

Policy POSS-2-d - Recreation 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.

Policy POSS-2-e - Open Space Dedication for Residential Development. Ensure new residential developments provide adequate land for parks, open space, landscaping, and trails through the dedication of land or otherwise providing for pocket parks, planned trails, and other recreational space, maintained by an HOA, CFD, or other such entity.

Policy POSS-2-f - Freeway Landscaping. Support the expansion of the State Route 99 Beautification Association to the Fresno County Highway Beautification Association with related updates and implementation of the master landscape plans for each freeway.

Objective POSS-3. Ensure that park and recreational facilities make the most efficient use of land; that they are designed and managed to provide for the entire Fresno community; and that they represent positive examples of design and energy conservation.

Policy POSS-3-a – Centralized Park Locations. Site parks central and accessible to the population served, while preserving the integrity of the surrounding neighborhood.

Policy POSS-3-b – Park Location and Walking Distance. Site pocket and neighborhood parks within one-half mile walking distance of new residential development.

Policy 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.

Policy POSS-3-d - Sidewalks to Connect Neighborhoods. Sidewalks should be designed for internal neighborhood circulation, and to connect neighborhoods to other residential areas, parks, community trails, shopping, and major streets.

Policy 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.

Policy POSS-3-f - Park Design Guidelines. Create, maintain, and apply park design guidelines, with provisions for appropriate amenities for each park type.

Policy POSS-3-g - Park Security and Design. Promote safety, attractiveness, and compatibility between parks and adjacent residential areas through design, maintenance, and enforcement of park regulations.

Policy 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.

POSS-3-i - Joint Use with Drainage Facilities. Continue to seek joint use agreements for use of FMFCD stormwater drainage facilities.

Objective POSS-4. Pursue sufficient and dedicated funding for parks acquisition, operations, and maintenance.

Policy POSS-4-a - Supplemental Revenue. Seek revenue sources to supplement general fund support for basic park maintenance and basic recreational services.

Policy POSS-4-b - Operation and Maintenance Financing. Continue to require new residential development to form lighting and landscaping maintenance districts or community facility districts or ensure other means of financing to pay for park operations and maintenance.

Policy POSS-4-c - Improvements in Established Neighborhoods. Seek agreements with formal neighborhood associations and institutions for improvements and ongoing maintenance of parks in established neighborhoods.

Policy POSS-4-d - Maintain Adopt-A-Park Program. Continue promoting the City's Adopt-A-Park Program that utilizes partnerships with local organizations to preserve, beautify and maintain Fresno's neighborhood parks.

4.16.4 - IMPACTS AND MITIGATION MEASURES

Methodology

Parks and recreational facilities within the Project area were evaluated to determine whether they would be adversely affected by the Project. This evaluation included consideration of the overall number and area of parklands and other recreational facilities within the Project area.

Thresholds of Significance

In accordance with CEQA, the effects of a project are evaluated to determine if they will result in significant adverse impact on the environment. The criteria used to determine the significance of an impact to parks and recreational facilities are based on the Environmental Checklist in Appendix G of the State CEQA Guidelines as identified below. Accordingly, parks and recreational facilities impacts resulting from the proposed Project are considered significant if the Project would:

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or

b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Project Impacts

Impact 4.16-1: Increase Use of Existing Neighborhood and Regional Parks or Other Recreational Facilities Such That Substantial Physical Deterioration Would Occur or Be Accelerated

Full build-out of the Fresno General Plan would result in a potential population increase of approximately 425,000 additional residents within the City and result in an increase in the demand for parks and recreational facilities. Based on the proposed standard of five acres of public parkland per 1,000 residents, the build-out of the General Plan would require 4,850 acres of parkland and associated recreational amenities to serve all of the residents.

As explained above, impacts on parks and recreational facilities are determined by analyzing the projected increase in demand for these facilities, as a result of future residential development and corresponding population increase projected under the proposed Project. The proposed Project will occur in existing commercial, industrial, and mixed-use zones. As discussed in Section 4.14, *Population and Housing* and Section 4.15, *Public Services*, the Project will create approximately 2,114 new jobs, which represents a total increase in jobs of 0.05 percent. The educational and professional criteria for cannabis industry workers are similar to those of other industrial and commercial industries that currently operate within the City. While a small number of employees will come from out of State, the majority of employee will be either existing City of Fresno residents, or already living in the area and may commute. Any population growth directly or indirectly resulting from the proposed Project would represent a minimal increase relative to the overall population of the City of Fresno. The build-out of the proposed Project would not result in an increase in residential development or population increase, nor increase the need for additional parks and recreational facilities. Therefore, the Project would not result in any impacts to parks or other recreational facilities.

Mitigation Measures

No mitigation measures are required.

Level of Significance

No impacts would occur.

Impact 4.16-2: Include Recreational Facilities or Require the Construction or Expansion of Recreational Facilities Which Might Have an Adverse Physical Effect on the Environment

As analyzed in Impact 4.16-1 above, the proposed Project will occur in existing commercial, industrial, and mixed-use zones. As discussed, population increases as a direct or indirect result of the proposed Project would be minimal relative to the overall population of the City of Fresno. Therefore, the build-out of the proposed Project would not include recreational facilities or require the construction or expansion of recreational facilities. Therefore, the Project would no result in any impacts related to recreational facilities.

Mitigation Measures

No mitigation measures are required.

Level of Significance

No impacts would occur.

Cumulative Setting Impacts and Mitigation Measures

CUMULATIVE SETTING

The study area for the analysis of cumulative impacts is the City of Fresno and the unincorporated portions of Fresno County located adjacent to the city limits, as well as portions of the City of Clovis and the County of Madera adjacent to the City of Fresno. The applicable cumulative projections include growth projections from the City of Fresno General Plan, Fresno County General Plan, Madera County General Plan, and the City of Clovis General Plan.

The City of Fresno General Plan was last adopted in the year 2014. Anticipated development within the General Plan includes 186,840 dwelling units, 66.4 million square feet (msf) of commercial/office/public facility, 100,000 quare feet of mixed uses, and 72.8 msf of industrial uses. The General Plan contains approximately 11,714 acres of agricultural land, 12,288 acres of open space, and 12,522 acres of vacant land. Existing agricultural land is primarily located in the southeastern and western portions of the General Plan.

The General Plan contains two major rail lines that generally traverse in a southeast to northwest direction. These railways include the Union Pacific Railroad line that is generally located along SR-99, and the BNSF Railway that diverges from the SR-99 in the southwest and travels through the Downtown to the northwest. There are three airports located within the City of Fresno including the Fresno-Yosemite International Airport located in the eastern portion of the Planning Area, the Fresno-Chandler Downtown Airport located west of Downtown, and Sierra Sky Park Airport that is located on the northern portion of the General Plan.

The County of Fresno General Plan was last adopted in the year 2000. The County General Plan was prepared to accommodate population growth through the year 2020, consistent with the California Department of Finance projection of 1.1 million by 2020. This represents an additional population of approximately 344,000, which includes the year 2020 projections outside the sphere of influences for cities within the East Valley area, which is located east of Interstate 5.

Additional development projects are proposed northeast of the City of Fresno Project area including Friant Ranch that represents an additional population of approximately 164,693 through the year 2020.

The County of Madera General Plan was last adopted in the year 1995. The Madera County General Plan identifies population and employment growth projections through the year 2010 and includes 177,071 people and 61,866 employees. Since the adoption of Madera County's General Plan, substantial new development projects have been proposed in the southern portion of Madera County, some of which is proposed within close proximity of the City of Fresno Project area including Gateway, Gunner Ranch, Liberty Groves, North Fork Village, Tesoro Viejo, and River Ranch Estates. These projects include approximately 23,000 units, and supporting uses such as commercial, public facilities, parks, and open space.

The City of Clovis General Plan was last adopted in the year 2014. The Clovis General Plan forecasts the ultimate buildout of the entire Clovis General Plan area that is expected to occur for at least 70 years. The Clovis General Plan forecasts an additional 65,100 residential units, 179,300 population, and 38,250,000 square feet of buildings.

CUMULATIVE IMPACTS

Implementation of the proposed Project may include development of new buildings and sites, and changes to occupancies of existing buildings and sites.

CEQA Section 15130(a) states: An EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in Section 15065(a)(3). Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

The implementation of cumulative development that is located within the Project area and development that would occur within the City of Clovis, the County of Fresno, and the County of Madera, would not result in the potential for cumulative impacts on the City's existing recreation facilities. As discussed above, impacts on recreation facilities are determined by analyzing the projected increase in demand for these services, as a result of future residential development and corresponding population increase generated by the proposed Project. The proposed Project will increase available jobs by 0.05 percent. It is likely the majority of employees will live in the City or neighboring area and would commute. Therefore, the build-out of the proposed Project would not result in an increase in residential development or population, or the need for additional recreational facilities.

Furthermore, the Ordinance includes development standards and operational requirements, and requires discretionary approvals from City departments that will review each application to ensure compliance with all applicable development codes and standards. And the applicable General Plan objectives and policies, as cited in this EIR section will ensure that the proposed Project does not result in cumulative impacts on recreational facilities.

Mitigation Measures

No mitigation measures are required.

Cumulative Level of Significance

Cumulative impacts would be *less than significant.*

4.17 - Transportation

4.17.1 - INTRODUCTION

This section describes potential impacts to the transportation system associated with the Proposed Regulation and Permitting of Commercial Cannabis Activities (Project). The impact analysis examines the roadway, transit, bicycle, pedestrian, rail, and aviation components of the transportation system in the City of Fresno. To provide a context for the impact analysis, this section begins with the environmental setting, which describes the existing physical and operational conditions of the transportation system. Followed by the relevant regulatory framework, which influences the transportation system and provides the basis for impact significance thresholds that are used in the impact analysis findings and recommended mitigation measures.

4.17.2 - ENVIRONMENTAL SETTING

Roadway Network

The roadway network in the City is a traditional grid-based network of north/south and east/west streets, except for portions of the Downtown Planning Area, whose grid-based network of streets are angled consistent with the northwest/southeast railroad alignment. Almost all of the major streets in the Fresno metropolitan area are regularly spaced at half-mile intervals. The grid system provides high levels of accessibility (i.e., travel choices) for residents. Some of the roadways in Fresno are super arterials, which are similar to expressways. Super arterials have limited access and function like expressways to move large volumes of vehicles where freeways are absent. This roadway hierarchy is explained in Table 4.17-1. Freeways are under the jurisdiction of the State, and are outside of City control, but have been assessed for the purposes of this EIR section due to their location within the Project area.

Table 4.17-1
City of Fresno Roadway Hierarchy

Roadway Type	Number of Vehicle Lanes	Bike Lanes	Pedestrian Facilities	On-Street Parking	Median
Expressway	4 to 6	No	Trail	No	Yes
Superarterial	4 to 6	Yes	Sidewalks[4]	No	Yes
Arterial	4 to 6	Yes	Sidewalks[1]	Possible	Yes
Collector	2 to 3	Possible (or Trail)	Sidewalks	Yes	No
Local	2 to 3	Possible (or Trail)	Sidewalks	Yes	Possible

Source: 2035 General Plan

[1] Where called for by the General Plan, a trail maybe required instead of a sidewalk.

State Facilities

The State facilities in the City of Fresno are listed below and are full access-controlled freeways, which are operated and maintained by Caltrans.

- SR-41 serves as a principal north/south route connecting north Fresno with the Central Business District (CBD), generally paralleling the Blackstone Avenue corridor within the City. Regionally, SR-41 extends from Yosemite National Park in Madera County, through Fresno County, and to Kettleman City in Kings County near Interstate 5 (I-5). From I-5, SR-41 continues west and connects to U.S. Highway 101 and SR-1 on the Central Coast.

- SR-99 is a principal north/south route in Fresno County that links Bakersfield in Kern County to the Stockton and Sacramento metropolitan areas in the Northern San Joaquin and Sacramento Valleys. SR-99 is a major goods movement corridor with significant truck volumes. Within Fresno, SR-99 connects northwest Fresno with Downtown and has freeway-to-freeway interchanges with SR-180 and SR-41.

- SR-168 connects Downtown Fresno with northeast Fresno and the City of Clovis. SR-168 begins at a freeway-to-freeway interchange with SR-180 about one and a half miles east of SR-41. East of the City of Clovis, SR-168 transitions to a two-lane conventional highway and provides access to the Sierra Nevada.

- SR-180 travels east/west and connects southeast and southwest Fresno with Downtown Fresno. It also has freeway-to-freeway interchanges at SR-41, SR-99, and SR-168. East of Fresno, SR-180 provides access to Kings Canyon and Sequoia National Parks. West of Fresno, SR-180 transitions to a two-lane conventional highway and connects to SR-145 in Kerman and SR-33 in Mendota.

Public Transportation

Public transportation in the City consists of public bus service, express bus service, demand-response paratransit, and passenger rail service.

Fresno Area Express (FAX), a department of the City of Fresno, is the predominant transit provider in the City. FAX provides 17,600,000 annual passenger boardings, averaging 48,000 passenger trips per day. The entire FAX system runs about 1,000 bus operations per day. Ridership trends in recent years have shown an increase in the number of people using transit, which may be attributable to poor economic conditions and the rising cost of travel. The bus routes typically follow most of the Fresno arterial street network, which are generally spaced on the mile and provide good coverage to most of the City. Table 4.17-2, below, shows the Fresno area express routes that are currently in operation.

Handy Ride is a demand-response service for seniors and persons with disabilities, as required by the Americans with Disabilities Act. This paratransit service serves up to 12,500 eligible individuals in the FAX service area and provided 238,707 passenger rides in fiscal year 2010.

Table 4.17-2
Fresno Area Express Routes

Route	Service type	North or West Terminal	Destinations Served	South or East Terminal
1 – Q Bus Rapid Transit	Q BRT	North Fresno (Fresno & Friant)	River Park, Manchester Transit Center, Fresno City College, Downtown Transit Center, Fresno Fairgrounds	Sunnyside (Kings Canyon & Clovis)
9 – Shaw	FAX 15	Brawley & Shaw	Fig Garden Shopping Center, Fashion Fair, Fresno State University	Shaw & Cole
12 – Brawley	Regular	Brawley & Shields	Central High School East Campus, Inspiration Park, Forestiere Underground Gardens	Brawley & Shaw
20 – Hughes/McKinley	Regular	Brawley & Shaw	Fresno High School, Fresno City College	Downtown Transit Center
22 – West Ave/Tulare	Regular	West & Bullard	Fig Garden Library, Downtown Transit Center, Santa Fe Passenger Depot	Clovis & Kings Canyon
26 – Palm/Butler	Regular	Nees & Blackstone	Bullard High School, Fresno High School, Tower District, Downtown Transit Center, Fresno Fairgrounds, Mosqueda Community Center, Fresno Pacific University	Fresno Yosemite International Airport
28 – FSU/Manchester Center/West Fresno	Regular	Willow & Shaw	Fresno State University, Fashion Fair, Manchester Transit Center, Fresno City College, Fresno High School, FAX Offices, Fresno Chandler Executive Airport	Crystal & Kearney

Route	Service type	North or West Terminal	Destinations Served	South or East Terminal
32 – Fresno St	Regular	El Paso & Blackstone	River Park, Kaiser Hospital, VA Medical Center, Community Regional Medical Center, Downtown Transit Center	North & Elm
33 – Belmont	Regular	Belmont & Delno	Roeding Park, Chaffee Zoo	Maple & Butler
34 – 1st St	Regular	El Paso & Blackstone	River Park, Politi Library, Hoover High School, Fashion Fair, Downtown Transit Center	Jensen & Cherry
35 – Olive	Regular	Marks & Olive	Roeding Park, Tower District	Olive & Peach
38 – Cedar	FAX 15	El Paso & Blackstone	River Park, Fresno State University, Duncan Polytechnical High School, McLane High School, Roosevelt High School	Downtown Transit Center
39 – FYI/Clinton	Regular	Shields & Brawley	VA Medical Center, McLane High School, Cedar Clinton Library	Fresno Yosemite International Airport
41 – Malaga/Shields/Chestnut	Regular	Marks & Shaw	Manchester Transit Center, Fresno Pacific University	Grand & Harding
45 – Herndon/Fruit/Ashlan	Regular	Herndon & Milburn	Manchester Transit Center, Fresno City College, Fresno High School, Bullard High School	Shields & Stanford
58 – NE Fresno	Regular	El Paso & Blackstone	Kaiser Hospital, Clovis West High School, Woodward Park Regional Library	Champlain & Perrin

Route	Service type	North or West Terminal	Destinations Served	South or East Terminal
58E – Children's Hospital	Express	Valley Children's Hospital	(no stops)	El Paso & Blackstone

The Fresno County Rural Transit Agency (FCRTA) and Amtrak also provide services for regional travel outside of the Fresno-Clovis metropolitan area. FCRTA provides service to many of the unincorporated communities in Fresno County such as Coalinga and Mendota (Fresno County Rural Transit Agency, 2017). The San Joaquin Line is 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.

Bicycle and Pedestrian Circulation

The Fresno Active Transportation Plan (ATP) is a comprehensive guide outlining the vision for active transportation in the City of Fresno, and a roadmap for achieving that vision. Active transportation is human-powered travel including walking, bicycling, and wheelchair use. The ATP strives to improve the accessibility and connectivity of the bicycle and pedestrian network in order to increase the number of persons that travel by active transportation and to provide walking and bicycling facilities equitably for all City residents.

The ATP updated and superseded the existing City of Fresno Bicycle, Pedestrian, & Trails, Master Plan (BMP) that was adopted in 2010. In addition to updating elements of the BMP, the ATP includes more robust planning for pedestrian travel and infrastructure than presented in the BMP. Therefore, the ATP serves as the City's bicycle master plan and pedestrian master plan.

The ATP recommended build out network would add 166 miles of Class I Bike Paths, 691 miles of Class II Bike Lanes, 69 miles of Class III Bike Routes, 21 miles of Class IV Separated Bikeways, and 661 miles of sidewalks. Implementation of the entire network facilities will occur over many years. Facilities will be constructed in conjunction with adjacent land development, roadway maintenance and capacity enhancement projects, as well as active transportation infrastructure projects using funds available from several different local, state, and federal funding sources.

PEDESTRIAN TREATMENTS AND SUPPORT FACILITIES

- Sidewalks are paved areas immediately adjacent to the vehicular right-of-way for the exclusive use of pedestrians. Unlike shared-use paths, they are directly adjacent to the main right-of-way and use by bicyclists is usually prohibited. As with trails, shade is important to encourage walking in Fresno's hot summer climate.

- Marked crosswalks feature striping and other enhancements to delineate a street crossing for pedestrians. There are two types of marked crosswalks: controlled and

uncontrolled. At uncontrolled crosswalks, drivers are legally required to yield to pedestrians, but do not have to stop when a pedestrian is not present. In Fresno, uncontrolled crosswalks are not used without careful study and employ high visibility markings. Controlled crosswalks are located at intersections with stop signs or traffic signals.

- Median refuge islands provide a safe space in longer crosswalks. They are particularly helpful for older adults and people with disabilities, who may require more time to get across the street or need to pause in between long crossing segments. Median refuge islands are recommended to be at least six feet wide, and preferably ten feet wide. Design of specific median refuge islands, as well as other features, should consider local context.

- Pedestrian street signage improves visibility of crosswalks and can increase the likelihood that a driver will yield or stop to pedestrians. In-street signs are ideal for streets with low vehicle speeds and two lanes. In-street signs can be permanently installed or movable for peak hours such as pickup/drop-off times at schools. Overhead signs are more impactful at busier, wider streets. These are typically installed at mid-block crossings or intersections. Additional signage in school zones helps alert drivers that children, who are known to make unpredictable movements, may be present.

- Wayfinding refers to the network of informational signage posted to guide pedestrians or bicyclists to their destination. Good wayfinding signage presents destination, direction, and distance information in a manner that is easy to read and interpret. Signs posted at trail junctions and intersections of trails with arterials are particularly helpful. Guidance on sign design and installation is available in Chapter 9B of the 2014 California MUTCD and the National Association of City Transportation Officials (NACTO) design guidelines. Wayfinding signage can also be enhanced with average walk times and bike times to destinations and local branding.

- Sufficient lighting on pedestrian facilities reduces the fear of crime and prevents collisions that occur due to decreased visibility. Pedestrian walkways should have lighting that allows people to identify faces from a distance of about 30 feet. Lighting should be consistent to reduce deep shadows and avoid excessive glare. It is necessary to maintain conventional light fixtures regularly, keeping lamp bowls clean and promptly replacing bulbs that have burnt out. Newer light emitting diode (LED) fixtures, which have much longer bulb life, have greatly decreased maintenance requirements.

BICYCLE TREATMENTS AND SUPPORT FACILITIES

- Green bike lanes include colored pavement to call attention visually to conflict areas between bicyclists and motorists. Green markings are more likely to be used in high volume intersections and busy driveway locations. Bike lane lines can be installed with either paint or thermoplastic. Painted lanes are less expensive to install.

- Buffers and bollards are treatments used to increase the separation between bicyclists and motorists. They are implemented on streets that are candidates for traditional bicycle lanes but have high travel speeds and traffic volumes. Separating bicyclists from vehicle traffic is ideal anytime the street space allows for it.

- Bicycle parking is a key component to encouraging ridership by supporting the final stage of a bicycle trip. Locations with high ridership are excellent candidates for bicycle parking, including civic, residential, commercial, and office spaces. At these locations, both short-term and long-term parking should be accommodated.

- Providing showers and changing spaces at employment centers make commuting by bicycle more desirable. Showers and changing rooms are particularly useful to Fresno bicycle commuters during the hot summer months. The Fresno Municipal Code includes requirements for provision of showers in new nonresidential construction (details are provided in the Municipal Code and Charter of Fresno, California section of Appendix C).

- Regional bike share programs are often implemented as a way to promote bicycle travel. They offer temporary bicycle rental services that are ideal for short-distance trips. Users pick up bikes at one station and leave their bike at the station closest to their destination. Bike share programs aim to solve the "last mile" problem, the challenge of moving travelers from the end of their transit trips to their final destinations. Bike share can allow people to reach transit options with minimal user planning involved.

Rail/Highway Freight

The City is served by two rail corridors: the Burlington Northern Santa Fe (BNSF) rail corridor has one track and travels through northwest Fresno and the middle of Downtown while the Union Pacific Railroad (UPRR) corridor has two tracks and generally runs parallel to SR-99. According to the 2007 City of Fresno Downtown Transportation and Infrastructure Study, about 50 freight trains pass through the two rail corridors daily as they travel through Downtown. SR-99 and the UPRR are both international trade facilities. Peak shipping months in the San Joaquin Valley are May through October.

High Speed Train

In addition to airport, train, and bus travel mentioned above, the California High Speed Train (HST) will also serve as a regional transportation system for Fresno and surrounding communities. The proposed HST line, if approved and funded, would ultimately extend through the San Joaquin Valley, linking San Francisco with Los Angeles. The Initial Construction Section is planned to start in Madera County to just north of Bakersfield, with a station located in Fresno's Downtown, aligned with Mariposa Street. The HST tracks through Fresno's metropolitan area are currently under construction and would run generally parallel to the Union Pacific Railroad tracks and primarily at-grade, with some shorter sections being depressed (below surface grade) to clear

existing structures, such as the interchange of State Routes 99 and 180. All roads proposed to cross the HST alignment will be grade-separated from the HST (go over or under).

Aviation

The City of Fresno manages the Fresno Yosemite International Airport (FYI). The airport is located in northeast Fresno just southwest of Clovis in between Highways 168 and 180. There are two runways, each of which is 7,205 feet long and 100 feet wide. There are 174 aircraft based at FYI with an average of 371 daily aircraft operations in 2012. In 2011, the two runways served about 1.2 million passengers and airport officials expect that number to grow in the future. There are also two other general aviation airports (i.e., Chandler and Sierra Sky Park) and four heliports, including McCarthy Ranch, Community Regional Medical Center, Valley Medical Center, and PG&E Service Center in the City (AirNav, 2019).

4.17.3 - Regulatory Setting

This section summarizes the transportation policies, laws, and regulations that apply to the proposed Project. This information provides context for the impact discussion related to the Project's consistency with applicable regulatory conditions. Further, this study identifies impacts to traffic operations by comparing roadway LOS analysis results against LOS policies set forth by the City of Fresno and Caltrans.

Federal

No federal plans, policies, regulations or laws pertaining to transportation are applicable.

State

California Department of Transportation

The California Department of Transportation (Caltrans) is responsible for operating and maintaining the State highway system. In the project vicinity, State Routes 41, 99, and 180, along with all the freeway ramp terminal intersections, fall under Caltrans jurisdiction. Caltrans provides administrative support for transportation programming decisions made by the California Transportation Commission (CTC) for State funding programs. The State Transportation Improvement Program (STIP) is a multi-year capital improvement program that sets priorities and funds transportation projects envisioned in long-range transportation plans.

Senate Bill 743

Senate Bill 743, passed in 2013, required the California Governor's Office of Planning and Research (OPR) to develop new CEQA guidelines that address traffic metrics under CEQA. As stated in the legislation, upon adoption of the new guidelines, "automobile delay, as described solely by level of service (LOS) or similar measures of vehicular capacity or traffic congestion shall

not be considered a significant impact on the environment pursuant to this division, except in locations specifically identified in the guidelines, if any."

In December 2018, OPR and the State Natural Resources Agency submitted the updated CEQA Guidelines to the Office of Administrative Law for final approval to implement SB 743. The Office of Administrative Law subsequently approved the updated CEQA Guidelines; thus, implementing SB 743 and making vehicle miles traveled (VMT) the primary metric used to analyze transportation impacts. However, local agencies have until July 1, 2020, to opt-in and implement the updated guidelines.

Complete Streets

The California Complete Streets Act (Act) requires general plans updated after January 30, 2011 to develop a plan for a multi-modal transportation system. The goal of the 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 design has many advantages. When people have more transportation options, there are fewer traffic jams and the overall capacity of the transportation network increases. Additionally, increased transit ridership, walking, and biking can reduce air pollution, energy consumption, and greenhouse gas emissions, while improving the overall travel experience for road users. Providing more transportation options will allow the City to meet its future travel demands without solely relying on motorized vehicles.

While there is no standard design template for a Complete Street, it generally includes one or more of the following features: bicycle lanes, wide shoulders, well-designed and well placed crosswalks, crossing islands in appropriate midblock locations, bus pullouts or special bus lanes, audible and accessible pedestrian signals, sidewalk bulb-outs, center medians, street trees, planter strips and ground cover. Complete Streets create a sense of place and improve public safety due to their emphasis on comprehensively encouraging pedestrian activity. The Act is implemented through the City's ATP and General Plan.

Regional

FRESNO COUNCIL OF GOVERNMENTS (FRESNO COG)

The Fresno Council of Governments (Fresno COG) is an association of local governments in Fresno County. Fresno COG provides transportation planning and funding for the region and serves as a forum for the study and resolution of regional issues. In addition to preparing the region's long-range transportation plan, Fresno COG assists in planning for transit, bicycle networks, clean air, and airport land uses. Fresno COG also develops and maintains the regional travel demand-forecasting model.

2018 Regional Transportation Plan and Sustainable Communities Strategy

The 2018 Regional Transportation Plan (RTP) is a comprehensive assessment of all forms of transportation available in Fresno County and of the needs for travel and goods movement through the year 2042. The 2018 RTP update was accomplished within the framework of the Fresno Council of Governments (Fresno COG), which is the Regional Transportation Planning Agency and Metropolitan Planning Organization (MPO) for the Fresno County area. This process of intergovernmental cooperation, coordination, and long-range planning has included contributions from 15 cities, Fresno County, staff from related local public agencies, the Air District, Caltrans, and other State agencies, federal agencies, and the public. The 2018 RTP contains a Sustainable Communities Strategy (SCS) as required by California's Senate Bill 375. SB 375 requires each MPO to include an SCS that provides an integrated land use and transportation plan in order to meet the California Air Resource Board's greenhouse gas emissions reduction targets.

Regional Transportation Improvement Program (RTIP)

The Regional Transportation Improvement Program (RTIP) is a list of transportation projects and programs to be funded and implemented over the next three years. Fresno COG submits this document to Caltrans and amends the program on a quarterly cycle.

Local

City of Fresno Traffic Impact Study Report Guidelines

The City of Fresno's Traffic Impact Study Report Guidelines establish general procedures and requirements for the preparation of traffic impact studies associated with development within the City. The guidelines are intended to be a checklist to ensure regular study items are not missed but are not intended to be prescriptive to the point of eliminating professional judgment. The guidelines include the preferred traffic analysis methodologies, significance criteria, and documentation requirements. This study is conducted using the preferred analysis methodologies and significance criteria as outlined in the guidelines. The guidelines indicate that a traffic study is required under the following conditions:

- When project-generated traffic is expected to be greater than 100 vehicle trips during any peak hour;
- When a project includes a General Plan Amendment (GPA) which changes the land use;
- When the project traffic will substantially affect an intersection or roadway segment already identified as operating at an unacceptable level of service; or
- When the project will substantially change the offsite transportation system or connection to it as determined by the Traffic Engineering Manager.

CITY OF FRESNO GENERAL PLAN

The Fresno General Plan serves as the community's guide for the continued development, enhancement, and revitalization of the Fresno metropolitan area. The General Plan includes the following policies related to transportation and circulation that are relevant to this analysis:

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-c - Plan Line Adoption. Prepare and adopt Official Plan Lines, or other appropriate documentation such as Director Determinations, for transportation corridors, roadways, and bicycle/pedestrian paths/trails, as necessary to preserve and/or obtain right-of-way needed for planned circulation improvements.

Policy MT-1-d - Integrate Land Use and Transportation Planning. Plan for and maintain a coordinated and well-integrated land use pattern, local circulation network and transportation system that accommodates planned growth, reduces impacts on adjacent land uses, and preserves the integrity of established neighborhoods.

Policy MT-1-e - Ensure Interconnectivity Across Land Uses. Update development standards and design guidelines applicable to public and private property to achieve Activity Centers, neighborhoods and communities which are well connected by pedestrian, bicycle, appropriate public transportation and automobile travel facilities.

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

Policy MT-1-h - Update Standards for Complete Streets. Update the City's Engineering and Street Design Standards to ensure that roadway and streetscape design specifications reflect the Complete Streets concept, while also addressing the needs of through traffic, transit stops, bus turnouts, passenger loading needs, bike lanes, pedestrian accommodation, and short- and long-term parking.

Policy MT-1-l - Level of Service in the Downtown Area. Within the Downtown Planning Area accept vehicle LOS F conditions during peak hours for street segments and intersections specified in community and Specific Plans as may be adopted by the City. Where there is an overlap in policies regarding LOS in the Downtown Planning Area, this policy shall supersede.

Policy MT-1-n - Peak Hour Vehicle LOS. 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 mitigation to maintain this LOS would be infeasible and/or conflict with the achievement of other General Plan policies.

Policy MT-1-o - LOS Deviations Outside of Activity Centers and Areas Designated for Mixed-Use. Accept vehicle LOS E or F conditions outside of identified multi-modal districts only if provisions commensurate with the level of impact and approved by the City Traffic Engineer are made to sufficiently improve the overall transportation system and/or promote non-vehicular transportation as part of a development project or City initiated project.

Policy MT-1-p - Participate in Sustainable Communities Strategy/ Regional Transportation Plan. Continue to work with the Fresno Council of Governments in developing and updating the Sustainable Communities Strategy and Regional Transportation Plan, consistent with the goals, objectives and policies of the General Plan.

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-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).

Policy MT-2-I - Transportation Impact Studies. Require a Transportation Impact Study (currently named Traffic Impact Study) to assess the impacts of new development projects on existing and planned streets for projects meeting one or more of the following criteria, unless it is determined by the City Traffic Engineer that the project site and surrounding area already has appropriate multi-modal infrastructure improvements.

- When a project includes a General Plan Amendment that changes the General Plan Land Use Designation.

- When the project will substantially change the offsite 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.

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-a - Bicycle, Pedestrian, and Trails Master Plan. To the extent consistent with this General Plan, continue to implement and periodically update the Bicycle, Pedestrian, and Trails Master Plan to meet State standards and requirements for recommended improvements and funding proposals as determined appropriate and feasible.

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

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

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

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

Policy MT-4-f - Bike Detection Devices. Include bicycle detection devices when new intersection traffic control signals are installed and strive to retrofit existing traffic control signals to provide bicycle detection and retiming of signal phases to make them more bicycle friendly.

Policy MT-4-g - Advocacy for Bike Accommodation. Advocate for the accommodation of bike facilities in new or upgraded state route interchanges and railroad construction projects, and construction of bicycle crossings of freeways and railroads.

Policy MT-4-h - Bicycle Parking Facilities. Promote the installation of bicycle locking racks and bicycle parking facilities at public buildings, transit facilities, public and private parking lots, and recreational facilities. Establish standards for bicycle parking in the Development Code.

Policy MT-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.

Policy MT-4-j - Street Maintenance for Bicycle Safety. Provide regular sweeping and other necessary maintenance to clear bikeways of dirt, glass, gravel, and other debris and maintain the integrity of the bicycling network.

Policy MT-4-k - Bicycle Safety, Awareness, and Education. Promote bicycle ridership by providing secure bicycle facilities, promoting traffic safety awareness for both bicyclists and motorists, promoting the air quality benefits, promoting non-renewable energy savings, and promoting the public health benefits of physical activity.

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-c - New Subdivision Design. Do not approve new single-family residential subdivisions with lots that front and access onto a major roadway, unless the City Traffic Engineer determines that no other feasible alternative means of vehicle access can be provided and that sufficient design measures can be implemented, such as an on-site driveway turnaround, landscaped buffering, or an on-street parking lane to assure a desirable and enduring residential environment.

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

Policy MT-5-e - Traffic Management in Established Neighborhoods. Establish acceptable design and improvement standards and provide traffic planning assistance to established neighborhoods to identify practical traffic management and calming methods to enhance the pedestrian environment with costs equitably assigned to properties receiving the benefits or generating excessive vehicle traffic.

Policy MT-5-f - Modifications to Street Standards. Continue to evaluate and adopt modifications to City street standards to achieve overall objectives of providing good access and travel opportunities while calming traffic, promoting pedestrian and other transportation options, and reducing the amount of land devoted to streets.

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-8-b - Transit Serving Residential and Employment Nodes. Identify the location of current and future residential and employment concentrations and Activity Centers throughout the transit service area in order to facilitate planning and implementation of optimal transit services for these uses. Work with California State University, Fresno to determine locations within the campus core for bus stops.

Policy MT-8-c - New Development Facilitating Transit. Continue to review development proposals in transportation corridors to ensure they are designed to facilitate transit. Coordinate all projects that have residential or employment densities suitable for transit services, so they are located along existing or planned transit corridors or that otherwise have the potential for transit orientation to FAX and consider FAX's comments in decision-making.

4.17.4 - IMPACTS AND MITIGATION MEASURES

Methodology

The City of Fresno has established guidelines for purposes of assessing project impacts. Typically, intersection and roadway capacities are evaluated against level of service (LOS) methodologies as documented in the Highway Capacity Manual (6th Edition). LOS methodologies are applied by the City of Fresno to quantitatively assess a street and highway system's performance. The City of Fresno's General Plan, Policy number MT-2-i, identifies a peak hour 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 mitigation to maintain this LOS would be infeasible and/or conflict with the achievement of other General Plan policies.

The methodology described above is based on the City of Fresno Traffic Impact Study Report Guidelines, City of Fresno's General Plan, and memorandum of understanding with the City of Fresno Department of Public Works, dated July 3, 2019.

Thresholds of Significance

The following criteria, as established in Appendix G of the CEQA Guidelines, will be utilized to determine if a project could potentially have a significant impact:

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities;

b) Would the project 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.

Project Impacts

Impact 4.17-1 - Conflict with a Program, Plan, Ordinance or Policy Addressing the Circulation System, Including Transit, Roadway, Bicycle and Pedestrian Facilities

As noted in the regulatory section above, the Fresno General Plan has policies related traffic systems. To assess the impacts that the Project may have on the surrounding roadway network in the City of Fresno, the first step is to determine Project trip generation. The trip generation was based on the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition. The ITE Trip Generation, 10th Edition manual, includes a Marijuana Dispensary Land Use (882), which is a standalone facility where cannabis is sold to patients or consumers. Land Use 882 would only be applicable to the 'Cannabis Retailers' portion of the Project. The Project would also allow for Cultivation, Distribution, and Manufacturing and Testing Laboratories in addition to Cannabis Retailers. The most closely related ITE code (General Light Industrial-110) was used for the Cultivation, Distribution, and Manufacturing and Testing Laboratories portions of the Project. The three land uses being considered in the City of Fresno, as noted above, include:

1. Cultivation, Distribution, and Manufacturing

    a. ITE Code 110 – General Light Industrial.

    b. Cultivation activities and General Light Industrial are similar in regard to the ratio of acreage to personnel and equipment.

c. Eight total businesses would be permitted inside the Cannabis Innovation Zone.

d. Eight total businesses outside of the Cannabis Innovation Zone

e. It is assumed that Cultivation, Distribution, and Manufacturing will not exceed a combined total of 700,000 sf (~16 acres).

f. It is assumed that 'Individual' Cultivation, Distribution, and Manufacturing sites will be approximately 43,750 square feet in size.

2. Testing Laboratories

   a. ITE Code 110 – General Light Industrial.

   b. Testing Laboratories activities and General Light Industrial are similar in regard to the 'Type' of use. General Light Industrial has an emphasis on activities other than manufacturing and typically has minimal office space. Typical light industrial activities include printing, material testing, and assembly of data processing equipment.

   c. There is no limit on how many may be permitted.

   d. It is assumed that Testing Laboratories will not exceed a combined total of 100,000 sf.

   e. It is assumed that 'Individual' Testing Laboratory sites will be approximately 20,000 sf in size.

3. Cannabis Retailers

   a. ITE Code 882 – Marijuana Dispensary

   b. 21 total retail locations would be allowed in the DTN (Downtown Neighborhood), DTG (Downtown General), CMS (Commercial Main Street), CC (Commercial Community), CR (Commercial Regional), CG (Commercial General), CH (Commercial Highway), CMX (Corridor/Center Mixed-Use), RMX (Regional Mixed Use) and NMX Neighborhood Mixed-Use) zone districts.

   c. It is assumed that Cannabis Retailers will not exceed a combined total of 55,000 square feet.

   d. It is assumed that 'Individual' Cannabis Retailers sites will be approximately 2,500 square feet in size.

Table 4.17-3
Trip Generation for Individual Sites

Land Use	Quantity	Daily Trip Ends	Daily (ADT)	Weekday AM Peak Hour					Weekday PM Peak Hour				
		Rate	Volume	Rate	In:Out Split	Volume			Rate	In:Out Split	Volume		
						In	Out	Total			In	Out	Total
Cultivation, Distribution, and Manufacturing (110)	43.750 k.s.f	T =3.79(x)+57.96	224	0.70	88:12	27	4	31	0.63	13:87	4	24	28
Testing Laboratories (110)	20.000 k.s.f.	T =3.79(x)+57.96	134	0.70	88:12	12	2	14	0.63	13:87	2	11	13
Cannabis Retailers (882)	2.500 k.s.f.	252.7	632	10.44	56:44	15	11	26	21.83	50:50	27	28	55

Source: Generation factors from ITE Trip Generation Manual, 10th Edition.
Trip ends are one-way traffic movements, entering or leaving.
The numbers in parenthesis are ITE land use codes.

Table 4.17-4
Trip Generation for Combined Uses by Type

Land Use	Quantity	Daily Trip Ends Rate	Daily (ADT) Volume	Weekday AM Peak Hour					Weekday PM Peak Hour				
				Rate	In:Out Split	Volume			Rate	In:Out Split	Volume		
						In	Out	Total			In	Out	Total
8 - Cultivation, Distribution, and Manufacturing (110)	43.750 k.s.f	T =3.79(x)+57.96	1,384	0.70	88:12	216	29	245	0.63	13:87	29	191	220
Testing Laboratories (110)	100.000 k.s.f.	T =3.79(x)+57.96	437	0.70	88:12	62	8	70	0.63	13:87	8	55	63
2 - Cannabis Retailers per Council District (882)	2.500 k.s.f.	252.7	1,264	10.44	56:44	29	23	52	21.83	50:50	55	54	109
3 - Cannabis Retailers per Council District (882)	2.500 k.s.f.	252.7	1,895	10.44	56:44	44	34	78	21.83	50:50	82	82	164

Source: Generation factors from ITE Trip Generation Manual, 10th Edition.
Trip ends are one-way traffic movements, entering or leaving.
The numbers in parenthesis are ITE land use codes.

Based on the tables above, trips generated from individual Cannabis retail sites will generate an estimated 55 peak hour trips. Individual cultivation, distribution, and manufacturing sites will generate an estimated 31 peak hour trips. Individual testing laboratories will generate an estimated 14 peak hour trips. The up to 21 cannabis retailers are estimated to generate a combined total of 1,155 peak hour trips (21 retailers x 55 peak hour trips). The up to 16 cultivation, distribution, and manufacturing businesses are estimated to generate a combined total of 496 peak hour trips (16 businesses x 31 peak hour trips). Although testing laboratories are not capped by total amount of businesses, it is reasonable to assume that testing laboratories will be limited based on demand. For the purposes of this EIR it is assumed that a total of 100,000 sf of testing laboratories will permitted, and the average size of each individual testing laboratory will be 20,000 square feet, or a total of five testing laboratories. Using a total of five testing laboratories are estimated to generate a combined total of 70 peak hour trips (5 testing labs x 14 peak hour trips).

Based on the number of peak hour trips generated per individual site, Project traffic from 'individual' commercial cannabis business locations will not exceed the City of Fresno's threshold of 100 or 200 peak hour trips and will not require a focused traffic analysis. However, when combined the overall Project is estimated to produce a total of 1,721 peak hour trips.

This proposed Project differs from typical development projects because the project's proposed uses are distributed throughout the City and are not located on a single parcel, or a cluster of parcels at a particular location. There are many siting requirements that cause specific locations of cannabis businesses to be unknown at this time. Some of these include the requirement of cannabis retail businesses to be located more than 800 feet from each other and have a maximum of 3 per Council District. Another requirement is that up to 8 commercial cannabis businesses must be located in the Cannabis Innovation Hub. Other requirements restrict certain retail businesses and some commercial cannabis businesses from being located near sensitive receptors. Due to these requirements and the uncertainty of available parcels, exact locations cannot be analyzed by this DEIR. However, impacts linked to a "conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities" (Impact 4.17-1) can be quantified, analyzed and mitigated.

As stated above, traffic issues are typically viewed as localized impacts associated with the increase of vehicles traversing road intersections to the point at which a said road intersection no longer functions as it was designed. This is commonly referred to a Level of Service (LOS). Due the dispersed nature of the proposed Project and the very specific road intersection placement necessary to create an impact, a screening level threshold needs to be applied for purposes of determining the need for a focused traffic impact analysis for individual cannabis businesses. As noted in the latest edition (2009) of the City of Fresno Traffic Impact Study Report Guidelines, a Traffic Impact Study (TIS) is generally required by the City if project-generated traffic is expected to be greater than 100 vehicle trips during any peak hour. In addition, the need for a TIS is also based on a Project's location within the City's Sphere of Influence (SOI) as documented in the City of Fresno's General Plan Policy MT-2. The City has identified four Traffic Impact Zones (TIZ)

within the City's SOI along with a corresponding threshold to determine if a focused traffic analysis is warranted.

- TIZ I – Represents the Downtown Planning Area. A TIS is required for all development projected to generate 200 or more peak hour new vehicle trips.

- TIZ II – Generally represents areas of the City currently built up and wanting to encourage infill development. A TIS is required for all development projected to generate 200 or more peak hour new vehicle trips.

- TIZ III – Generally represents areas near or outside the city limits but within the SOI as of December 31, 2012. A TIS is required for all development projected to generate 100 or more peak hour new vehicle trips.

- TIZ IV – Represents the southern employment areas within and planned by the City. A TIS is required for all development projected to generate 200 or more peak hour new vehicle trips.

The majority of eligible sites in the City are currently developed with existing commercial and industrial uses. These parcels have been previously analyzed for their impacts to traffic in a combination of different ways. Some of these developed sites are within historic areas, in which their existing traffic generation has been accounted for as part of the Fresno General Plan. Some of the sites are located in newer developments that were individually analyzed for traffic related impacts as part of a discretionary process, i.e. zone change, conditional use permit, etc. In these cases, the City has analyzed traffic impacts and placed conditions on these developments to mitigate their impacts. Examples of these conditions include the installation of traffic signals, deceleration lanes, controlled egress and ingress points, etc.

Since the proposed Project will allow for any combination of conversion of existing sites and new construction of vacant sites, it will be necessary for all new development to analyze their impacts to traffic and mitigate those impacts on a case-by-case basis. New commercial cannabis facilities that fall below 100 or 200 vehicle trips, depending on location, may not require a focused traffic analysis. However, a focused traffic analysis may be required if it is determined by the City Traffic Engineer that the new commercial cannabis facility is located adjacent to intersections or roadway segments already operating at a deficient LOS. New commercial cannabis facilities that exceed 100 or 200 vehicle trips, depending on location, during any peak hour will be required to provide a focused traffic analysis to assess project specific impacts. Outcomes of the analysis resulting in a level of service "F" are generally considered potential significant impacts unless individual sites are located in TIZ I.

Cultivation, Distribution, and Manufacturing

As shown in Table 4.17-4, eight total Cultivation, Distribution, and Manufacturing businesses are estimated to generate 1,384 daily trips, 245 trips during the AM peak hour, and 220 trips during the PM peak hour considering individual sites. The Cannabis Innovation Zone is located within

TIZ's that allow up to 200 peak hour trips before a focused traffic analysis is needed to assess impacts. If the maximum of eight Cultivation, Distribution, and Manufacturing businesses are located in the Cannabis Innovation Zone, then an estimated total of 248 peak hour trips will be generated. This would exceed the maximum of 200 peak hour trips, as noted above. It was assumed that 'Individual' Cultivation, Distribution, and Manufacturing sites are approximately 43,750 square feet in size, for a total of 350,000 square feet. Based on the 200 peak hour trip maximum threshold, new Cultivation, Distribution, and Manufacturing sites within the Cannabis Innovation Zone may be allowed up to a combined total of 282,000 square feet A focused traffic analysis will be required when the combined total square footage of the Cultivation, Distribution, and Manufacturing sites exceed 282,000 square feet to ensure minimum LOS standards are maintained. Mitigation Measure MM 4.17-1, below, requires a focused traffic analysis to be completed once the 282,000 square feet threshold for new commercial cannabis businesses is exceeded.

Eight total Cultivation, Distribution, and Manufacturing businesses would also be permitted within industrial zoned property within one mile of Highway 99 between Shaw and Clinton Avenues, or within one mile of Highway 99 north of Shaw and south of Clinton Avenues, or within one mile of Highway 180 west of Highway 99. As shown in Table 4.17-3, 'Individual' Cultivation, Distribution, and Manufacturing sites (43,750 square feet) will generate approximately 31 peak hour trips. It should be noted that 'Individual' Cultivation, Distribution, and Manufacturing sites that exceed 282,000 square feet would generate 200+ peak hour trips and would require additional analysis to determine traffic impacts. As a result, new Cultivation, Distribution, and Manufacturing sites exceeding 140,000 square feet within TIZ III and 282,000 square feet within TIZ I, II, and IV will require a focused traffic study.

The majority of commercial cannabis businesses are within close proximity to SR-41 and SR-99. Impacts to State facilities are possible depending upon the specific commercial cannabis business location and existing LOS operations in the Project's vicinity. The California Department of Transportation's (Caltrans) *Guide for the Preparation of Traffic Impact Studies* has identified the following criteria in determining when a traffic analysis is needed:

- Generates over 100 peak hour trips assigned to a State highway facility;
- Generated 50 to 100 peak hour trips assigned to a State highway facility and affected facilities are experiencing noticeable delay; approaching unstable traffic flow conditions (LOS 'C' or 'D');
- Generates one to 49 peak hour trips assigned to a State highway facility and affected facilities are experiencing:
    - Significant delay; unstable or forced traffic flow conditions (LOS 'E' or 'F');
    - The potential risk for traffic incident is significantly increased (i.e. congestion related collisions, non-standard sight distance considerations, increase in traffic conflict points, etc.); and

- Change in local circulation networks that impact a State highway facility (i.e., direct access to State highway facility, a non-standard highway geometric design, etc.).

As a result, new commercial cannabis businesses should, at a minimum, conduct a trip distribution analysis to determine AM and PM peak hour trips assigned to State facilities. Coordination with Caltrans staff will be needed to determine if further analysis is required.

Cannabis Retailers

As shown in Table 4.17-4, two cannabis retail businesses are estimated to generate 109 peak hour trips. Three cannabis retail locations are estimated to generate 164 trips peak hour trips. TIZ III allows up to 100 peak hour trips before a focused traffic analysis is needed to assess impacts and TIZ's I, II, and IV allow up to 200 peak hour trips.

Similar to commercial cannabis businesses, the majority of the eligible sites available for retail businesses are developed and have previously been analyzed for traffic related impacts. However, new retail businesses could be developed as part of the Conditional Use Permit process. In order to mitigate any traffic related impacts associated with up to three new cannabis retail businesses being located in close proximity to each other (minimum of 800 feet), a focused traffic analysis will be required for new cannabis retail businesses when the combined total square footage of the cannabis retail sites in TIZ III exceed 4,500 square feet and exceed 9,000 square feet in TIZ I, II, or IV.

Testing Laboratories

It is assumed that Testing Laboratories will be limited to a combined total of 100,000 sf. As shown in Table 4.17-4, the Testing Laboratory sites are estimated to generate 70 peak hour trips. Based on the number of peak hour trips generated by the Testing Laboratory use, Project traffic from Testing Laboratory sites will not exceed the City of Fresno's threshold of 100 or 200 peak hour trips and will not require a traffic analysis for individual sites. Therefore, Project traffic from 'individual' Testing Laboratory sites are considered regionally/locally insignificant. All requests for cannabis related businesses will require approval of a Conditional Use Permit. The CUP process ensures compliance with all applicable programs, plans, ordinances and policies addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

Therefore, based on the analysis above and the proposed Mitigation Measures MM 4.17-1 and MM 4.17-2, the proposed Project will not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities, and Project impacts are considered less than significant with mitigation.

Mitigation Measures

MM 4.17-1: As part of the application submittal for a conditional use permit for new commercial cannabis businesses, the applicant shall submit a focused traffic analysis once the following applicable criteria has been exceeded:

1. The total number of commercial cannabis businesses in the Cannabis Innovation Zone has exceeded 282,000 square feet;

2. The total number of commercial cannabis businesses within TIZ III has exceeded 140,000 square feet;

3. The total number of commercial cannabis businesses within TIZ I, II, and IV has exceeded 282,000 square feet.

The focused traffic study shall be approved by the City of Fresno and shall be submitted and approved by the California Department of Transportation.

MM 4.17-2: As part of the application submittal for a conditional use permit for new cannabis retail businesses, the applicant shall submit a focused traffic analysis once the following applicable criteria has been exceeded:

1. The total number of cannabis retail businesses within TIZ III has exceeded 4,500 square feet;

2. The total number of cannabis retail businesses within TIZ I, II, and IV has exceeded 9,000 square feet.

The focused traffic study shall be approved by the City of Fresno and shall be submitted and approved by the California Department of Transportation.

Level of Significance

Impacts would be *less than significant after mitigation*.

Impact 4.17-2 - Would the Project Conflict or be Inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b)

In the areas where SB 743 is implemented, delay-based metrics such as roadway capacity and level of service will no longer be the performance measures used for the determination of the transportation impacts of projects in studies conducted under CEQA. Instead, new performance measures such as VMT or other similar measures will be used. July 1, 2020 is the statewide implementation date and agencies may opt-in use of new metrics prior to that date.

Section 15064.3 of the current California Environmental Quality Act (CEQA) Guidelines establishes VMT as the most suitable measure of determining a project's transportation impacts on nearby roadways and intersections in lieu of LOS analysis. Section 15064.3 presumes no significant transportation impacts for land use projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor, or land use projects that reduce VMT below existing conditions. Figures 3, 4, and 5 in the attached Traffic Impact Study (Appendix G) provide one-half mile boundaries from major transit stops and stops along existing high-quality transit corridors in the City of Fresno. Individual commercial cannabis

businesses located within these boundaries would have a less-than-significant transportation impact.

The traffic operations impact analysis in this EIR, as summarized above, follows traditional practice of evaluating potential impacts related to levels of service. However, an estimate of VMT associated with individual commercial cannabis businesses located outside of the one-half mile boundary of a major transit stop or stop along an existing high-quality transit corridor is provided in Table 4.17-5 for the purposes of disclosure and in consideration of the intent of SB 743 and CEQA Guidelines. The estimated VMT is derived from the default trip length for commercial-work trips from the California Emissions Estimator Model (CalEEMod) Program. The 9.5 miles/trip for automobiles was derived from the Regional Shopping Center and General Light Industrial land uses. These land uses are the most consistent with the land uses utilized in the trip generation tables above. Individual commercial cannabis business sites processed after July 1, 2020 will require a VMT-focused transportation analysis depending on whether they meet future VMT thresholds determined by the City of Fresno. It should be noted that the City of Fresno is in the process of establishing VMT thresholds for the implementation of the new rules adopted into CEQA in December of 2018.

Table 4.17-5
Estimated Project VMT – Individual Sites

Land Use	ADT Volume	Rate	Average Daily VMT
Cultivation, Distribution, and Manufacturing	224	9.5 Miles/Trip	2,128
Testing Laboratories	134	9.5 Miles/Trip	1,273
Cannabis Retailers	632	9.5 Miles/Trip	6,004
Total			**9,405**

OPR has determined that projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact. It should be noted that updated CEQA Guidelines will apply prospectively only and would not affect projects that have already commenced environmental review. As this proposed Project will allow for cannabis related businesses to be processed under a Conditional Use Permit, and the intention of this EIR is to allow for those CUPs to be approved utilizing this EIR, mitigation measures need to be placed on future Projects to ensure they comply with VMT standards and City regulations. Cannabis related businesses approved prior to the City adopting VMT thresholds will be subject to the mitigation measures in Impact 4.17-1 above. Any project approved subsequent to the City adopting VMT thresholds will be subject to review and approval based on the City's developed mitigation for VMT.

Mitigation Measures

MM 4.17-3: As part of the application submittal for a conditional use permit for any cannabis related businesses submitted after adoption of VMT regulations by the City of Fresno, the applicant shall comply with all requirements and measures associated with the adopted rules.

Level of Significance

Impacts would be *less than significant after mitigation*.

Impact 4.17-3 - Substantially Increase Hazards Due to a Geometric Design Feature (e.g., Sharp Curves or Dangerous Intersections) or Incompatible Uses (e.g., Farm Equipment)

A review of the proposed Project revealed no potential internal policy inconsistencies or discrepancies related to hazards associated with design features and incompatible uses.

A small percentage of the Project eligible sites are vacant infill lots that can support new development, all of which are located in existing commercial and industrial zones and in urbanized areas. The majority of the Project eligible sites are fully serviced industrial and commercial lots that have been improved with industrial and commercial uses and buildings. Implementation of the proposed Project may include development of new buildings and sites, and changes to occupancies of existing buildings and sites, which will require compliance with all applicable development codes and policies.

The existing and improved Project eligible sites were already analyzed under the General Plan Update Master EIR and determined to have a less-than-significant impact, with regard to geometric design. With regard to incompatible uses and traffic hazards, cannabis related businesses are similar to other uses previously permitted within the City. Typical operations of cultivation, manufacturing, distribution, retail, and testing laboratories would consist of light-duty and medium-duty vehicles.

All requests for cannabis related businesses will require approval of a Conditional Use Permit. The CUP process ensures compliance with all applicable development codes and policies, including egress and ingress points and proper loading and unloading areas. This review of Project specific design and implementation of MM 4.17-1 through MM 4.17-3 will ensure that impacts associated with hazards due to geometric design features will be less than significant.

Mitigation Measures

Implement Mitigation Measures MM 4.17-1 through MM 4.17-3.

Level of Significance

Less than significant after mitigation.

Impact 4.17-4 - Result in Inadequate Emergency Access

A review of the proposed Project revealed no potential internal policy inconsistencies or discrepancies related to emergency access. Implementation of the Project would increase the amount of citywide vehicle traffic by a total of 1,721 peak hour trips.

A small percentage of the Project eligible sites are vacant infill lots that can support new development, all of which are located in existing commercial and industrial zones and in urbanized areas. The majority of the Project eligible sites are fully serviced industrial and commercial lots that have been improved with industrial and commercial uses and buildings. Implementation of the proposed Project may include development of new buildings and sites, and changes to occupancies of existing buildings and sites, which will require compliance with all applicable development codes and policies.

The existing and improved Project eligible sites were already analyzed under the General Plan Update Master EIR and determined to have a less-than-significant impact. With regard to inadequate emergency access, cannabis related businesses are similar to other uses previously permitted within the City. Typical operations of cultivation, manufacturing, distribution, retail, and testing laboratories would consist of light-duty and medium-duty vehicles.

All requests for commercial cannabis uses will require a Conditional Use Permit discretionary review, and approval by the City Planning Commission. The discretionary review process ensures compliance with all applicable development codes and policies, including egress and ingress points and proper loading and unloading areas. This review of Project specific design will ensure that impacts associated with inadequate emergency access will be less than significant.

Mitigation Measures

Implement Mitigation Measures MM 4.17-1 through MM 4.17-3.

Level of Significance

Less than significant after mitigation.

Cumulative Setting Impacts and Mitigation Measures

CUMULATIVE SETTING

The study area for the analysis of cumulative impacts is the City of Fresno and the unincorporated portions of Fresno County located adjacent to the city limits, as well as portions of the City of Clovis and the County of Madera adjacent to the City of Fresno. The applicable cumulative projections include growth projections from the City of Fresno General Plan, Fresno County General Plan, Madera County General Plan, and the City of Clovis General Plan.

The City of Fresno General Plan was last adopted in the year 2014. Anticipated development within the General Plan includes 186,840 dwelling units, 66.4 million square feet (msf) of

commercial/office/public facility, 100,000 sf of mixed uses, and 72.8 msf of industrial uses. The General Plan contains approximately 11,714 acres of agricultural land, 12,288 acres of open space, and 12,522 acres of vacant land. Existing agricultural land is primarily located in the southeastern and western portions of the General Plan.

The General Plan contains two major existing rail lines that generally traverse in a southeast to northwest direction. These railways include the Union Pacific Railroad line that is generally located along SR-99, and the BNSF Railway that diverges from the SR-99 in the southwest and travels through the Downtown to the northwest. The High-Speed Rail is currently under construction in parts of Central Fresno. There are three airports located within the City of Fresno including the Fresno-Yosemite International Airport located in the eastern portion of the Planning Area, the Fresno-Chandler Downtown Airport located west of Downtown, and Sierra Sky Park Airport that is located on the northern portion of the General Plan.

The County of Fresno General Plan was last adopted in the year 2000. The County General Plan was prepared to accommodate population growth through the year 2020, consistent with the California Department of Finance projection of 1.1 million by 2020. This represents an additional population of approximately 344,000, which includes the year 2020 projections outside the sphere of influences for cities within the East Valley area, which is located east of Interstate 5. Additional development projects are proposed northeast of the City of Fresno Project area including Friant Ranch that represents an additional population of approximately 164,693 through the year 2020.

The County of Madera General Plan was last adopted in the year 1995. The Madera County General Plan identifies population and employment growth projections through the year 2010 and includes 177,071 people and 61,866 employees. Since the adoption of Madera County's General Plan, substantial new development projects have been proposed in the southern portion of Madera County, some of which is proposed within close proximity of the City of Fresno Project area including Gateway, Gunner Ranch, Liberty Groves, North Fork Village, Tesoro Viejo, and River Ranch Estates. These projects include approximately 23,000 units, and supporting uses such as commercial, public facilities, parks, and open space.

The City of Clovis General Plan was last adopted in the year 2014. The Clovis General Plan forecasts the ultimate buildout of the entire Clovis General Plan area that is expected to occur for at least 70 years. The Clovis General Plan forecasts an additional 65,100 residential units, 179,300 population, and 38,250,000 square feet of buildings.

CUMULATIVE IMPACTS

CEQA Section 15130(a) states: An EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in Section 15065(a)(3). Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

A small percentage of the Project eligible sites are vacant infill lots that can support new development, all of which are located in existing commercial, mixed-use, and industrial zones and in urbanized areas. The majority of the Project eligible sites are fully serviced industrial and commercial lots that have been improved with industrial and commercial uses and buildings.

Existing uses located on parcels that will now be available for cannabis related businesses were analyzed under the General Plan Update certified Master EIR and determined to have a less-than-significant impact to traffic and transportation. According to the traffic impact study, prepared for this Project (Appendix G), implementation of the Project would increase the amount of citywide vehicle traffic by a total of 1,721 peak hour trips. As noted above, depending on the type of cannabis business proposed, peak trip traffic could exceed established thresholds. However, MM 4.17-1 and MM 4.17-2 would require a focused traffic analysis by a traffic engineer. Development of Project eligible sites will require compliance with all applicable development codes and policies and will be assessed by the applicable City departments to determine if it meets the thresholds summarized in the methodology section, or if a site-specific traffic memo or traffic impact study is required. Cannabis related businesses approved prior to the City adopting VMT thresholds will be subject to the Mitigation Measure 4.17-3. With implementation of MM 4.17-1 through MM 4.17-3, cumulative impacts to traffic and transportation will be less than significant.

Mitigation Measures

Implementation of MM 4.17-1 through 4.17-3.

Cumulative Level of Significance

Cumulative impacts would be *less than significant with mitigation.*

4.18 - Tribal Cultural Resources

4.18.1 - INTRODUCTION

This section evaluates potential impacts on tribal cultural resources. The setting, context, and impact analysis in this section are based on a Cultural Resources Inventory Report prepared for the proposed Project (Applied Earthworks, 2019a), including but not limited to: natural and cultural setting of the Project area, various record searches, and correspondence with the Native American Heritage Commission. The Cultural Resource Inventory Report is included as Appendix D of this document.

Tribal cultural resources are defined as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either included or determined to be eligible for inclusion in the California Register of Historical Resources (California Register) or included in a local register of historical resources, or a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant. A cultural landscape that meets these criteria is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape. Historical resources, unique archaeological resources, or non-unique archaeological resources may also be tribal cultural resources if they meet these criteria.

4.18.2 - ENVIRONMENTAL SETTING

The Project area is the City of Fresno. The northern border of the City is largely defined by the San Joaquin River, which flows to the Sacramento-San Joaquin River Delta and San Francisco Bay. The eastern border of the City mostly abuts the city limits of the City of Clovis. The western boundary of the City traverses State Route 99 and passes through western rural residential and agricultural lands of the unincorporated County. The Project area is surrounded by urban development and vacant land, interspersed with agricultural fields and fallow fields. Infrastructure associated with urban development is also surrounding the Project area. Historical and recent land use has thus changed the vegetation that was once present within and near the Project area.

The Project area is within an ethnographic transitional zone in which Northern Valley and Northern Hill Yokuts groups likely overlapped. The Yokuts are one of eight subgroups of the Penutian linguistic group that is present across the Western Coast and inland regions of North America from Canada to Mexico (Applied Earthworks, 2019a). There were many Yokuts language subgroups across the Southern and Central San Joaquin Valley and in the Sierra Nevada. Yokuts in these regions spoke a variety of dialects, and many groups could converse across dialects with relative ease (Applied Earthworks, 2019a).

The Project area is within territory typically ascribed to the Pitkachi, who populated the southern banks of the San Joaquin River, and the Gashowu, a tribelet that occupied the drainages of Big Dry Creek and Little Dry Creek. The villages Kohuou, Weshiu, and Gewachiu are associated with

the Pitkachi (Applied Earthworks, 2019a). All three villages are eight to 12 miles northwest of the Project area. Two major settlements are attributed to the Gashowu: Pohonui, below Letcher on Big Dry Creek, and Yokau, on Little Dry Creek in Auberry Valley (Applied Earthworks, 2019a). These villages appear to be central year-round settlements that were occupied more densely in the winter. However, within the Project area the Gashowu's activities were likely limited to trade and seasonal food-gathering forays onto the Valley floor.

The San Joaquin River and nearby drainages were critical for sustaining the lifeways of the Northern Valley and Northern Hill Yokuts near the Project. The riparian plant communities and flow of freshwater provided humans with a source of constant food, building materials, and avenues of travel for small watercraft. Yokuts homes were constructed of tule reeds, and villages were situated near major waterways and built on low mounds to prevent spring flooding (Applied Earthworks, Inc., 2019). Fish provided the major source of protein. Fall and spring spawning brought abundant supplies of salmon to the inhabitants along the San Joaquin River and its tributaries. The Yokuts diet was supplemented by various species of fowl (e.g., geese, ducks) that were attracted to the riverine environment. The Yokuts also relied on seasonally available acorns, which were harvested from groves of valley oak, processed using mortars and pestles, and then cooked as a gruel or bread. Awls from animal bone allowed the Yokuts to create a broad range of baskets that facilitated food storage and transportation (Applied Earthworks, 2019a).

As with other Native American groups in California, the lifeways of the Yokuts were dramatically altered as a result of contact with early Spanish explorers and missionaries, miners, ranchers, and other immigrants who entered the San Joaquin Valley after A.D. 1800. The introduction of European culture and new diseases resulted in a drastic reduction in Yokuts population size. However, there are at least 25 fluent-speaking groups of various Yokuts dialects alive today, including Chukchansi speakers, who live near the Picayune and Table Mountain Rancherias northeast of Fresno. Others include the Tule-Kaweah and Yawelmani (also known as Yowlumne), who mostly reside on the Tule River Reservation near Porterville, the Choynimni (also known as Choinumne), who live throughout the Kings River region, and the Tachi, who live at the Santa Rosa Rancheria near Lemoore. Native Americans from these tribal groups have established language and culture schools and actively participate in master-apprentice language partnerships to ensure the continuity of their cultures and languages (Applied Earthworks, 2019a).

4.18.3 - REGULATORY SETTING

Federal

SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT (NHPA)

Archaeological resources are protected through the National Historic Preservation Act (NHPA) of 1966, as amended (54 U.S.C. 300101 et seq.); and its implementing regulation, Protection of Historic Properties (36 CFR Part 800), the Archaeological and Historic Preservation Act of 1974, and the Archaeological Resources Protection Act of 1979 (NHPA, 2016). The NHPA authorized the expansion and maintenance of the National Register of Historic Placed (NRHP), established the

position of State Historic Preservation Officer (SHPO), and provided for the designation of State Review Boards, set up a mechanism to certify local governments to carry out the purposes of the NHPA, assisted Native American tribes to preserve their cultural heritage, and created the Advisory Council on Historic Preservation (ACHP). Prior to implementing an "undertaking" (e.g., issuing a federal permit), Section 106 of the NHPA requires federal agencies to consider the effects of the undertaking on historic properties and to afford the ACHP and the SHPO a reasonable opportunity to comment on any undertaking that would adversely affect properties eligible for listing in the National Register of Historic Places (NRHP). As indicated in Section 101(d)(6)(A) of the NHPA, properties of traditional religious and cultural importance to a tribe are eligible for inclusion in the NRHP. Under the NHPA, a resource is considered significant if it meets the NRHP listing criteria at 36 Code of Federal Regulations (CFR) 60.4.

In addition, the NHPA (16 USC 470 et seq.) provides for the survey, recovery, and preservation of significant paleontological data when such data may be destroyed or lost due to a federal, federally licensed, or federally funded project (NHPA, 2016).

NATIONAL REGISTER OF HISTORIC PLACES (NRHP)

The NRHP was established by the NHPA of 1966, as "an authoritative guide to be used by federal, State, and local governments, private groups, and citizens to identify the nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment" (CFR 36 Section 60.2) (NHPA, 2016). The NRHP recognizes both historic-period and prehistoric archaeological properties that are significant at the national, State, and local levels.

To be eligible for listing in the NRHP, a resource must be significant in American history, architecture, archaeology, engineering, or culture. A property (districts, sites, buildings, structures, and objects of potential significance) is eligible for the NRHP if it is significant under one or more of the following four established criteria:

- **Criterion A:** It is associated with events that have made a significant contribution to the broad patterns of our history.
- **Criterion B:** It is associated with the lives of persons who are significant in our past.
- **Criterion C:** It embodies the distinctive characteristics of a type, period, or method of construction; represents the work of a master; possesses high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction.
- **Criterion D:** It has yielded, or may be likely to yield, information important in prehistory or history.

Cemeteries, birthplaces, or graves of historic figures; properties owned by religious institutions or used for religious purposes; structures that have been moved from their original locations;

reconstructed historic buildings; and properties that are primarily commemorative in nature are not considered eligible for the NRHP unless they satisfy certain conditions. In general, a resource must be at least 50 years of age to be considered for the NRHP, unless it satisfies a standard of exceptional importance.

In addition to meeting the criteria of significance, a property must have *integrity*. Integrity is defined as "the ability of a property to convey its significance." The NRHP recognizes seven qualities that, in various combinations, define integrity. To retain historic integrity a property must possess several, and usually most, of these seven aspects. Thus, the retention of the specific aspects of integrity is paramount for a property to convey its significance. The seven factors that define integrity are location, design, setting, materials, workmanship, feeling, and association.

CERTIFIED LOCAL GOVERNMENT

The Certified Local Government Program is jointly administered by the National Park Service (NPS) and the SHPOs. The California Office of Historic Preservation manages the Certified Local Government (CLG) Program, in which the City participates. CLG status requires that the City meet certain requirements, including a Historic Preservation Ordinance, a citizen's commission, an inventory of local historic properties, adequate public participation, and compliance with CEQA.

NATIVE AMERICA GRAVES PROTECTION AND REPATRIATION ACT OF 1990

The Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 sets provisions for the intentional removal and inadvertent discovery of human remains and other cultural items from federal and tribal lands. It clarifies the ownership of human remains and sets forth a process for repatriation of human remains and associated funerary objects and sacred religious objects to the Native American groups claiming to be lineal descendants or culturally affiliated with the remains or objects. It requires any federally funded institution housing Native American remains or artifacts to compile an inventory of all cultural items within the museum or with its agency and to provide a summary to any Native American tribe claiming affiliation.

State

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

The CEQA Statute (PRC Section 21000 et seq.) and Guidelines (Title 14, California CCR Section 15000 et seq.) direct lead agencies to determine whether cultural resources are "historically significant." Generally, a cultural resource shall be considered "historically significant" if it is 50 years old or older; possesses integrity of location, design, setting, materials, workmanship, feeling, and association; and meets the requirements for listing on the CRHR under any one of the following criteria (Title 14 CCR 15064.5, 2019):

- 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, or 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.

Unique archaeological resources are also protected under CEQA. Unique archaeological resources are those resources that may not meet the above criteria but can clearly demonstrate that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria (PRC Section 21082.2 g, 2016):

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

In addition, PRC Section 21074 defines a tribal cultural resource (TCR) as "a site, feature, place, or 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." TCRs may also include "non-unique archaeological resources" that may not be scientifically significant but still hold sacred or cultural value to a consulting tribe. A TCR is considered significant if it is: (1) listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC Section 5020.1(k); or (2) a TCR determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC Section 5024.1(c). In applying these criteria applicable to TCRs, the lead agency must consider the significance of the resource to a California Native American tribe.

Under CEQA, a project with an effect that may cause a substantial adverse change in the significance of a historical resource or a TCR is a project that may have a significant effect on the environment (Title 14 CCR 15064.5, 2019)(b). Substantial adverse change in the significance of a historical resource or TCR is defined as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings in a manner that materially impairs the significance of the resource that justifies its inclusion or eligibility to be included in the CRHR. Additionally, a project may have a substantial adverse change in the significance of a TCR if the adverse change is identified through consultation with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project (PRC Section 21084.2, 2014).

The cited statute and guidelines specify how cultural resources and TCRs are to be managed in the context of projects, such as the present Project. Briefly, archival and field surveys must be conducted, government-to-government consultation with California Native American tribes must occur and identified resources must be inventoried and evaluated in prescribed ways. Impacts on TCRs, prehistoric and historical archaeological resources, and built-environment resources such as standing structures, buildings, and objects deemed "historically significant" must be avoided or mitigated to the extent feasible (PRC Section 21081, 1972).

CALIFORNIA REGISTER OF HISTORICAL RESOURCES

According to the CEQA Guidelines, for a resource to be eligible for the CRHR, it must meet at least one of the criteria defined in Section 5024.1 of the California PRC:

- 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, or 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 history or prehistory.

In addition to these criteria, cultural resources must, except in rare circumstance, be 50 years old or older (OHP 1995:2, 2012).

Integrity refers to the degree or extent to which a resource retains its original character. Ultimately, the question of integrity is answered by deciding whether the resource retains the identity for which it is significant. To facilitate this assessment, the OHP (1995) recognizes that the National Parks Service (2002:44–45) has identified seven aspects of integrity:

- Location is the place where the historic property was constructed or the place where the historic event occurred;
- Design is the combination of elements that create the form, plan, space, structure, and style of a property;
- Setting is the physical environment of a historic property;
- Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property;
- Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory;

- Feeling is a property's expression of the aesthetic or historic sense of a particular period of time; and

- Association is the direct link between an important historic event or person and a historic property.

Only after significance is fully established is the issue of integrity addressed. To be eligible for the CRHR, a resource must possess both significance and integrity. Thus, cultural resources that are not significant per CRHR criteria are ineligible for inclusion in the CRHR and do not require an integrity assessment.

NATIVE AMERICAN HERITAGE COMMISSION (NAHC)

PRC Section 5097.91 established the Native American Heritage Commission (NAHC), the duties of which include inventorying of places of religious or social significance to Native Americans and identifying known graves and cemeteries of Native Americans on private lands. PRC Section 5097.98 specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner.

CALIFORNIA PUBLIC RECORDS ACT

Sections 6254(r) and 6254.10 of the California Public Records Act were enacted to protect archaeological sites from unauthorized excavation, looting, or vandalism. Section 6254(r) explicitly authorizes public agencies to withhold information from the public relating to "Native American graves, cemeteries, and sacred places maintained by the Native American Heritage Commission." Section 6254.10 specifically exempts from disclosure requests for "records that relate to archaeological site information and reports, maintained by, or in the possession of the Department of Parks and Recreation, the State Historical Resources Commission, the State Lands Commission, the NAHC, another State agency, or a local agency, including the records that the agency obtains through a consultation process between a Native American tribe and a State or local agency."

CALIFORNIA HEALTH AND SAFETY CODE, SECTIONS 7050 AND 7052

Health and Safety Code, Section 7050.5, declares that, in the event of the discovery of human remains outside of a dedicated cemetery, all ground disturbance must cease, and the county coroner must be notified. Section 7052 establishes a felony penalty for mutilating, disinterring, or otherwise disturbing human remains, except by relatives.

CALIFORNIA PENAL CODE, SECTION 622.5

The California Penal Code, Section 622.5, provides misdemeanor penalties for injuring or destroying objects of historic or archaeological interest located on public or private lands, but specifically excludes the landowner.

PUBLIC RESOURCES CODE, SECTION 5097.5

PRC Section 5097.5 defines as a misdemeanor the unauthorized disturbance or removal of archaeological, historic, or paleontological resources located on public lands.

ASSEMBLY BILL (AB) 52

Assembly Bill (AB) 52 was approved by California State Governor Edmund Gerald "Jerry" Brown, Jr. on September 25, 2014. The act amended PRC Section 5097.94, and added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3. AB 52 applies specifically to projects for which a Notice of Preparation (NOP) or a Notice of Intent to Adopt a Negative Declaration or Mitigated Negative Declaration (MND) is filed on or after July 1, 2015. The primary intent of AB 52 was to include California Native American Tribes early in the environmental review process and to establish a new category of resources related to Native Americans that require consideration under CEQA, known as tribal cultural resources. PRC Section 21074(a)(1) and (2) defines tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" that are either included or determined to be eligible for inclusion in the California Register or included in a local register of historical resources, or a resource that is determined to be a tribal cultural resource by a lead agency, in its discretion and supported by substantial evidence. On July 30, 2016, the California Natural Resources Agency adopted the final text for tribal cultural resources update to Appendix G of the CEQA Guidelines, which was approved by the Office of Administrative Law on September 27, 2016.

PRC Section 21080.3.1 requires that within 14 days of a lead agency determining that an application for a project is complete, or a decision by a public agency to undertake a project, the lead agency provide formal notification to the designated contact, or a tribal representative, of California Native American tribes that are traditionally and culturally affiliated with the geographic area of the project (as defined in PRC Section 21073) and who have requested in writing to be informed by the lead agency (PRC Section 21080.3.1, 1972). Tribes interested in consultation must respond in writing within 30 days from receipt of the lead agency's formal notification and the lead agency must begin consultation within 30 days of receiving the tribe's request for consultation (PRC Section 21080.3.1, 1972).

PRC Section 21080.3.2(a) identifies the following as potential consultation discussion topics: the type of environmental review necessary; the significance of tribal cultural resources; the significance of the project's impacts on the tribal cultural resources; project alternatives or appropriate measures for preservation; and mitigation measures. Consultation is considered concluded when either: (1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or (2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached (PRC Section 21080.3.2, 1972).

If a California Native American tribe has requested consultation pursuant to Section 21080.3.1 and has failed to provide comments to the lead agency, or otherwise failed to engage in the consultation process, or if the lead agency has complied with Section 21080.3.1(d) and the California Native American tribe has failed to request consultation within 30 days, the lead agency may certify an EIR or adopt an MND (PRC Section 21082.3, 1972). PRC Section 21082.3(c)(1) states that any information, including, but not limited to, the location, description, and use of the tribal cultural resources, that is submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public without the prior consent of the tribe that provided the information. If the lead agency publishes any information submitted by a California Native American tribe during the consultation or environmental review process, that information shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public.

Confidentiality, does not however apply to data or information that are, or become publicly available, are already in lawful possession of the project applicant before the provision of the information by the California Native American tribe, are independently developed by the project applicant or the project applicant's agents, or are lawfully obtained by the project applicant from a third party that is not the lead agency, a California Native American tribe, or another public agency (PRC Section 21082.3, 1972).

Letters received from tribes pursuant to AB 52 (See Appendix D):

- Dumna Wo Wah Tribal Government, Robert Ledger, Chairperson;
- Table Mountain Rancheria of California, Bob Pennell, Cultural Resources Director; and
- Table Mountain Rancheria of California, Leanne Walker-Grant, Chairperson.

Letters were sent out August 9, 2019. No further consultation was requested from the tribes.

Local

CITY OF FRESNO GENERAL PLAN

The Project area is located within the City of Fresno General Plan. The Project would be subject to applicable policies and measures of the General Plan. The Yokuts were the first residents of the Fresno area, with small tribes occupying the floodplains of the Big Dry and the Little Dry Creek.

There have been 16 Native American archeological sites recorded within the Project area by the Southern San Joaquin Valley Information Center (SSJVIC), a depository for information on cultural resources. According to the SSJVIC the probability of finding subsurface cultural resources is considered low to moderate in most areas, with the exception of the waterways. Current and past waterways and their surrounding regions are considered especially sensitive for cultural

resources, as indigenous people utilized these areas as permanent villages, temporary camps, and task specific sites.

As part of the City of Fresno's General Plan Update process, the Native American Heritage Commission (NAHC) conducted a record search of the sacred lands file. The NAHC response listed 11 local Native American tribes that may have historic ties to the Project area, and letters of inquiry were sent, along with follow up phone calls, to the 11 tribal representatives; however, no responses were received. Nonetheless, the NAHC has characterized the City of Fresno as being "very sensitive" for potential impacts to Native American sacred sites and prehistoric deposits.

Goal 6. Protect, preserve, and enhance natural, historic, and cultural resources. Emphasize the continued protection of important natural, historic, and cultural resources in the future development of Fresno. This includes both designated historic structures and neighborhoods, but also "urban artifacts" and neighborhoods that create the character of Fresno.

Goal 15. Improve Fresno's visual image and enhance its form and function through urban design strategies and effective maintenance.

Goal 17. Recognize, respect, and plan for Fresno's cultural, social, and ethnic diversity, and foster and informed and engaged citizenry. Emphasize shared community values and genuine engagement with and across different neighborhoods, communities, institutions, businesses and sectors to solve difficult problems and achieve shared goals for the success of Fresno and all its residents.

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

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

HISTORIC PRESERVATION ORDINANCE

In 1979, the City adopted a Historic Preservation Ordinance, which was amended and updated in 1999, 2009, and 2012. The ordinance establishes a Historic Preservation Commission and a Local Register of Historic Resources (Local Register). The latter includes three separate landmark

programs: individual designation on the Local Register, inclusion within a Local Register District, and inclusion in the Heritage Property Program.

4.18.4 - IMPACTS AND MITIGATION MEASURES

Methodology

RECORDS SEARCH

Native American Heritage Commission

On July 30, 2019, a request was submitted to the NAHC for a search of the Sacred Lands File to identify recorded sacred sites or areas of importance to local tribes within the Project area. The NAHC responded on August 20, 2019 with its findings. A copy of the NAHC response letter is attached to Appendix D the Cultural Inventory Report as Appendix.

Tribal Cultural Resources

On August 20, 2019, the NAHC reported that its search of the Sacred Lands File did not identify any sacred sites or places of tribal importance in the Project area. The NAHC recommended follow-up with tribes having an ancestral connection to the Project area to give Native American groups the opportunity to share information about other cultural or tribal cultural resources that may be in or near the Project area. The NAHC provided a contact list for outreach purposes (see Appendix D). The City has conducted government-to-government tribal consultation in compliance with AB 52.

Cultural Resources Sensitivity Modeling

A prehistoric and historic archaeological site sensitivity model was developed through analysis of GIS data gathered during records searches. GIS software (i.e., ArcGIS 10.7 and Maxtent) were used to analyze key predictive factors including known site locations; proximity to water; placement within late Pleistocene and Holocene sediments; and landscape conditions such as topography, slope, and aspect. Results for the Project area were then ranked as having high, moderate, or low potential for containing archaeological deposits at or below the ground surface.

In addition, built environment spatial data was gathered from online sources pertaining to the City and performed a simple overlay analysis to identify specific Project areas containing known historic-era buildings, structures, and objects that are listed in or recommended eligible for inclusion in the NRHP or CRHR.

Cultural Resources Sensitivity Within the Project Area

The buried site sensitivity model constructed for this Project predicts Project areas that have high, moderate, and low potential for containing buried prehistoric archaeological sites within the Project area and surrounding city. As summarized in Table 4.18-1, the Project area contains several areas where Project-related activities involving disturbance of the ground surface would

have potential for unanticipated discovery of cultural resources and/or have potential to cause inadvertent adverse effects resulting in a substantial change in the significance of a resource. In particular, Project areas along SR-99, SR-41, and the southern extent of SR-168 near the central Fresno area have the highest sensitivity. Table 4.18-1 identifies additional areas of high sensitivity in each Project area quadrant and relates these to proposed ordinance areas. The entire SR-99 corridor has high to moderate sensitivity, while much of the far eastern and northeastern portion of the Project area have low sensitivity.

Table 4.18-1
Areas of High Sensitivity

Quadrant	Area of High Sensitivity	Ordinance Location
Northwest	Southern half, especially southwest quarter	Laboratory; Retailer
Northeast	Northwest quarter	Cultivation, Distribution and Manufacturing; Laboratory; Retailer
Southeast	Western half	Cultivation, Distribution and Manufacturing; Laboratory; Retailer
Southwest	Northern half, especially northeast quarter	Cultivation; Distribution and Manufacturing; Laboratory; Retailer

Thresholds of Significance

The following criteria, as establish in Appendix G of the CEQA Guidelines, will be utilized to determine if a project could potentially have a significant impact:

a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California register of historical resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k); or

b) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in Subdivision (c) of Public Resources Code Section 5024.1.

Project Impacts

Impact 4.18-1: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource, Defined in Public Resources Code Section 21074 as Either a Site, Feature, Place, Cultural Landscape that is Geographically Defined in Terms of the Size and Scope of the Landscape, Sacred Place, or Object with Cultural Value to a California Native American Tribe, and that is Listed or Eligible for Listing in the California Register of Historical Resources, or in a Local Register of Historical Resources as Defined in Public Resources Code Section 5020.1(k)

As discussed in Section 4.18.2, *Tribal Cultural Resource's Environmental Setting*, the Native peoples of Fresno County are likely of Yokuts descent. The Project area is within the territory of the Pitkachi, who populated the southern banks of the San Joaquin River, and the Gashowu, a triblet that occupied the drainages of Big Dry Creek, and Little Dr Creek. The Villages Kohuou, Weshiu, and GewaChiu are associated with the Pitkachi. All three villages are eight to 12 miles northwest of the Project area.

On August 20, 2019 the NAHC reported that its search of the Sacred Lands File did not identify any sacred sites or places of tribal importance in the Project area. The NAHC recommended follow-up with tribes having an ancestral connection to the Project area to give Native American groups the opportunity to share information about other cultural or tribal cultural resources that may be in or near the Project area. The City of Fresno has conducted government-to-government tribal consultation in compliance with AB 52. As a result, letters were sent out on August 9, 2019 to The Dumna Wo Wah Tribe and Table Mountain Rancheria of California Tribe informing them of the proposed Project. The tribes had 30 days to respond to request further consultation, pursuant to Public Resource Code Section 21080.3.1(d). No letters were received by the lead agency requesting further consultation pursuant to the proposed Project.

The majority of the Project is categorized as having high sensitivity for containing buried archaeological sites, or that contain historical resources that are either listed in or proposed for listing in the NRHP, CRHR and/or the City's Local Register. In addition, approximately 22 percent of the Project area has been subject to archaeological and built environment studies. Grading and trenching, as well as other ground-disturbing actions, have the potential to damage or destroy these previously unidentified and potentially significant cultural resources within the project area, including historical or archaeological resources. Disturbance of any deposits that have the potential to provide significant cultural data would be considered a significant impact under CEQA. Implementation of Mitigation Measures MM 4.5-1 through 4.5-3, as proposed in Section 4.5, *Cultural Resources,* would reduce potential impacts on cultural resources, including tribal resources, associated with the proposed Project to less-than-significant levels. These mitigation measures state:

Mitigation Measures

> **MM 4.5-1:** If previously unknown historical resources are encountered before or during grading activities, construction shall stop in the immediate vicinity of the find and a qualified

historical resources specialist shall be consulted to determine whether the resource requires further study. The qualified historical resources specialist 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 in accordance with Section 15064.5 of the CEQA Guidelines.

If the resources are determined to be unique historical resources as defined under Section 15064.5 of the CEQA Guidelines, measures shall be identified by the qualified historical resources specialist and recommended to the City. Appropriate 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 City approves the measures to protect these resources.

Any historical artifacts recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study.

MM 4.5-2: If a Cannabis License application is submitted on a parcel of land that has not previously been graded, a field survey and literature search for prehistoric archaeological resources shall be conducted by a qualified historical resources specialist. The following procedures shall be followed:

1. If prehistoric resources are not found during either the field survey or literature search, excavation and/or construction activities can commence. In the event that buried prehistoric archaeological resources are discovered during excavation and/or construction activities, construction shall stop in the immediate vicinity of the find and a qualified archaeologist shall be consulted to determine whether the resource requires further study. The qualified archaeologist shall make recommendations to the developer and 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 in accordance with Section 15064.5 of the CEQA Guidelines. If the resources are determined to be unique prehistoric archaeological resources as defined under Section 15064.5 of the CEQA Guidelines, mitigation measures shall be identified by the monitor and required to the developer and City. Appropriate 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 prehistoric archaeological artifacts recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study.

2. If prehistoric resources are found during the field survey or literature review, the resources shall be inventoried using appropriate State record forms and submit the forms to the Southern San Joaquin Valley Information Center. The resources shall be evaluated

for significance. If the resources are found to be significant, measures shall be identified by the qualified archaeologist. 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 an archaeological monitor. The monitoring period shall be determined by the qualified archaeologist.

3. If additional prehistoric archaeological resources are found during excavation and/or construction activities, the procedure identified above for the discovery of unknown resources shall be followed.

MM 4.5-3: In the event that human remains are unearthed during excavation and grading activities of any future development project, all activity shall cease immediately. Pursuant to Health and Safety Code (HSC) Section 7050.5, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code (PRC) Section 5097.98(a).

If the remains are determined to be of Native American descent, the Coroner shall within 24 hours notify the Native American Heritage Commission (NAHC). The NAHC shall then contact the most likely descendent of the deceased Native American, who shall then serve as the consultant on how to proceed with the remains. Pursuant to PRC Section 5097.98(b), upon the discovery of Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains.

Mitigation Measures

Implement Mitigation Measures MM 4.5-1 through MM 4.5-3.

Level of Significance

Impacts would be *less than significant with mitigation*.

Impact 4.18-2: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource, Defined in Public Resources Code Section 21074 as Either a Site, Feature, Place, Cultural Landscape that is Geographically Defined in Terms of the Size and Scope of the Landscape, Sacred Place, or Object with Cultural Value to a California Native American Tribe, and that is a Resource Determined by the Lead Agency, in its Discretion and Supported by Substantial Evidence, to be Significant Pursuant to Criteria Set Forth in Subdivision (c) of Public Resources Code Section 5024.1. In Applying the Criteria Set Forth in Subdivision (c) of Public

Resource Code Section 5024.1, the Lead Agency Shall Consider the Significance of the Resource to a California Native American Tribe

As noted in Impact Section 4.18-1, above, no tribal cultural resources were identified through the Sacred Lands File search by the NAHC. The results of AE's research and analyses indicate that the majority of the Project is categorized as having high sensitivity for containing buried archaeological sites, or that contain historical resources that are either listed in or proposed for listing in the NRHP, CRHR and/or the City's Local Register. In addition, approximately 22 percent of the Project area has been subject to archaeological and built environment studies. Grading and trenching, as well as other ground-disturbing actions, have the potential to damage or destroy these previously unidentified and potentially significant cultural resources within the Project area, including historical or archaeological resources. Disturbance of any deposits that have the potential to provide significant cultural data would be considered a significant impact under CEQA. Implementation of Mitigation Measures MM 4.5-1 through 4.5-3, as proposed in Section 4.5, *Cultural Resources*, would reduce potential impacts on cultural resources, including tribal resources, associated with the proposed Project to less-than-significant levels.

Mitigation Measures

Implement Mitigation Measures MM 4.5-1 through MM 4.5-3.

Level of Significance

Impacts would be *less than significant with mitigation*.

Cumulative Setting Impacts and Mitigation Measures

CUMULATIVE SETTING

The study area for the analysis of cumulative impacts is the City of Fresno and the unincorporated portions of Fresno County located adjacent to the city limits, as well as portions of the City of Clovis and the County of Madera adjacent to the City of Fresno. The applicable cumulative projections include growth projections from the City of Fresno General Plan, Fresno County General Plan, Madera County General Plan, and the City of Clovis General Plan.

The City of Fresno General Plan was last adopted in the year 2014. Anticipated development within the General Plan includes 186,840 dwelling units, 66.4 million square feet (msf) of commercial/office/public facility, 100,000 sf of mixed uses, and 72.8 msf of industrial uses. The General Plan contains approximately 11,714 acres of agricultural land, 12,288 acres of open space, and 12,522 acres of vacant land. Existing agricultural land is primarily located in the southeastern and western portions of the General Plan.

The General Plan contains two major rail lines that generally traverse in a southeast to northwest direction. These railways include the Union Pacific Railroad line that is generally located along SR-99, and the BNSF Railway that diverges from the SR-99 in the southwest and travels through

the Downtown to the northwest. There are three airports located within the City of Fresno including the Fresno-Yosemite International Airport located in the eastern portion of the Planning Area, the Fresno-Chandler Downtown Airport located west of Downtown, and Sierra Sky Park Airport that is located on the northern portion of the General Plan.

The County of Fresno General Plan was last adopted in the year 2000. The County General Plan was prepared to accommodate population growth through the year 2020, consistent with the California Department of Finance projection of 1.1 million by 2020. This represents an additional population of approximately 344,000, which includes the year 2020 projections outside the sphere of influences for cities within the East Valley area, which is located east of Interstate 5. Additional development projects are proposed northeast of the City of Fresno Project area including Friant Ranch that represents an additional population of approximately 164,693 through the year 2020.

The County of Madera General Plan was last adopted in the year 1995. The Madera County General Plan identifies population and employment growth projections through the year 2010 and includes 177,071 people and 61,866 employees. Since the adoption of Madera County's General Plan, substantial new development projects have been proposed in the southern portion of Madera County, some of which is proposed within close proximity of the City of Fresno Project area including Gateway, Gunner Ranch, Liberty Groves, North Fork Village, Tesoro Viejo, and River Ranch Estates. These projects include approximately 23,000 units, and supporting uses such as commercial, public facilities, parks, and open space.

The City of Clovis General Plan was last adopted in the year 2014. The Clovis General Plan forecasts the ultimate buildout of the entire Clovis General Plan area that is expected to occur for at least 70 years. The Clovis General Plan forecasts an additional 65,100 residential units, 179,300 population, and 38,250,000 square feet of buildings.

CUMULATIVE IMPACTS

An analysis of cumulative impacts takes into consideration the entirety of impacts that the projects, amendments to the Citywide Development Ordinance discussed in Chapter 3, *Project Description*, and subsequent projects that are a product of the proposed Project and their effect on tribal cultural resources (TCR). The effects of the project on TCR that may combine with similar effects caused by other past, current, and reasonably foreseeable future projects, could be cumulatively significant.

CEQA Section 15130(a) states: An EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in Section 15065(a)(3). Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

As summarized in Table 4.18-1, the Project area contains several areas where Project-related activities involving disturbance of the ground surface would have potential for unanticipated

discovery of cultural resources and/or have potential to cause inadvertent adverse effects resulting in a substantial change in the significance of a resource.

Excavation activities associated with the proposed Project in conjunction with other projects in the area could contribute to impacting of as-yet unrecorded TCR. Although unlikely, construction activities associated with the proposed Project could contribute to the cumulative loss of TCR and result in adverse cumulative impacts.

With implementation of Mitigation Measures MM 4.5-1, MM 4.5-2, and MM 4.5-3, the Project would not have a cumulatively considerable contribution to impacts to TCR. Consequently, with implementation of these mitigation measures, cumulatively considerable impacts would be considered less than significant.

Mitigation Measures

Implement Mitigation Measures MM 4.5-1 through MM 4.5-3.

Cumulative Level of Significance

Cumulative impacts would be *less than significant with mitigation*.

4.19 - Utilities and Service Systems

4.19.1 - INTRODUCTION

This section addresses the potential impacts of the Proposed Regulation and Permitting of Commercial Cannabis Activities (Project) on certain utilities and services: water, electricity, natural gas, solid waste and wastewater, and stormwater. It describes the existing utilities and service systems within the City of Fresno (City), the regulatory setting, the potential impacts resulting from implementing the Project, and feasible mitigation measures to reduce impacts. A description of the environmental setting (affected environment) is presented below in Section 4.19.2, *Environmental Setting*, and the regulatory setting is presented in Section 4.19.3, *Regulatory Setting*, while the Project impacts and associated mitigation measures are analyzed in Section 4.19.4, *Impacts and Mitigation Measures*.

Information for the utilities and services systems, for environmental setting purposes, were obtained from the City of Fresno 2015 Urban Water Management Plan, the 2016 District Services Plan, and the Wastewater Collection System Master Plan Update prepared by Blair, Church & Flynn in 2015.

Solid waste information and plans were obtained from the City of Fresno Department of Public Utilities.

4.19.2 - ENVIRONMENTAL SETTING

The City of Fresno (City) is located in Fresno County and is situated in the central portion of the San Joaquin Valley, in the State of California. The City encompasses approximately 113 square miles. Fresno is the largest city in Fresno County and has a current estimated population of 536,683 residents (California Department of Finance, 2019).

The topography of the City is relatively flat with little topographic variation. It occurs at an elevation of approximately 328 feet above mean sea level (AMSL). The surrounding land is relatively flat with a sharp rise towards the foothills of the Sierra Nevada Mountain Range to the east. State Route (SR) 99 runs northwest-southeast on the western edge of the City, connecting it with Sacramento and Bakersfield. SR-41 runs north-south through the heart of the City, connecting it with Yosemite National Park. SR-168 links the Downtown to Clovis, and SR-180 runs east-west within the southern portion of the City.

The northern border of the City is largely defined by the San Joaquin River, which flows to the Sacramento-San Joaquin River Delta and San Francisco Bay. The eastern border of the City mostly abuts the city limits of the City of Clovis. The western border of the City traverses SR-99 and passes through western rural residential and agricultural lands of the unincorporated county. The southern boundary extends as far south as Malaga Avenue.

The City center is within Township 14 South, Range 20 East, Mount Diablo Baseline and Meridian and the U.S. Geological Survey 7.5 Minute Fresno South Quadrangle.

Water Supply

The water supply section discusses the existing condition of the City's water supply and treatment and distribution systems. The key planning document for the City of Fresno's water resources is the 2015 Urban Water Management Plan (UWMP).

The City of Fresno Department of Public Utilities (DPU) provides potable water to the majority of the City, and some users within the portion of the Project area outside of the city limits, or Sphere of Influence (SOI).

The UWMP is a requirement of the Urban Water Management Planning Act (UWMPA) (Division 6, Part 2.6 of the California Water Code (CWC) §10610-10656). The UWMPs must be filed every five years and submitted to the Department of Water Resources (DWR). The UWMPA applies to urban water suppliers with 3,000 or more connections being served or supplying more than 3,000 acre-feet (af) of water annually. Failure to submit a plan, as required, could result in ineligibility to receive certain grants or receive drought assistance from the State.

GROUNDWATER SUPPLY

As shown in the California Water Plan Update 2013 (2013 CWP), the City of Fresno is located in the Kings Subbasin (DWR Subbasin 5-22.08) which is in the greater Tulare Lake hydrologic region (DWR Basin 5.22), and also within the larger San Joaquin Valley Groundwater Basin (CA Natural Resources Agency, 2018). The Kings Subbasin covers approximately 1,530 square miles. The Kings Subbasin, as depicted in the 2013 CWP, is generally bounded: on the north by the San Joaquin River; on the west by the Fresno Slough; on the south by the Kings River and Cottonwood Creek; and on the east by the Sierra foothills.

The City currently relies on a combination of surface water and groundwater supplies to meet the demands of its citizens and businesses within its service area. For many years, the needs of the community were solely met through the use of groundwater, but as time has passed the City has recognized the importance of preserving and maximizing groundwater supplies within the boundary of its SOI. A cone of depression developed within the City and groundwater replenishment efforts have been able to offset the effect of groundwater extraction. The falling groundwater levels are evidence of overdraft. The volume of groundwater pumped by the City can be seen below in Table 4.19-1.

Table 4.19-1
Groundwater Volume Pumped

Groundwater Type	Location or Basin Name	Groundwater – Volume Pumped (af/yr)				
		2011	2012	2013	2014	2015
Alluvial Basin	San Joaquin Groundwater Basin: Kings Subbasin	119,813	115,615	128,510	110,313	83,360

As can be seen in the above table, the overall reliance on groundwater as a principle source of water has decreased over the years and is now supplemented with treated surface water. The substantial reductions in 2014 and 2015 are attributed to mandatory water reductions imposed by the State to protect limited supplies as the severe drought has continued. The shift in reliance away from groundwater supplies has allowed intentional recharge programs to be more effective and has reduced groundwater overdraft conditions that the City has historically experienced. To put this into perspective, the City had a high in groundwater pumping of 165,540 af in 2002, prior to the NESWTF going online in 2004. Comparatively, groundwater production in 2015 has dropped to one-half of this value.

SURFACE WATER

The City of Fresno has contracts for surface water supplies include the following:

- FID Agreement for Kings River water
- USBR CVP – Friant Division Contract for San Joaquin River water

The cumulative supply these contracts bring to the City provide the opportunity to construct surface water treatment facilities and optimize the use of these supplies. This conjunctive use approach continues the process of allowing the groundwater system to recover and used sustainably. Each of the surface water supplies is summarized in the following paragraphs.

Surface Water Supplies through FID Agreement

The Fresno Irrigation District (FID) is one of 28 agencies that receive an entitlement of water from the Kings River through the Kings River Water Association (KRWA).

In May of 1976 the City of Fresno and FID executed an agreement that stipulated that as land is annexed to the City, the City will receive a pro rata share of FID's Kings River entitlement. The agreement was specific that FID's USBR Class 2 water was excluded and that the City could not store allocated water behind Pine Flat Dam. The pro rata share is based on the area annexed to the City, and within FID's boundaries, as compared to the total area of FID's water service area. The agreement stipulates the allocation amount will be reviewed each year by the two agencies to address new annexations to the City. So, as the City annexes new areas the allocation will increase. In 2016, the agreement was revised to include a 29 percent cap. Utilizing GIS, there will be approximately 71,925 acres of land within the SOI and within FID's water service boundaries at SOI buildout, excluding Bakman Water Company, Pinedale County Water District, CSU Fresno, County islands, and the excluded area of the District in the downtown area. Projected future percentages of water allocations available to the City are shown in Table 4.19-2 below.

Table 4.19-2
Projected Allocation of FID's Kings River Water for the City of Fresno in Normal Years

Year	2010[1]	2015[1]	2020	2025	2030[3]	2035[3]	2040[3]
Projected City Allocation, %	25.41%	25.94%	27.23%	28.51%	29.0%	29.0%	29.0%
Projected Water Quantity to City in Normal Year, af/yr	108,200	110,500	116,000	121,500	123,540	123,540	123,540
Actual Allocation for City, af	125,543	42,935					

1. Allocations for 2010 and 2015 were provided by FID. Allocation for all other years is based on interpolation between 2015 and SOI buildout at 2056. With General Plan Update SOI buildout has shifted from 2025 to 2056 as reflected here.
2. Projected City Allocation (%) x 426,000 af/yr (estimated normal year diversion by FID.
3. The renegotiated 2016 Water Supply Contract with FID limits the maximum available water to the City from the Kings River to 29.0%, or approximately 123,540 af/yr.

Surface Water Supplies through USBR Contract

The City, through an agreement originally executed in January of 1961, secured a surface water supply from USBR CVP - Friant Division. This agreement, for an annual water supply of 60,000 af of Class 1 water, was last renewed in 2010 as a Section 9(d) Contract that provides water from the San Joaquin River in perpetuity. The USBR CVP – Friant Division facilities generally include Friant Dam (Millerton Reservoir); the Friant-Kern Canal; and the Madera Canal. The Friant-Kern Canal is maintained and operated by the Friant Water Authority. The USBR water supply is a wholesale supply.

In addition to the Class 1 water available to the City, the USBR contract also makes available to the City water classified as: Recovered Water Account water; Section 215 water; unreleased restoration flows, unreleased recirculation flows, and uncontrolled season flows. The San Joaquin River water supply has excellent water quality as it originates from snowmelt from the high Sierras and has not been detrimentally impacted.

WATER DEMAND

The City's gross water use is comprised of surface water purchased from the United States Bureau of Reclamation (USBR) and the Fresno Irrigation District (FID), and groundwater produced by its 260 municipal wells from the Kings Subbasin, which is a part of the greater San Joaquin Valley Groundwater Basin.

The basis of gross water use are the meters installed at the City's NESWTF, T-3 WTF, and SESWTF, and each of its municipal groundwater wells which are equipped with flow meters. The City

installs flow meters on municipal water wells and has a maintenance program to keep them appropriately calibrated, and as such meter error is considered to be negligible.

Table 4.19-3
10-Year Baseline Daily Per Capita Water Use

Baseline Period		Service Area Population	Gross Water Use, gpd	Daily Per Capita Water Use, gpcd
Sequence Year	Calendar Year			
Year 1	1999	437,142	135,514,430	310
Year 2	2000	445,073	139,693,072	314
Year 3	2001	451,621	146,443,531	324
Year 4	2002	458,919	147,776,305	322
Year 5	2003	464,165	147,450,476	318
Year 6	2004	468,908	146,495,306	312
Year 7	2005	474,405	140,399,184	296
Year 8	2006	481,732	139,036,059	289
Year 9	2007	488,304	147,004,831	303
Year 10	2008	498,111	150,073,423	301
Baseline Daily Per Capita Water Use[1]				309

1. Average of annual daily per capita water use for the 10-year period from 1999 to 2008.

The above table was presented in the 2015 UWMP to aid in setting a target for per capita water use reduction. Due to the installation of residential water meters and other drought and conservation measures, the 2015 UWMP reports an actual average daily per capita water use of 190 gpcd.

WATER DISTRIBUTION SYSTEM

The City of Fresno presently covers an area of approximately 128 square miles consisting largely of single-family residential development (41 square miles) and multi-family development (five square miles). Commercial/Office/Public Facilities make up the next significant portion of the City's landscape covering approximately 23 square miles, while industrial land use makes up 11 square miles. The remainder of the landscape is composed of Open Space at 19 square miles and Other at about 29 square miles. The 2035 General Plan Update Master Environmental Impact Report (MEIR) states that the incorporated area is 72,244 acres (112.9 square miles).

In 1989, the City Water Division acquired numerous County waterworks districts and began serving customers previously served by Fresno County. This added a significant number of customers to the City's water service area. The City currently serves the general area encompassed by its city limits and will eventually serve out to the Sphere of Influence (SOI) boundary; Bakman Water Company, Park Van Ness Mutual Water Company, Pinedale County Water District, and CSU, Fresno also serve portions of the City. The SOI is coincident with the

General Plan boundary (adopted on December 18, 2014) and therefore, includes all lands planned to be annexed by the City at the projected 2056 buildout of the General Plan.

In 2015, the City had approximately 133,615 water service connections. The water service connection types vary widely, and approximately 85 percent of these connections are single-family residential. Table 4.19-4, below, contains a list of different service connection types and their corresponding counts.

Table 4.19-4
Customer Meter Connections

Land Use Type	Number of Service Connections in 2015	Percent of Total Connections
Single-Family Residential	113,510	84.95%
Multi-Family Residential	5,712	4.27%
Commercial/Institutional	8,184	6.13%
Industrial	89	0.07%
Landscape Irrigation	3,389	2.54%
Other	0	0.00%
Fire Service	2,731	2.04%
Total Connections	133,615	100.0%

Source: City of Fresno 2015 UWMP, Table 3-1 Customer Meter Connections.

As of 2015, the City's existing water system consisted of about 1,799 miles of transmission and distribution pipelines, 260 active municipal groundwater wells, 224 of which registered flows, three surface water treatment facilities (Northeast Surface Water Treatment Facility, T-3 Surface Water Treatment Facility and Southeast Surface Water Treatment Facility) located throughout the City, three water storage facilities, and four booster pump facilities. The distribution system was previously divided into four quasi-pressure zones to help regulate and optimize system pressures as there is an approximate 120 feet of elevation decrease running across the City from the northeast to the southwest. The "Highway 41 Gate System" became inactive as the closed distribution main valves that made-up the gate system were opened in 2015, leaving only three pressure zones.

Wastewater

The coordination with other water agencies and potential consumers within the Planning Area is inherently within the purview of the City's Department of Public Utilities (DPU) as this department provides both water and wastewater services. DPU has been on the forefront of numerous water supply preservation, enhancement, and development projects and programs for decades, including the construction and dedication of the North Fresno Wastewater Reclamation Facility to the City.

There following agencies, besides the City, have wastewater collection and treatment facilities within and immediately adjacent to the Plan Area.

City of Clovis

The Fresno/Clovis Regional Wastewater Reclamation Facility (RWRF) was developed under a joint powers authority agreement executed in 1977 between the City of Fresno, the City of Clovis, and the County of Fresno. Both of the cities contribute to the cost of operations and maintenances and capital expenditures for the RWRF based on formulas in the agreement. This facility provides service for most of Clovis' sewer flows. The City of Clovis has recently constructed its own wastewater treatment facility that produces tertiary level effluent which is distributed in a dedicated purple pipe system within portions of its service area.

Malaga County Water District

Malaga County Water District provides water and sewer service to an unincorporated county area of about 2.25 square miles, which covers a small portion of the City's SOI. The District provides wastewater collection and treatment for residential and non-residential customers.

Pinedale County Water District

Pinedale County Water District provides water, sewer, and solid waste service to an area of about two square miles, which service area covers an unincorporated county island and a portion of the City. The District provides wastewater collection to an area of about 699 acres and diverts the flow to the City's collection system for treatment at the RWRF.

Pinedale Public Utility District

Pinedale Public Utility District provides sewer, street lighting, street sweeping, and landscape maintenance. The District services an area of approximately 362 acres in the northern portion of the City, serving both an unincorporated county island and portions of the City. The collected wastewater is discharged to the City's collection system for treatment at the RWRF.

As the City is the primary responsible agency for wastewater collection and treatment for its annexed areas and certain County islands, it has taken the lead role of developing and implementing recycled water facilities to serve the same area. Recently, the City has constructed a recycled water tertiary facility at the RWRF that produces 5 MGD. The recycled water system has a transmission system that conveys the recycled water though the southwest region of the city and this system is currently being extended to serve the downtown area as well.

WASTEWATER COLLECTION SYSTEM AND RECLAMATION FACILITIES

The City's wastewater collection system consists of about 1,500 miles of pipes ranging in size from four-inches in diameter to 84-inches in diameter. This collection system also utilizes 15 lift stations throughout the City, ranging in pumping capacity from 0.25 mgd to 2.2 mgd.

The City is served by two wastewater reclamation facilities.

Fresno/Clovis Regional Wastewater Reclamation Facility

The Fresno/Clovis RWRF is now a state-of-the-art 91.5 MGD wastewater treatment facility. The RWRF treats flows from not only the City, but also some County areas, the City of Clovis, Pinedale County Water District, and Pinedale Public Utility District. Flows received at this facility range from a high of 72 mgd in 2006 to a recent low of 56 mgd in 2015. The treated effluent is discharged to percolation ponds, with some flow also being directed to irrigation of non-food crops. The discharged effluent is within the City boundaries and located just southwest of the metropolitan area. The treated effluent percolation ponds are within the City's SOI and hydrologic sphere that benefit the City's overall regional water budget.

North Fresno Wastewater Reclamation Facility

The North Fresno Wastewater Reclamation Facility (NFWRF) was constructed as part of a residential, commercial, and golf course master planned development located in the northern portion of the City. This facility is presently rated at 0.71 mgd (average monthly flow) and 1.07 mgd (maximum daily flow). This facility is expandable to 1.25 mgd (average monthly flow). The NFWRF will need to have a disinfection process expansion in order to increase permitted capacity from the 0.43 mgd to the as built treatment capacity of 0.71 mgd. The construction of additional sequencing batch reactor (SBR) tankage would be needed to move from the 0.71 mgd to the 1.2 mgd full build out. Current NFWRF flows are approximately 0.23 mgd and plans to make any changes affecting permitted capacity will not be developed until flow reaches approximately 0.33 mgd.

The disinfected tertiary effluent from the plant is largely used to irrigate the Copper River Ranch Golf Course. Of the 203 af of wastewater treated in 2015, 62 af was used for irrigation of turf.

DRAINAGE

Fresno Metropolitan Flood Control District

The Fresno Metropolitan Flood Control District's objective, and statutory intent, is a comprehensive, regionally coordinated local drainage program that ensures consistent design and performance, the elimination of duplication within the watershed shared by the cities and the County, and assurance of equity in the distribution of costs.

The local stormwater drainage system consists of interconnected surface conveyances, storm drains, retention basins, pump stations, and outfalls which discharge to groundwater, irrigation canals, creeks, and the San Joaquin River. The system is designed to capture retain discharge stormwater flows. The District makes efforts to infiltrate runoff into the underlying groundwater aquifer. At present, the local drainage service area is subdivided into 165 relatively small drainage areas (approximately one to two square miles each). The vast majority of these areas drain to a retention basin.

The District Master Plan storm drainage pipeline system is designed to accept the peak flow rate of runoff from a two-year intensity storm event (a storm which has a 50 percent probability of occurring in any given year). When storm events occur, which exceed the two-year intensity, ponding begins to occur in the streets until the pipeline system can remove the water. If the storm is sufficiently intense to generate more water than the street can store, the water will continue to rise until it reaches a topographic outlet where it can escape down gradient. This escape route is a feature of the major storm routing system that protects properties from damage in rainfall/runoff events that exceed system design capacities.

Unless necessary to meet operational criteria for subsequent storms stormwater is not discharged from retention basins, some of the stormwater percolates to groundwater. The District usually discharges into the Fresno Irrigation District system so the water can be diverted from the Metropolitan Area. Five drainage areas discharge directly, without benefit of any basin storage, through a pumping station to the river or irrigation canal. Two of these drainage areas currently discharge directly to the San Joaquin River, without prior storage. Six drainage areas discharge to the river, upon release from stormwater quality detention facilities. There are another 34 that discharge to other basins and 61 that discharge to canals and other channels.

STORMWATER COLLECTION AND DISPOSAL

In compliance with the Federal Clean Water Act and implementing stormwater permit regulations, the District and five other local public agencies (County of Fresno, City of Fresno, City of Clovis, CSU Fresno, and Caltrans) developed a Stormwater Quality Management Program to be implemented in the Fresno-Clovis Metropolitan Area. The program proposal was submitted to the Central Valley Regional Water Quality Control Board (RWQCB) as a part of the NPDES municipal stormwater permit process. The RWQCB incorporated into the permit specific program requirements, including best management practices to prevent and reduce stormwater pollutants.

In September 2005, the District prepared an application for renewal of the NPDES permit, including assessment of the current program. The permit renewal included four co-permittees: County of Fresno, City of Fresno, City of Clovis, and CSU Fresno. Caltrans was removed from the MS4 permit in the 2001 permit because they were required to get a statewide permit. The new NPDES permit was issued in May 2013 and is scheduled to expire in May 2018.

As owner and operator of the stormwater drainage system serving the Metropolitan Area, the District has primary responsibility for implementing this mandated program. The Stormwater Quality Management Program includes specific pollution prevention and control practices for urban drainage system planning, design, construction, and maintenance. The program also includes public education to prevent stormwater pollution; commercial, industrial, and new development stormwater quality control practices; monitoring to assess stormwater impacts on receiving water and to evaluate the effectiveness of best management practices; and development and implementation of ordinances to effect and enforce stormwater quality controls.

SOLID WASTE DISPOSAL

The City of Fresno Solid Waste Management Division has 171 full-time customers who are responsible for the collection of municipal solid waste, recyclables, green waste, and Operation Clean Up for approximately 112,000 residential customers. The Division also has oversight of litter collection, and solid waste related FresGO customer service responses for 103 square miles within the Fresno city limits. These collection activities produce approximately 4,600 tons of material each week.

The commercial collection service providers are Allied Waste Services which is responsible for servicing the northern portion of the City, and Mid Valley Disposal which is responsible for the southern section of the City, with Ashlan Avenue being the dividing line. These companies have been awarded the exclusive franchise for collecting and hauling commercial solid waste and recycling material in the City of Fresno. These franchises became effective on December 5, 2011. This agreement includes the servicing of all commercial solid waste containers ranging from one cubic yard to six cubic yards in size.

Garbage disposed of in the City of Fresno is taken to Cedar Avenue Recycling and Transfer Station. 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 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.

The American Avenue Landfill (i.e. American Avenue Disposal Site 10-AA-0009) 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.

Other landfills within the County of Fresno include the Clovis Landfill with a maximum remaining permitted capacity of 7,740,000 cubic yards, a maximum permitted throughput of 2,000 tons per day, and an estimated closure date of 2047. There is also the Coalinga Landfill with a maximum remaining capacity of 1,930,062 cubic yards, a maximum permitted throughput of 200 tons per day, and an estimated closure date of 2029.

NATURAL GAS AND ELECTRICITY

Pacific Gas and Electric (PG&E) provides almost all the energy for the City of Fresno. The PG&E natural gas pipeline system was established decades ago and has had limited upgrade. In 1993, a massive expansion of the natural gas pipeline that runs from Idaho's border with British Columbia to the County of Fresno was completed. Natural gas usage in Fresno has increased 9.2 percent since 2005, adding increased load on the system.

Large capacity natural gas transmission mains are regulated by stringent State of California, California Public Utilities Commission (CPUC) and operating company safety standards. In addition, a substantial portion of these systems crossing the Project area are within recorded easements that would include additional restrictions to proposed development within the control area specified in the easement documentation (Utility Specialists, 2019).

The PG&E electrical grid was established decades ago. It's been at least 30 years since a large transmission line has been built in the Central Valley. Demand for electricity in Fresno has increased 5.4 percent since 2005, placing an increased load on a finite capacity grid system. In April of 2014, PG&E disclosed plans to build a 70-mile transmission line meant to meet the Valley's growing demand for electricity. The route for this power line is proposed to the west of Fresno SOI and is expected to go into operation by 2020 (Fresno General Plan, 2018)

VOICE, VIDEO, AND DATA

There are several "Active" and "Conditional Use" fiber optic lines within the Project area. On October 21, 2016 the City issued a request for qualification (RFQ) to develop and operate a citywide wireless fiber system. The City envisions the deployment of a wireless network with broadband access and enhance the connectivity of the City's residents, businesses, municipal facilities, and community anchor institutions by expanding the range and quality of available broadband and data transport services. The City initiated the RFQ to identify one or more entities to enable or directly provide high-capacity wireless broadband services to users within the City.

4.19.3 - REGULATORY SETTING

Federal

CLEAN WATER ACT (CWA)

The Clean Water Act (CWA) (33 U.S.C. Section 1251 et seq.), formerly the Federal Water Pollution Control Act of 1972, was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. The CWA requires individual states to set standards to protect, maintain, and restore water quality through the regulation of point source and certain non-point source discharges to surface water. Those discharges are regulated by the National Pollutant Discharge Elimination System (NPDES) permit process (CWA Section 402). In California, NPDES permitting authority is delegated to, and administered by, the nine Regional Water Quality Control Boards (RWQCBs). The State Water Resources Control Board (SWRCB) has elected to adopt one statewide general permit for California that applies to all construction-related stormwater discharges.

Construction activities that are subject to this general permit include clearing, grading, stockpiling, and excavation that result in soil disturbances to at least one acre of the total land area. Construction activities that disturb less than one acre are still subject to this general permit if the activities are part of a large common plan of development or if significant water quality

impairment would result. In California, the Construction General Permit, revised in September 2009, is implemented by the SWRCB.

SAFE DRINKING WATER ACT

The Safe Drinking Water Act (SDWA) was established to protect the quality of drinking water in the United States. This SDWA focuses on all waters either designed or potentially designed for drinking water use, whether from surface water or groundwater sources. The SDWA and subsequent amendments authorized the EPA to establish health-based standards, or maximum contaminant levels (MCLs), for drinking water to protect public health against both natural and anthropogenic contaminants. All owners or operators of public water systems are required to comply with these primary (health-related) standards. State governments, which can be approved to implement these primary standards for the EPA, also encourage attainment of secondary (nuisance-related) standards. At the federal level, the EPA administers the SDWA and establishes MCLs for bacteriological, organic, inorganic, and radiological constituents (United States Code Title 42, and Code of Federal Regulations Title 40). At the State level, California has adopted its own SDWA, which incorporates the federal SDWA standards with some other requirements specific only to California (California Health and Safety Code, Section 116350 et seq.).

The 1996 Federal 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 EPA 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 California State Water Resources Control Board: Division of Drinking Water (SWRCB-DDW) is the primary agency for developing and implementing the DWSAP Program and is responsible for performing the assessments of existing groundwater sources.

FEDERAL ENERGY REGULATORY COMMISSION

The Federal Energy Regulatory Commission (FERC) regulates and oversees the energy industries in the interest of the American public. The Energy Policy Act of 2005 gave FERC additional responsibilities, including interstate commerce, licenses and inspections, energy markets, and penalizing energy organizers and individuals who violate FERC rules in the energy markets.

CENTRAL VALLEY PROJECT IMPROVEMENT ACT

The Reclamation Projects Authorization and Adjustment Act of 1992 (Public Law 102-575) includes Title 34, the Central Valley Project Improvement Act (CVPIA). The CVPIA amended the previous authorizations of the California CVP to include fish and wildlife protection, restoration, and mitigation as project purposes having equal priority with irrigation and domestic uses and fish and wildlife enhancement as a project purpose equal to power generation. The CVPIA

identifies specific measures to meet the CVPIA's multiple purposes (U.S. Bureau of Reclamation, 2017a).

State

California Energy Commission

The California Energy Commission (CEC) regulates the provision of natural gas and electricity within the State. The CEC is the State's primary energy policy and planning agency. Created in 1974, the CEC has five major responsibilities: forecasting future energy needs and keeping historical energy data, licensing thermal power plants 50 megawatts (MW) or larger, promoting energy efficiency through appliance and building standards, developing energy technologies and supporting renewable energy, and planning for and directing the State of California's response to energy emergencies.

California Department of Resources Recycling and Recovery (CalRecycle) Formerly California Integrated Waste Management Board (CIWMB)

CalRecycle is the State agency designated to oversee, manage, and track California's 76 million tons of waste generated each year. It is one of the six agencies under the umbrella of the California Environmental Protection Agency. CalRecycle develops regulations to control and manage waste, for which enforcement authority is typically delegated to the local government. The Board works jointly with local government to implement regulations and fund programs.

Assembly Bill 939 and Senate Bill 1016

The California Integrated Waste Management Act of 1989, or Assembly Bill (AB) 939, established the Integrated Waste Management Board, required the implementation of integrated waste management plans, and mandated that local jurisdictions divert at least 50 percent of all solid waste generated (from 1990 levels), beginning January 1, 2000, and divert at least 75 percent by 2010. Projects that would have an adverse effect on waste diversion goals are required to include waste diversion mitigation measures to assist in reducing these impacts to less-than-significant levels. With the passage of Senate Bill (SB) 1016 (the Per Capita Disposal Measurement System) in 2006, only per capita disposal rates are measured to determine if a jurisdiction's efforts are meeting the intent of AB 939.

Assembly Bill 341

In response to reducing commercial solid waste that is landfilled, the State Legislature passed AB 341 declaring that it is the policy goal of the State that not less than 75 percent of solid waste generated be source separated, reduced, recycled, or composted by the year 2020. AB 341 sets forth the requirements of the statewide mandatory commercial recycling program which defines that a business, including any commercial or public entity, generating four cubic yards or more of commercial solid waste per week are required to recycle. Businesses are required to take one

or any combination of the following actions in order to reuse, recycle, or otherwise divert solid waste from disposal:

- Subscribe to a source separated recycling service with a regional franchise hauler authorized to provide service for the area in which the business is located;
- Subscribe to a mixed solid waste recycling service with a regional franchise hauler authorized to provide service for the area in which the business is located; and
- Self-recycle and certify compliance with Ordinance No. 2003-100.

ASSEMBLY BILL 1826

AB 1826, created to drive the recycling of yard trimmings and food scraps, will become effective April 2016. The bill requires businesses generating a specified amount of organic solid waste per week to arrange for recycling for that material. This bill will also require the contract or work agreement between a business and a gardening or landscaping service to require the organic waste generated by those services to comply with the requirements of the law. Business within the Project area would be required to comply with any codes/regulations promulgated from AB 1826.

CALIFORNIA GREEN BUILDING STANDARDS CODE

Construction- and demolition-generated (C&D) waste is heavy, inert material. This material creates significant problems when disposed of in landfills. Since C&D debris is heavier than paper and plastic, it is more difficult for counties and cities to reduce the tonnage of disposed waste. For this reason, C&D waste debris has been specifically targeted by the State of California for diversion from the waste stream.

The California Green Building Standards Code (Standards Code) will apply to the construction related activities of this Project. The purpose of the Standards Code is to improve public health, safety, and general welfare by enhancing the design and construction of buildings using building concepts that have a positive environmental impact and encouraging sustainable construction practices. Provisions of the Standards Code shall apply to the design and construction of building structures subject to State regulation.

Per Code Section 708.3 – Construction Waste Reduction, Disposal, and Recycling of the Standards Code, a commercial entity is to recycle and/or salvage for reuse a minimum of 50 percent of the non-hazardous construction and demolition debris or meet a local construction and demolition waste management ordinance, whichever is more stringent.

STATE WATER RESOURCES CONTROL BOARD

The National Pollution Discharge Elimination System (NPDES) was established per the 1972 amendments to the Federal Water Pollution Control Act, or Clean Water Act (CWA), to control

discharges of pollutants from point sources (Section 402). Amendments to the CWA created a new section to the Act, which is devoted to stormwater permitting (Section 402(p)), with individual states designated for administration and enforcement of the provisions of the CWA and the NPDES permit program. The SWRCB issues both general construction permits and individual permits under this program.

Biosolids generated during wastewater treatment are regulated by the State under SWRCB Water Quality Order No. 2004-0012-DWQ, titled the "Final General Waste Discharge Requirements for Land Application of Biosolids for Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities." This order, implemented under the federal biosolids rules set forth in 40 CFR Part 503, applies to all land application of Class A and Class B biosolids as well as “exceptional quality” biosolids-derived mixtures consisting of 50 percent or more biosolids. The order establishes permitting, monitoring, and reporting requirements. Local ordinances, described below, would also regulate the disposal of biosolids in Kern County.

CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD

The primary responsibility for the protection of water quality in California rests with the SWRCB and nine regional water quality control boards (RWQCBs). The SWRCB sets statewide policy for the implementation of State and federal laws and regulations. The RWQCBs adopt and implement water quality control plans (basin plans) that recognize regional differences in natural water quality, actual and potential beneficial uses, and water quality problems associated with human activities. The jurisdiction of the Central Valley RWQCB extends from the Oregon border, over the Valley and foothills from Redding to Fresno, through the Central Valley, to the border with Los Angeles County.

CALIFORNIA DEPARTMENT OF WATER RESOURCES (DWR)

DWR’s major responsibilities include preparing and updating the California Water Plan to guide development and management of the State’s water resources; planning, designing, constructing, operating, and maintaining the State Water Resources Development System; regulating dams; providing flood protection; assisting in emergency management to safeguard life and property; educating the public; and serving local water needs by providing technical assistance. In addition, DWR cooperates with local agencies on water resources investigations; supports watershed and river restoration programs; encourages water conservation; explores conjunctive use of ground and surface water facilities voluntary water transfers; and, when needed, operates a State drought water bank.

The California Water Code (Water Code) Section 13149 was enacted to require the State Water Resources Control Board (Board), in consultation with the California Department of Fish and Wildlife (CDFW), to adopt interim and long-term principles and guidelines for the diversion and use of water for cannabis cultivation in areas where cannabis cultivation may have the potential to substantially affect instream flows. The legislation requires the Board to establish these principles and guidelines as part of a State policy for water quality control. The Board has adopted

policies to guide cannabis production. The Cannabis Cultivation Policy: Principles and Guidelines for Cannabis Cultivation (2019) guide outlines requirements for cannabis cultivation with regard to management practices and permits required prior to operation (State Water Resources Control Board, 2019).

The State of California has directed that, under the direction of the Board, local agencies representing each critically impacted groundwater basin in the State submit to the State by January 2020 a plan for sustainable groundwater management for that basin. In Fresno County that document is under preparation and public review. The City is a member of the North Kings Groundwater Sustainability Authority (NKGSA). The draft Groundwater Sustainability Plan for NKGSA was made available for publication and comment on August 16, 2019.

CALIFORNIA WATER CODE SECTION 13260

California Water Code Section 13260 requires any person who discharges waste, other than into a community sewer system, or proposes to discharge waste that could affect the quality of waters of the State, to submit a report of waste discharge to the applicable RWQCB. Any actions of the project that would be applicable under California Water Code Section 13260 would be reported to the Central Valley RWQCB.

PORTER-COLOGNE WATER QUALITY CONTROL ACT

The Porter Cologne Act, passed in 1969, acts in concert with the Federal CWA. The Act established the SWRCB and divided the State into nine regions, each overseen by an RWQCB. The SWRCB is the primary State agency responsible for protecting the quality of the State's surface and groundwater supplies; however, much of its daily implementation authority is delegated to the nine RWQCBs. The Project area is under the jurisdiction of two RWQCBs: Central Valley Region and Lahontan Region.

The Porter Cologne Act provides for the development and periodic review of water quality control plans (basin plans) that designate beneficial uses of California's major rivers and groundwater basins and establish narrative and numerical water quality objectives for those waters. Basin plans are primarily implemented by using the NPDES permitting system to regulate waste discharges so that water quality objectives are met. Basin plans, updated every three years, provide the technical basis for determining waste discharge requirements, taking enforcement actions, and evaluating clean water grant proposals. The Act also assigns responsibility for implementing CWA Sections 401, 402, and 303(d) to the SWRCB and RWQCBs. There are two basin plans in the Central Valley RWQCB region, the Water Quality Control Plan for the Sacramento and San Joaquin Rivers and the Water Quality Control Plan for the Tulare Lake Basin. There is one basin plan in the Lahontan RWQCB region, the Water Quality Control Plan for the Lahontan Region.

ASSEMBLY BILL 1881

AB 1881 expanded previous legislation related to landscape water use efficiency. AB 1881, the Water Conservation in Landscaping Act of 2006, enacted landscape efficiency recommendations of the California Urban Water Conservation Council (CUWCC) for improving the efficiency of water use in new and existing urban irrigated landscapes in California. AB 1881 required the DWR to update the existing Model Local Water Efficient Landscape Ordinance and local agencies to adopt the updated model ordinance or an equivalent. The law also requires the California Energy Commission to adopt performance standards and labeling requirements for landscape irrigation equipment, including irrigation controllers, moisture sensors, emission devices, and valves to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy or water.

ASSEMBLY BILL 2882

AB was passed in 2008 and encourages public water agencies throughout California to adopt conservation rate structures that reward consumers who conserve water. AB 2882 clarifies the allocation-based rate structures and establishes standards that protect consumers by ensuring a lower base rate for those who conserve water.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA), passed in 2014, became law in 2015, and created a legal and policy framework to manage groundwater sustainably at a local level. The SGMA allows local agencies to customize groundwater sustainability plans to their regional economic and environmental conditions and needs and establish new governance structures, known as groundwater sustainability agencies (GSAs) (State of California 2015). The SGMA requires that a groundwater sustainability plan (GSP) be adopted for groundwater basins designated as high and medium priority (127 out of 515 basins and sub basins) under the California Statewide Groundwater Elevation Monitoring program (described below) by 2020 for basins with critical overdraft of underground aquifers. GSPs are intended to facilitate the use of groundwater in a manner that can be maintained during the planning and implementation horizon without causing undesirable results. Undesirable results are defined as the following:

- Chronic lowering of groundwater levels (not including overdraft during a drought if a basin is otherwise managed);
- Significant and unreasonable reduction of groundwater storage;
- Significant and unreasonable seawater intrusion;
- Significant and unreasonable degraded water quality, including the migration of contaminant plumes that impair water supplies;
- Significant and unreasonable land subsidence that substantially interferes with surface land uses; and

- Depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water.

GSPs are required to include measurable objectives, as well as interim milestones in 5-year increments, to achieve the sustainability goal for the basin for the long-term beneficial uses of groundwater. The GSP may, but is not required to, address undesirable results that occurred before, or had not been corrected prior to the date that the SGMA went into effect. The GSA has the discretion to decide whether to set measurable objectives and the timeframes for achieving any objectives for undesirable results that occurred before 2015. Additionally, GSPs are required to include components related to the monitoring and management of groundwater levels within the basin, mitigation of overdraft, and a description of surface water supply used or available for use for groundwater recharge or in lieu use.

As with other local regulatory requirements, GSP requirements may apply to licensed cultivators located within the boundaries of a GSA and using groundwater as a source; the source could include existing on- or off-site wells, as well as supplies from water purveyors or water delivery services that have groundwater as some component of their supply. The City does not currently allow for new groundwater wells to be drilled within its service area.

RECYCLED WATER POLICY

On February 3, 2009, by Resolution No. 2009-0011, the SWRCB adopted a Recycled Water Policy in an effort to move towards a sustainable water future. In the Recycled Water Policy states "we declare our independence from relying on the vagaries of annual precipitation and move towards sustainable management of surface waters and groundwater, together with enhanced water conservation, water reuse and the use of stormwater."

The following goals were included in the Recycled Water Policy:

- Increase use of recycled water over 2002 levels by at least one million acre-feet per year by 2020 and at least two million acre-feet per year by 2030;

- Increase the use of stormwater over use in 2007 by at least 500,000 acre-feet per year by 2020 and at least one million acre-feet per year by 2030;

- Increase the amount of water conserved in urban and industrial areas by comparison to 2007 by at least 20 percent by 2020; and

- Included in these goals is the substitution of as much recycled water for potable water as possible by 2030.

The Recycled Water Policy provides direction to the RWQCBs regarding issuing permits for recycled water projects, addresses the benefits of recycled water, addresses a mandate for use of recycled water and indicates the SWRCB will exercise its authority to the fullest extent possible to encourage the use of recycled water.

The Recycled Water Policy also indicates that some groundwater basins contain salts and nutrients that exceed or threaten to exceed water quality objectives established in basin plans and states that it is the intent of this Recycled Water Policy that all salts and nutrients be managed on a basin-wide or watershed-wide basis through development of regional or sub-regional management plans. Finally, the Recycled Water Policy addresses the control of incidental runoff from landscape irrigation projects, recycled water groundwater recharge projects, anti-degradation, control of emerging constituents and chemicals of emerging concern and incentives for use of recycled water.

In accordance with the provisions of the Recycled Water Policy, a Constituents of Emerging Concerns (CEC) Advisory Panel was established to address questions about regulating CECs with respect to the use of recycled water. The CEC Advisory Panel's primary charge was to provide guidance for developing monitoring programs that assess potential CEC threats from various water recycling practices, including groundwater recharge/reuse and urban landscape irrigation. On June 25, 2010, the CEC Advisory Panel provided recommendations to the SWRCB and California Department of Public Health in their Final Report "Monitoring Strategies for Chemicals of Emerging Concern in Recycled Water – Recommendations of a Scientific Advisory Panel" (Geosyntec Consultants, 2015a). The SWRCB used those recommendations to amend the Recycled Water Policy in 2013 (CA SWRCB, 2013).

The April 2013 amendment provides direction to the RWQCBs on monitoring requirements for CECs in recycled water. The monitoring requirements pertain to the production and use of recycled water for groundwater recharge reuse by surface and subsurface application methods, and for landscape irrigation. The amendment identifies three classes of constituents to monitor:

- Human health-based CECs: CECs of toxicological relevance to human health;
- Performance indicator CECs: An individual CEC used for evaluating removal through treatment of a family of CECs with similar physicochemical or biodegradable characteristics; and
- Surrogates: A measurable physical or chemical property, such as chlorine residual or electrical conductivity, that provides a direct correlation with the concentration of an indicator compound. Surrogates are used to monitor the efficiency of CEC treatment.

Only groundwater recharge reuse facilities will be required to monitor for CECs and surrogates. Surface application and subsurface application facilities will have different mandatory CECs and a different monitoring schedule. Monitoring is not required for recycled water used for landscape irrigation projects that qualify for streamlined permitting unless monitoring is required under the adopted salt and nutrient management plan. Streamlined permitting projects must meet the criteria specified in the Policy including compliance with Title 22, application at agronomic rates, compliance with any applicable salt and nutrient management plan, and appropriate use of fertilizers.

SENATE BILLS 610 (CHAPTER 643, STATUTES OF 2001) AND 221 (CHAPTER 642, STATUTES OF 2001)

SB 610 and SB 221 are companion measures that seek to promote more collaborative planning among local water suppliers and cities and counties. They require that water supply assessments occur early in the land use planning process for all large-scale development projects. If groundwater is the supply source, the required assessments must include detailed analyses of historic, current, and projected groundwater pumping and an evaluation of the sufficiency of the groundwater basin to sustain a new project's demands. They also require an identification of existing water entitlements, rights, and contracts and a quantification of the prior year's water deliveries. In addition, the supply and demand analysis must address water supplies during single and multiple dry years presented in five-year increments for a 20-year projection. Under SB 221, approval by a county of a subdivision of more than 500 homes requires an affirmative written verification of a sufficient water supply.

CALIFORNIA DROUGHT REGULATIONS

Beginning in January 2014, Governor Jerry Brown issued three Executive Orders (EOs), B-26-14, B-28-14, and B-29-15, regarding water supply, water demand, and water use within the State during severe drought conditions. EO B-29-15, issued April 1, 2015, sets limitations not only for existing land uses and water supply systems, but also for new construction. Some of these restrictions include:

- The Water Board shall prohibit irrigation with potable water of ornamental turf on public street medians. (EOB--29-15 Action #6, 2015).

- The Water Board shall prohibit irrigation with potable water outside of newly constructed homes and buildings that is not delivered by drip or microspray systems. (EO B-29-15, Action #7, 2015).

- The California Energy Commission shall adopt emergency regulations establishing standards that improve the efficiency of water appliances, including toilets, urinals, and faucets available for sale and installation in new and existing buildings (EO B-29-15 Increase Enforcemnet Against Water Waste, Action #16, 2015).

In addition, EO B-29-15 requires that DWR update the State Model Water Efficient Landscape Ordinance through expedited regulation by the end of 2015. This ordinance will increase water efficiency standards for new and existing landscapes through more efficient irrigation systems, greywater usage, onsite storm water capture, and by limiting the portion of landscapes that can be covered in turf (EO B-29-15, Increase Enforcement Against Water Waste, Action #11, 2015).

On November 13, 2015, Governor Brown issued EO B-36-15, which upheld the previous EOs, and directs the SWRCB to extend of urban water use restrictions through October 31, 2016 based on drought conditions known through January 2016. The SWRCB issued emergency regulations on February 2, 2016, in compliance with EO B-36-15. These emergency regulations maintain the

current tiers of required water reductions; however, additional adjustments in response to stakeholders; equity concerns were included in the emergency regulations.

In addition, DWR and the U.S. Bureau of Reclamation have finalized the 2016 Drought Contingency Plan that outlines State Water Project and Central Valley Project operations from February through November 2016. The 2016 Drought Contingency Plan was developed in coordination with staff from State and federal agencies. The 2016 Drought Contingency Plan communicates overarching goals for 2016 water management and the potential operations needed to achieve those goals. The Grapevine Project would not obtain water from the Central Valley Project of the State Water Project.

ASSEMBLY BILL 341

Effective July 1, 2012, the State's Mandatory Commercial Recycling law requires all businesses that generate four cubic yards or more of solid waste per week to arrange for recycling services (AB 341, 2011).

ASSEMBLY BILL 1826

Effective April 1, 2016, the State's Mandatory Organic Waste Recycling law phases in requirements for businesses that generate specified amounts of organic waste to arrange for recycling services for that material (AB 1826, 2014). The law phases in the requirements for businesses over time based on the amount and type of waste the business or dwelling produces on a weekly basis with full implementation realized in 2019. The law also contains a 2020 trigger that will increase the scope of affected businesses if waste reduction targets are not met. The implementation schedule is as follows:

- January 1, 2019: Businesses that generate four cubic yards or more of commercial solid waste per week shall arrange for organic waste recycling services;

- Fall 2020: After receipt of the 2019 annual reports submitted on August 1, 2020, CalRecycle shall conduct its formal review of all jurisdictions; and

- Summer/Fall 2021: If CalRecycle determines that the statewide disposal of organic waste in 2020 has not been reduced by 50 percent of the level of disposal during 2014, the organic recycling requirements on businesses will expand to cover businesses that generate two cubic yards or more of commercial solid waste per week. Additionally, certain exemptions may no longer be available if this target is not met.

Local

CITY OF FRESNO GENERAL PLAN

The Project site is located within the City of Fresno. The City's General Plan objectives and policies for utilities applicable to the project are provided below.

Section 6.3 – Wastewater Treatment and Collection

Objective PU-4. Ensure provision of adequate trunk sewer and collector main capacities to serve existing and planned urban development, consistent with the Wastewater Master Plan.

Policy PU-4-a - Plan for Regional Needs. Coordinate and consult with the City of Clovis, pursuant to the Fresno-Clovis Sewerage System Joint Powers Agreement, so that planning and construction of sewer collection facilities will continue to meet the regional needs of the Metropolitan Area.

Policy PU-4-b - New Trunk Facilities. Pursue construction of new or replacement sewer trunk facilities or other alternatives consistent with the Wastewater Master Plan to accommodate the uses as envisioned in this General Plan.

Policy PU-4-c - System Extension and Cost Recovery. Pursue enlargement or extension of the sewage collection system where necessary to serve planned urban development, with the capital costs and benefits allocated equitably and fairly between the existing users and new users.

Policy PU-4-d - Capacity Modeling. Continue development and utilization of citywide sewer flow monitoring and computerized flow modeling to determine availability of sewer collection system capacity to serve planned urban development.

Policy PU-4-e - Evaluate and Maintain Infrastructure. Promote the health and safety of the community and preserve the longevity and sound condition of the sewer collection system through evaluation and maintenance of the sewer infrastructure.

Objective PU-5. Preserve groundwater quality and ensure that the health and safety of the entire Fresno community is not impaired by use of private, onsite disposal systems.

Policy PU-5-a - Mandatory Septic Conversion. Continue to evaluate and pursue where determined appropriate the mandatory abatement of existing private wastewater disposal (septic) systems and mandatory connection to the public sewage collection and disposal system.

Policy PU-5-b - Non-Regional Treatment. Discourage, and when determined appropriate, oppose the use of private wastewater (septic) disposal systems, community wastewater disposal systems, or other non-regional sewage treatment and disposal systems within or adjacent to the Metropolitan Area if these types of wastewater treatment facilities would cause discharges that could result in groundwater degradation.

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.

Objective PU-6. Ensure the provision of adequate sewage treatment and disposal by utilizing the Fresno-Clovis Regional Wastewater Reclamation Facility as the primary facility, when economically feasible, for all existing and new development within the Metropolitan Area.

Policy PU-6-a - Treatment Capacity and Cost Recovery. Prepare for and consider the implementation of increased wastewater treatment and reclamation facility capacity in a timely manner to facilitate planned urban development within the Metropolitan Area consistent with this General Plan. Accommodate increase in flows and loadings from the existing community with the capital costs and benefits allocated equitably and fairly between existing users and new users, as authorized by law.

Policy PU-6-b - Consider Capacity in Plan Amendments. Monitor wastewater treatment plant flows and loadings to the extent feasible. Consider the effects on wastewater treatment capacity and availability of potable water when evaluating proposed General Plan amendment proposals, community plans, Specific Plans, neighborhood plans, and Concept Plans.

Objective PU-7. Promote reduction in wastewater flows and develop facilities for beneficial reuse of reclaimed water and biosolids for management and distribution of treated wastewater.

Policy 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-7-c - Biosolid Disposal. Investigate and consider implementing economically effective and environmentally beneficial methods of biosolids handling and disposal.

Policy PU-7-d - Wastewater Recycling. Pursue the development of a recycled water system and the expansion of beneficial wastewater recycling opportunities, including a timely technical, practicable, and institutional evaluation of treatment, facility siting, and water exchange elements.

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-7-f – Food and Drink Industry. Ensure adequate provision of facilities for the appropriate management of wastewater from wineries and food processing and beverage facilities, including conformance with Waste Discharge Requirements issued by the Regional Water Quality Control Board.

Section 6.4 Water

Objective PU-8. Manage and develop the City's water facilities on a strategic timeline basis that recognizes the long-life cycle of the assets and the duration of the resources, to ensure a safe, economical, and reliable water supply for existing customers and planned urban development and economic diversification.

Policy PU-8-a – Forecast Need. Use available and innovative tools, such as computerized flow modeling to determine system capacity, as necessary to forecast demand on water production and distribution systems by urban development, and to determine appropriate facility needs.

Policy PU-8-b – Potable Water Supply and Cost Recovery. Prepare for provision of increased potable water capacity (including surface water treatment capacity) in a timely manner to facilitate planned urban development consistent with the General Plan. Accommodate increase in water demand from the existing community with the capital costs and benefits allocated equitably and fairly between existing users and new users, as authorized by law, and recognizing the differences in terms of quantity, quality and reliability of the various types of water in the City's portfolio.

Policy PU-8-c – Conditions of Approval. Set appropriate conditions of approval for each new development proposal to ensure that the necessary potable water production and supply facilities and water resources are in place prior to occupancy.

Policy PU-8-d – CIP Update. Continue to evaluate Capital Improvement Programs and update them, as appropriate, to meet the demands of both existing and planned development consistent with the General Plan.

Policy PU-8-e – Repairs. Continue to evaluate existing water production and distribution systems and plan for necessary repair or enhancement of damaged or antiquated facilities.

Policy PU-8-f – Water Quality. Continue to evaluate and implement measures determined to be appropriate and consistent with water system policies, including prioritizing the use of groundwater, installing wellhead treatment facilities, constructing above-ground storage and surface water treatment facilities, and enhancing transmission grid mains to promote adequate water quality and quantity.

Policy PU-8-g – Review Project Impact on Supply. Mitigate the effects of development and capital improvement projects on the long-range water budget to ensure an adequate water supply for current and future uses.

Section 6.5 Solid Waste

Objective PU-9. Provide adequate solid waste facilities and services for the collection, transfer, recycling, and disposal of refuse.

Policy PU-9-a – New Techniques. Continue to collaborate with affected stakeholders and partners to identify and support programs and new techniques of solid waste disposal, such as recycling, composting, waste to energy technology, and waste separation, to reduce the volume and toxicity of solid wastes that must be sent to landfill facilities.

Policy PU-9-b – Compliance with State Law. Continue to pursue programs to maintain conformance with the Solid Waste Management Act of 1989 or as otherwise required by law and mandated diversion goals.

Policy PU-9-c – Cleanup and Nuisance Abatement. Continue and enhance, where feasible, community sanitation programs that provide services to neighborhoods for cleanup, illegal dumping, and nuisance abatement services.

Policy PU-9-d – Facility Siting. Locate private or public waste facilities and recycling facilities in conformance with City zoning and State and federal regulations, so that the transportation, processing, and disposal of these materials are not detrimental to the public health, safety, welfare, and aesthetic well-being of the surrounding community.

Policy PU-9-e – Tire Dumping. Adopt and implement, as determined appropriate, measures to eliminate illegal tire dumping.

Policy PU-9-f – Household-Generated Hazardous Waste and Hazardous Waste Facilities. Allow for household-generated hazardous waste and hazardous waste facilities, which are planned and zoned for Heavy Industrial uses, only after CEQA review, environmental assessments, and approval of a Conditional Use Permit.

4.19.4 - IMPACTS AND MITIGATION MEASURES

Methodology

This analysis is based on publicly available data provided by the City and County of Fresno, and the regulations, plans, and policies cited in the above sections 4.19.2, *Environmental Setting*, and 4.19.3, *Regulatory Setting*.

Thresholds of Significance

In accordance with CEQA, the effects of a project are evaluated to determine if they will result in significant adverse impact on the environment. The criteria used to determine the significance of an impact to utilities and service systems are based on the Environmental Checklist in Appendix G of the State CEQA Guidelines as identified below. Accordingly, utilities and service system impacts resulting from the proposed Project are considered significant if the Project 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 effects;

b) Have sufficient 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 adequate 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) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

Project Impacts

Impact 4.19-1: Require or Result in the Relocation or Construction of New or Expanded Water, Wastewater Treatment or Storm Water Drainage, Electric Power, Natural Gas, or Telecommunications Facilities, the Construction or Relocation of Which Could Cause Significant Environmental Effects

WATER FACILITIES

As noted in Section 4.10, *Hydrology and Water Quality*, the City of Fresno provides water service to a variety of customer types within the city limits. It has about 133,000 service connections, and as of 2018, provides approximately 120,067-acre feet (af) of potable water annually (36 percent surface water and 64 percent groundwater). The City currently relies on a combination of surface water and groundwater supplies to meet water demands of the citizens and businesses. The City's overall reliance on groundwater as a principal source of water has decreased over the years and is now supplemented with surface water.

The City of Fresno owns and operates three surface water treatment facilities, the Northeast Surface Water Treatment Facility (NESWTF), T-3 SWTF, and Southeast Surface Water Treatment Facility (SESWTF). According to the 2015 Urban Water Master Plan (UWMP), these facilities along with surface water from FID and USBR CVP, and ground water wells provide the City with enough water supply to meet single normal, single dry-year, and multiple dry-year demand through the year 2040.

Based on the water demand of the proposed Project, as detailed in Impact 4.10-1, the estimated maximum total water demand of the Project is 208.9-acre feet per year, approximately 0.17 percent of the City's current total water demand (120,067) acre feet per year. This demand will not require the relocation or construction of new or expanded water facilities and impacts are considered less than significant. Although no water facilities are expected to be constructed or

expanded as a result of the Project, due to the increase in estimated water demand of the proposed Project in comparison to typical industrial uses (see Impact 4.10-2), increases in water service infrastructure at each potential cannabis cultivation facility may be required. Mitigation Measure 4.19-1 has been included to ensure that appropriate water service connections are installed.

WASTEWATER TREATMENT FACILITIES

The Regional Water Reclamation Facility (RWRF), located southwest of the City near the intersection of Jensen and Cornelia Avenues, has a maximum capacity 91.5 mgd wastewater treatment facility. Flows received at this facility range from a high of 72 mgd in 2006 to a recent low of 56 mgd in 2015.

In general, the City's collection system has sufficient capacity to convey current Peak Wet Weather Flows (PWWFs) without exceeding the established flow depth criterion. The Wastewater Collection System Master Update identifies the improvements recommended to mitigate capacity deficiencies in the existing and future sewer collection system and improvements to accommodate future growth. Therefore, implementation of the Wastewater Collection System Master Plan Update will allow the conveyance of PWWFs to the RWRF during General Plan build-out conditions.

The proposed Project involves the cultivation, distribution, manufacturing, testing, and retail sales of commercial cannabis in existing zones, sites, and buildings within the City that are serviced by existing City utilities and facilities. The proposed Project is anticipated to use 208.9-acre feet of water per year (0.16 mgd). The majority of estimated water demand will be for cultivation. During the cultivation process, water will be used for plant propagation and growing cycles. Mitigation Measure MM 4.10-1, as proposed in Section 4.10, *Hydrology and Water Quality*, will require all cultivation facilities to submit a Wastewater Control Plan (WCP). This plan will require best management practices for the capture and reuse of produced water.

> **MM 4.10-1:** Concurrent with submittal of a conditional use permit for any cultivation facility, the applicant shall submit to the City Planning and Development Department a Wastewater Control Plan (WCP). The WCP shall include best management practices for capture and treatment of runoff (including recycling systems for capture and reuse of produced water, disclosure of pesticides to be used, and amounts of individual contaminate concentrates that will be disposed of through public wastewater treatment facilities). If contaminate concentrations exceed wastewater standards, pretreatment of wastewater will be required, prior to disposal. The plan shall also outline the materials to be used to create impermeable flooring surfaces and containment directly beneath all cultivation areas and associated walkways.

Based on information from companies specializing in water reuse systems, wastewater reuse can exceed 80 percent reductions in overall water use (Doherty, n.d.). Using a conservative estimate

of 50 percent reduction, the total amount of water that will be produced from cultivation and potentially disposed of via wastewater systems is 35-acre feet (0.03 mgd).

Current facilities can currently support up to 91.5 mgd of wastewater. The most recent available data shows the current City wastewater production is 56 mgd. The proposed Project estimated wastewater production is between 0.03 mgd and 0.07 mgd. This amount in combination with the current amount of wastewater produced would not exceed the wastewater treatment facilities capacity, relocate or require new or expanded wastewater treatment facilities. Therefore, with the proposed mitigation measures, the Project would result in a less-than-significant impact.

STORMWATER DRAINAGE FACILITIES

Storm drainage facilities within the City, as well as within Clovis are planned, implemented, operated, and maintained by the FMFCD. The existing and planned 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 consists of 130 individual drainage areas or urban watersheds.

In 2007, the FMFCD approved the 2004 District Services Plan (Services Plan) that included flood control, local stormwater drainage, water conservation, and recreational uses within its service area. A Master EIR was prepared for the 2004 Services Plan, certified in 2007, and identified various programs including the local stormwater drainage program. This program includes facilities to accommodate future growth in accordance with the City of Fresno General Plan. The proposed Project would include the development of vacant sites and existing parcels currently developed. Stormwater drainage facilities located throughout the City are not anticipated to be impacted by the proposed Project as the eligible parcels are currently being served by the FMFCD. Site specific drainage requirements will be addressed as part of the conditional use permit process. Therefore, the proposed Project would not relocate or require new or expanded stormwater drainage facilities, and impacts are considered less than significant.

NATURAL GAS AND ELECTRICITY FACILITIES

See Section 4.6, *Energy*, for a full description of natural gas and electrical facilities and demand. As noted in Impact 4.6-1, consumption of electrical energy will be significant and unavoidable. However, Mitigation Measure MM 4.6-1 and 4.6-2 require each cultivation facility to reduce electrical energy demand through a combination of energy efficient construction and potential installation of solar photovoltaic systems. Although electrical energy demand is considered significant and unavoidable due to unnecessary consumption of energy resources, it is not anticipated to create the need to relocate or require new or expanded electrical facilities that could create a significant effect on the environment.

> **MM 4.6-1**: The project proponent of any conditional use permit, for a cannabis related business (cultivation only), shall be required offset electrical energy demand by 50 percent. The project proponent shall submit an Energy Reduction Plan (ERP) to the City of Fresno. The ERP shall quantify the total electrical demand for the proposed cultivation facility. The

required electrical energy demand reductions may incorporate adherence to existing Title 24 requirements, exceedance of Title 24 through Calgreen Tier 1 and 2 voluntary elective measures. If further reduction is necessary to meet the required offset of electrical energy demand, the following combination of measures shall be included in the ERP: Installation of onsite solar photovoltaic systems; Offsite solar facility construction; and/or, Contributions to existing or new programs aimed at reducing electrical energy demand.

MM 4.6-2: All cultivation facilities shall exceed the minimum standards of Title 24, Part 11 (Calgreen) by adopting all or some elements of CalGreen Tier 1 and 2 voluntary elective measures to increase energy efficiency in new buildings, remodels and additions. These measures shall prioritize upgrading lighting (e.g., using light-emitting diode [LED] lights) in indoor grow rooms, heating and cooling systems, appliances, equipment and control systems to be more energy efficient.

TELECOMMUNICATION FACILITIES

The proposed Project would include the development of vacant sites and existing parcels currently developed. Telecommunication facilities located throughout the City are not anticipated to be impacted by the proposed Project as the eligible parcels are currently being served by existing telecommunication companies. Further, the proposed Project would permit cannabis related businesses that would utilize telecommunication facilities in a similar fashion as other existing commercial and industrial businesses. These uses would include telephone, broad-band internet and cable television. Therefore, the proposed Project would not relocate or require new or expanded telecommunication facilities, and impacts are considered less than significant.

Mitigation Measures

Implement Mitigation Measure MM 4.6-1, and MM 4.6-2 and MM 4.10-1.

MM 4.19-1: For all cannabis cultivation businesses, prior to issuance of building permits, certification of water service connection must be submitted to the City of Fresno. Water service connections must be certified by a licensed engineer or architect and include proper documentation for the estimated water usage of the proposed business and the recommended water service connection.

Level of Significance

Impacts would be *less than significant with mitigation.*

Impact 4.19-2: Have Sufficient Water Supplies Available to Serve the Project and Reasonably Foreseeable Future Development During Normal, Dry and Multiple Dry Years

The 2015 Urban Water Master Plan (UWMP) provides data of availability of groundwater and surface water supplies (Kings River, San Joaquin River, recycled water) for normal water years,

single dry years, and multiple dry years through 2040). Tables 4.19-5 through 4.19-7 depict these conclusions.

Table 4.19-5
Normal Year Supply and Demand Comparison (af)

	2020	2025	2030	2035	2040
Supply totals (af) (DWR Table 6-9)	308,700	329,900	338,640	345,240	351,840
Demand totals (af) (DWR Table 4-3)	235,700	264,000	274,100	292,900	301,100
Difference (af)	73,000	65,900	64,540	52,340	50,740

Reported volumes are rounded to the nearest 100.

1. The renegotiated 2016 Water Supply Contract with FID limits the maximum available water to the City from the Kings River to 29.0%, or approximately 123,540 af/yr.

Table 4.19-6
Single Dry Year Supply and Demand Comparison (af)

	2020	2025	2030	2035	2040
Supply totals (af)	198,000	216,400	224,400	231,500	238,600
Demand totals (af)	179,900	205,400	212,900	229,100	234,500
Difference (af)	18,100	11,000	11,500	2,400	4,100

Table 4.19-7
Multiple Dry Years Supply and Demand Comparison (af)

		2020	2025	2030	2035	2040
First Year	Supply totals	260,900	280,900	289,500	296,600	303,700
	Demand totals	213,800	217,800	229,300	229,100	234,500
	Difference	47,100	63,100	60,200	67,500	69,200
Second year	Supply totals	271,500	291,700	300,400	307,500	314,600
	Demand totals	225,100	229,200	240,900	231,800	241,400
	Difference	46,400	62,500	59,500	75,700	73,200
Third year	Supply totals	219,200	238,600	249,000	254,100	261,200
	Demand totals	179,900	205,400	212,900	229,100	234,500
	Difference	39,300	33,200	36,100	25,000	26,700
Fourth year	Supply totals	198,000	216,400	224,400	231,500	238,600
	Demand totals	179,900	205,400	212,900	229,100	234,500
	Difference	18,100	11,000	11,500	2,400	4,100

Reported volumes are rounded to the nearest 100.

As shown in Table 4.19-5, through the year 2040, the City would have a surplus of at least 50,740 af of water during normal water years. Table 4.19-6 shows the City's surplus of at least 2,400 af of water during a single dry year through 2040. Table 4.19-7 further shows the City's surplus for each of the five-year periods in multiple dry years, with the 2035 four-year event having the least available water. However, the City water supplies would continue to have a surplus of 2,400 af feet during this event.

As stated in Impact 4.10-1, the estimated water demand for the proposed Project is 208.9-af/yr. Based on the data provided in the 2015 UWMP, the proposed Project would not exceed the projected water demands and availability of the City during normal, single dry-year, or multiple dry-year, and impacts are considered less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be *less than significant.*

Impact 4.19-3: Result in a Determination by the Wastewater Treatment Provider Which Serves or May Serve the Project That It Has Adequate Capacity to Serve the Project's Projected Demand in Addition to the Provider's Existing Commitments

As stated in Impact 4.19-1, above, the City of Fresno would provide wastewater treatment for the proposed Project. As noted in Section 4.10, *Hydrology and Water Quality*, MM 4.10-1 requires the applicant to submit a Wastewater Control Plan, and document the potential for reductions in overall water use by reclamation, the proposed Project will not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. The majority of estimated water demand will be for cultivation. During the cultivation process, water will be used for plant propagation and growing cycles. Mitigation Measure MM 4.10-1, as proposed in Section 4.10, *Hydrology and Water Quality*, will require all cultivation facilities to submit a Wastewater Control Plan (WCP). The estimated 208.9-acre feet of water usage per year used by all cannabis businesses will also be reduced through the compliance with MM 4.10-1. The Wastewater Control Plan also requires the applicants of any cultivation facility to comply with BMPs for the capture and reuse of produced water. Based on information from companies specializing in water reuse systems, using a conservative estimate of 50 percent reduction, the total amount of water that will be produced from cultivation and potentially disposed of via wastewater systems is 104.5-acre feet (0.08 mgd). With implementation of MM 4.10-1 impacts are considered less than significant.

> **MM 4.10-1:** Concurrent with submittal of a conditional use permit for any cultivation facility, the applicant shall submit to the City Planning and Development Department a Wastewater Control Plan (WCP). The WCP shall include best management practices for capture and treatment of runoff (including recycling systems for capture and reuse of produced water,

disclosure of pesticides to be used, and amounts of individual contaminate concentrates that will be disposed of through public wastewater treatment facilities. If contaminate concentrations exceed wastewater standards, pretreatment of wastewater will be required, prior to disposal. The plan shall also outline the materials to be used to create impermeable flooring surfaces and containment directly beneath all cultivation areas and associated walkways.

Mitigation Measures

Implement Mitigation Measure MM 4.10-1.

Level of Significance

Impacts would be *less than significant with mitigation.*

Impact 4.19-4: Generate Solid Waste in Excess of State or Local Standards, or in Excess of the Capacity of Local Infrastructure, or Otherwise Impair the Attainment of Solid Waste Reduction Goals

To determine the amount of solid waste that could be generated by the proposed Project, the analysis uses information provided by the City of Fresno and CalRecycle. The following solid waste generation rates are used for the analysis:

- Commercial/Office/Public Facility = six lbs./1,000 sf /day
- 100,000 sf of Project area would generate 600 lbs of solid waste per day. Mixed Use = six lbs./1,000 sf /day
    - 55,000 sf of Project area would generate 330 lbs of solid waste per day
- Industrial = six lbs/1,000 sf/day
    - 700,000 sf of Project area would 420 lbs of solid waste per day

Implementation of the proposed Project would generate solid waste during potential future construction and operation of new cannabis related businesses. Common construction waste may include metals, masonry, plastic pipe, rocks, dirt, cardboard, or green waste related to land development. AB 939 and Ordinance No. 2003-100 require the City of Fresno to attain specific waste diversion goals. The C&D disposal facilities listed above have available capacity to accept construction waste from potential new facilities.

As noted in Impact 4.9-1, cannabis waste is considered a type of organic waste. There are three State licensing agencies that provide regulations for cannabis waste. These agencies include: Bureau of Cannabis Control, CalCannabis Cultivation Licensing, and Manufactured Cannabis Safety Branch. Based on these agency regulations, a cannabis cultivator is required to dispose of cannabis waste in one of the following methods:

1. On-premises composting of cannabis waste;

2. Collection and processing of cannabis waste by a local agency, a waste hauler franchised or contracted by a local agency, or a private waste hauler permitted by a local agency;

3. Self-haul cannabis waste to one or more of the following:

    a. A manned, fully permitted solid waste landfill or transformation facility;

    b. A manned, fully permitted composting facility or manned composting operation;

    c. A manned, fully permitted in-vessel digestion facility or manned in-vessel digestion operation;

    d. A manned, fully permitted transfer/processing facility or manned transfer/processing operation; or

    e. A manned, fully permitted chip and grind operation or facility.

    f. A recycling center as defined in Title 14, Section 17402.5(d) of the California Code of Regulations and that meets the following:

        i. The cannabis waste received shall contain at least ninety (90) percent inorganic material;

        ii. The inorganic portion of the cannabis waste is recycled into new, reused, or reconstituted products which meet the quality standards necessary to be used in the marketplace; and

        iii. The organic portion of the cannabis waste shall be sent to a facility or operation identified in subsection (c)(1) through (5).

4. Reintroduction of cannabis waste back into agricultural operation through on premises organic waste recycling methods, including but not limited to tilling directly into agricultural land and no-till farming.

Mitigation Measure 4.19-3, below, requires that a cannabis related business which generates four or more cubic yards of commercial solid waste per week, apply a combination of recycling actions to ensure waste streams are reduced.

All requests for cannabis related businesses will require approval of a Conditional Use Permit. The CUP review process ensures compliance with all applicable land use plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect. As Project applications are filed, the Planning Department will evaluate each request and impose project specific conditions of approval. Implementation of Mitigation Measures MM 4.19-2 through MM

4.19-4 would ensure compliance with policies to reduce waste sent to landfills. Therefore, impacts would be less than significant with mitigation.

Mitigation Measures

MM 4.19-2: During construction of future commercial cannabis facilities, the Project applicant shall not store construction waste onsite for longer than the duration of the construction activity or transport any waste to any unpermitted facilities. The Project applicant shall also reduce construction waste transported to landfills by ensuring construction and demolition waste is hauled to one of the six City-approved construction and demolition disposal facilities listed above.

MM 4.19-3: In order to reduce the amount of waste generated from cannabis-related operations being taken to the landfill, the following shall be incorporated into the CUP conditions of approval for each Project:

Businesses generating four cubic yards or more of commercial solid waste per week are required to recycle and take one, or any combination, of the following actions:

1. Subscribe to source separated recycling service with a regional franchise hauler authorized to provide service for the area in which the business is located;

2. Subscribe to a mixed solid waste recycling service with a regional franchise hauler authorized to provide service for the areas in which the business is located;

3. Self-recycle and certify compliance with Ordinance No. 2003-100;

4. Undertake a combination of such measures, or such alternate measures as may be approved by the City to reduce the amount of waste from the commercial sector being taken to a landfill.

MM 4.19-4: Prior to issuance of grading or building permits, the Project applicant shall construct, adequate, segregated, onsite screened storage for collection of commercial solid waste and source separated recyclable materials if constructing new facilities or if existing facilities do not provide such areas. The area shall be designed to be architecturally compatible with the development and shall not prevent security of the recyclables. Driveways and/or travel aisles shall provide, at a minimum, unobstructed access for collection vehicles and personnel. A sign clearly identifying all recycling/solid waste collection and loading areas and the materials accepted shall be posted adjacent to all points of direct access to the area.

Level of Significance

Impacts would be *less than significant with mitigation.*

Impact 4.19-5: Comply with Federal, State, and Local Management and Reduction Statutes and Regulations Related to Solid Waste

Construction and operational activities that generate solid waste are handled, transported, and disposed of in accordance with applicable federal, State, and local regulations pertaining to municipal waste. The 1989 California Integrated Waste Management Act requires jurisdictions to attain specific waste diversion goals (AB 393, 2019). In addition, the California Solid Waste Reuse and Recycling Access Act of 1991, as amended, requires expanded or new development projects to incorporate storage areas for recycling bins into the proposed project design. Reuse and recycling of construction debris would reduce operating expenses and save valuable landfill space. With development in accordance with the City's General Plan, solid waste will continue to be handled, transported, and disposed of according to all applicable federal, State, and local regulation pertaining to municipal waste disposal. The City has a number of provisions that require or promote recycling and waste reduction, including the Construction and Demolition Recycling Ordinance that requires contractors to recycle construction and demolition debris.

In June of 2005, the Fresno City Council adopted the City of Fresno Solid Waste and Recycling Facilities Ordinance (Ord. No. 2003-100) in order to comply with AB 939, which requires the implementation of integrated waste management plans and mandates that local jurisdictions divert at least 50 percent of all solid waste. The recycling of construction and demolition materials is required for any City-issued building, relocation, or demolition permit that generates at least eight cubic yards of material by volume.

Permit holders are required to hire a private collector or solid waste hauler except when there is private collection by any person or company that transports waste and/or recyclables through use of its own transportation, such as a truck and/or trailer, without compensation for such transportation (FMC Section 10-407).

All construction and demolition waste must be hauled to one of the six City-approved C&D disposal facilities listed below.

- Mid Valley Transfer Station Sorted or co-mingled C&D 2721 S. Elm Fresno, CA 93706 (Southwest of Jensen & 41) (559) 237-9425

- Kroeker, Inc. Co-mingled C&D 4627 S. Chestnut Avenue Fresno, CA 93725 (Chestnut / Cedar) (559) 237-3764

- CARTS (Industrial Waste and Salvage, 2019) Co-mingled C&D 3457 S. Cedar Avenue Fresno, CA 93725 (North / Cedar) (559) 233-1158

- Rice Road Recycler & Transfer Station Co-mingled C&D 10463 N. Rice Road Fresno, CA 93720 (Rice Road / Friant)

- Waste Management of Fresno Co-mingled C&D 4333 E. Jefferson Avenue Fresno, CA 93725 (Jefferson / Golden State) (559) 834-4070

- West Coast Waste Wood Waste Only 3077 S. Golden State Frontage Road Fresno, Ca 93725 (North / Golden State Frontage Road) (559) 497-5320

Implementation of the proposed project would generate solid waste during potential future construction and operation of new commercial cannabis facilities. Common construction waste may include metals, masonry, plastic pipe, rocks, dirt, cardboard, or green waste related to land development. AB 939 and Ordinance No. 2003-100 require the City of Fresno to attain specific waste diversion goals. The C&D disposal facilities listed above have available capacity to accept construction waste from potential new facilities.

All requests for commercial cannabis businesses will require a Conditional Use Permit discretionary review., and approval by the City Planning Commission. The CUP review process ensures compliance with all applicable land use plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect. As Project applications are filed, the Planning Department will evaluate each request and impose project specific conditions of approval. Implementation of Mitigation Measures MM 4.19-2 through MM 4.19-4 would ensure compliance with policies to reduce waste sent to landfills. Therefore, impacts would be less than significant with mitigation.

Mitigation Measures

Implement Mitigation Measures MM 4.19-1 through 4.19-4.

Level of Significance

Impacts would be *less than significant with mitigation*.

Cumulative Setting Impacts and Mitigation Measures

CUMULATIVE SETTING

The study area for the analysis of cumulative impacts is the City of Fresno and the unincorporated portions of Fresno County located adjacent to the city limits, as well as portions of the City of Clovis and the County of Madera adjacent to the City of Fresno. The applicable cumulative projections include growth projections from the City of Fresno General Plan, Fresno County General Plan, Madera County General Plan, and the City of Clovis General Plan.

The City of Fresno General Plan was last adopted in the year 2014. Anticipated development within the General Plan includes 186,840 dwelling units, 66.4 million square feet (msf) of commercial/office/public facility, 100,000 sf of mixed uses, and 72.8 msf of industrial uses. The General Plan contains approximately 11,714 acres of agricultural land, 12,288 acres of open space, and 12,522 acres of vacant land. Existing agricultural land is primarily located in the southeastern and western portions of the General Plan.

The General Plan contains two major rail lines that generally traverse in a southeast to northwest direction. These railways include the Union Pacific Railroad line that is generally located along SR-99, and the BNSF Railway that diverges from the SR-99 in the southwest and travels through the Downtown to the northwest. There are three airports located within the City of Fresno including the Fresno-Yosemite International Airport located in the eastern portion of the Planning Area, the Fresno-Chandler Downtown Airport located west of Downtown, and Sierra Sky Park Airport that is located on the northern portion of the General Plan.

The County of Fresno General Plan was last adopted in the year 2000. The County General Plan was prepared to accommodate population growth through the year 2020, consistent with the California Department of Finance projection of 1.1 million by 2020. This represents an additional population of approximately 344,000, which includes the year 2020 projections outside the sphere of influences for cities within the East Valley area, which is located east of Interstate 5. Additional development projects are proposed northeast of the City of Fresno Project area including Friant Ranch that represents an additional population of approximately 164,693 through the year 2020.

The County of Madera General Plan was last adopted in the year 1995. The Madera County General Plan identifies population and employment growth projections through the year 2010 and includes 177,071 people and 61,866 employees. Since the adoption of Madera County's General Plan, substantial new development projects have been proposed in the southern portion of Madera County, some of which is proposed within close proximity of the City of Fresno Project area including Gateway, Gunner Ranch, Liberty Groves, North Fork Village, Tesoro Viejo, and River Ranch Estates. These projects include approximately 23,000 units, and supporting uses such as commercial, public facilities, parks, and open space.

The City of Clovis General Plan was last adopted in the year 2014. The Clovis General Plan forecasts the ultimate buildout of the entire Clovis General Plan area that is expected to occur for at least 70 years. The Clovis General Plan forecasts an additional 65,100 residential units, 179,300 population, and 38,250,000 square feet of buildings.

CUMULATIVE IMPACTS

A small percentage of the Project eligible sites are vacant infill lots that can support new development, all of which are located in existing commercial and industrial zones and in urbanized areas. The majority of the Project eligible sites are fully serviced industrial and commercial lots that have been improved with industrial and commercial uses and buildings. Implementation of the proposed Project may include development of new buildings and sites, and changes to occupancies of existing buildings and sites, which could result in cumulative impacts to utilities and service systems.

CEQA Section 15130(a) states: An EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in Section 15065(a)(3). Where a lead agency is examining a project with an incremental effect that is not "cumulatively

considerable," a lead agency need not consider that effect significant but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

As noted in Impact 4.19-1, Mitigation Measure MM 4.6-1 and 4.6-2 requires a reduction electrical energy demand through a combination of energy efficient construction and potential installation of solar photovoltaic systems. Although electrical energy demand is considered significant and unavoidable due to unnecessary consumption of energy resources, it is not anticipated to create the need to relocate or require new or expanded electrical facilities that could create a significant effect on the environment. Therefore, cumulative impacts to electrical utilities would be less than significant with mitigation.

Surrounding areas could have construction projects of new water or wastewater treatment facilities or other urban development that could cause significant environmental impacts. Currently, the sewer and water conveyance facilities that serve the City of Fresno do not serve areas outside of the City. Based on the water demand of the proposed Project, as detailed in Section 4.10, *Hydrology and Water Quality*, the estimated maximum total water demand of the Project is 208.9-acre feet per year, approximately 0.17 percent of the City's current total water demand. Mitigation Measure MM 4.10-1 will require all cultivation facilities to submit a Wastewater Control Plan (WCP) and reduce overall water use, by an estimated conservative 50 percent. Therefore, with implementation of MM 4.10-1 cumulative development outside of the City is not expected to impact existing or future water, or wastewater facilities, and cumulative impacts be reduced to less-than-significant levels.

The Fresno Metropolitan Flood Control District (FMFCD) extends beyond the current boundaries of the spheres-of-influences for the City of Fresno and City of Clovis. Construction projects that are located immediately adjacent to the FMFCD boundary could have significant environmental impacts. However, as discussed above, the proposed project would not result in potential significant environmental impacts associated with the construction of new storm water drainage facilities, therefore the Project's contribution to cumulative environmental impacts would not be considerable, and the Project would not result in a significant cumulative impact.

The 2012 Kings Basin Integrated Regional Water Management Plan (IRWMP) was developed by the Kings Basin Water Authority, of which the City of Fresno is a member, to provide regional planning and management of water resources in the Kings Basin. Other members of the Kings Basin Water Authority include: Alta Irrigation District, City of Clovis, City of Sanger, City of Dinuba, City of Reedley, City of Parlier, City of Kingsburg, City of Selma, City of Kerman, Fresno County, Tulare County, Consolidated Irrigation District, Fresno Irrigation District, Fresno Metropolitan Flood Control District, Kings County Water District, and Kings River Conservation District. The Kings Water Authority and North Kings Groundwater Sustainability Authority have promulgated a series of goals to maintain a sustainable water supply for the City. The Kings Basin Water Authority has developed a project review process to identify projects, rank their ability to achieve the goals of the Authority as articulated in the Kings Basin IRWMP. The Project will not have cumulative impacts on these facilities; therefore, no cumulative impacts will occur.

All development projects would be required to comply with federal, State, and local statutes and regulations related to solid waste. Pursuant to the California Integrated Waste Management Act of 1989, every city and county in the State is required to divert 50 percent of solid waste generated in its jurisdiction away from landfills (AB 939, 2018). Implementation of source reduction measures, such as recycling, would serve to divert solid waste away from landfills. Cumulative development would be required to comply with existing statutes and regulations, and therefore, cumulative impacts related to solid waste would be less than significant.

Mitigation Measures

Implement Mitigation Measures MM 4.6-1, MM 4.6-2, MM 4.10-1, MM 4.19-1 through MM 4.19-4.

Cumulative Level of Significance

Cumulative impacts would be *less than significant with mitigation.*

4.20 - Wildfire

4.20.1 - INTRODUCTION

This section addresses potential wildfire hazard impacts that may result from the Proposed Regulation and Permitting of Commercial Cannabis Activities (Project). The following discussion addresses existing wildfire hazard conditions of the Project site and surrounding area, considers applicable goals and policies, identifies and analyzes environmental impacts, and recommends any necessary measures to reduce or avoid adverse impacts associated with the implementation of the proposed Project.

A wildfire is a non-structural fire that occurs in vegetative fuels, excluding prescribed fire. Wildfires can occur in undeveloped areas and spread to urban areas where the landscape and structures are not designed and maintained to be ignition resistant. A wildland-urban interface is an area where urban development is located in proximity to open space or "wildland" areas. The potential for wildland fires represents a hazard where development is adjacent to open space or within close proximity to wildland fuels or designated fire severity zones. Fires that occur in wildland-urban interface areas may affect natural resources as well as life and property.

4.20.2 - ENVIRONMENTAL SETTING

Regional Setting

The City of Fresno (City) is located in Fresno County and is situated in the central portion of the San Joaquin Valley, in the State of California. The City encompasses approximately 113 square miles. Fresno is the largest city in Fresno County and has a current estimated population of 536,683 residents (CA Department of Finance, 2019). Fresno County is California's sixth largest county in land area and encompasses approximately 6,011 square miles.

Local Setting

The topography of the City is relatively flat with little topographic variation. It occurs at an elevation of approximately 328 feet above mean sea level (AMSL). The surrounding land is relatively flat with a sharp rise towards the foothills of the Sierra Nevada Mountain Range to the east. State Route (SR) 99 runs northwest-southeast on the western edge of the City, connecting it with Sacramento and Bakersfield. SR-41 runs north-south through the heart of the City, connecting it with Yosemite National Park. SR-168 links the Downtown to Clovis, and SR-180 runs east-west within the southern portion of the City.

The northern border of the City is largely defined by the San Joaquin River, which flows to the Sacramento-San Joaquin River Delta and San Francisco Bay. The eastern border of the City mostly abuts the city limits of the City of Clovis. The western border of the City traverses Highway 99 and passes through western rural residential and agricultural lands of the unincorporated County. The southern boundary extends as far south as Malaga Avenue.

The City center is within Township 14 South, Range 20 East, Mount Diablo Baseline and Meridian and the U.S. Geological Survey 7.5 Minute Fresno South Quadrangle.

The latitude and longitude of the approximate center of the City site is 36.74077° N, -119.78562° E. The Universal Transverse Mercator (UTM) coordinates for the approximate center are Easting 252,462 meters and Northing 4,070,374 meters, in Zone 11S.

Surrounding Land Uses

Surrounding cities include the following:

- **North** – Cities of Madera and Merced;
- **East** – Cities of Clovis and Sanger;
- **South** – Cities of Fowler, Selma, and Kingsburg; and
- **West** – City of Kerman.

4.20.3 - REGULATORY SETTING

Federal

There are no federal regulations that apply to the proposed Project regarding wildfire hazards.

State

California Department of Forestry and Fire Protection (CAL FIRE) protects the people of California from fires, responds to emergencies, and protects and enhances forest, range, and watershed values providing social, economic, and environmental benefits to rural and urban citizens. CAL FIRE's firefighters, fire engines, and aircraft responded to an estimated 6,284 fires in 2018 (CAL FIRE, 2018).

The Office of the State Fire Marshal supports CAL FIRE's mission by focusing on fire prevention. It provides support through a wide variety of fire safety responsibilities including by regulating buildings in which people live, congregate, or are confined; by controlling substances and products which may, in and of themselves, or by their misuse, cause injuries, death, and destruction by fire; by providing statewide direction for fire prevention in wildland areas; by regulating hazardous liquid pipelines; by reviewing regulations and building standards; and by providing training and education in fire protection methods and responsibilities.

Fire regulations for California are established in Sections 13000 et seq. of the California Health and Services Code and include regulations for structural standards (similar to those identified in the California Building Code); fire protection and public notification systems; fire protection devices such as extinguishers and smoke alarms; standards for high-rise structures and childcare facilities; and fire suppression training. The State Fire Marshal is responsible for enforcement of these established regulations and building standards for all State-owned buildings, State-occupied buildings, and State institutions within California.

CALIFORNIA FIRE CODE

The 2016 California Fire Code (Title 24, Part 9 of the California Code of Regulations) establishes regulations to safeguard against the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises. The Fire Code also establishes requirements intended to provide safety for and assistance to firefighters and emergency responders during emergency operations. The provisions of the Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure throughout California. The Fire Code includes regulations regarding fire-resistance-rated construction, fire protection systems such as alarm and sprinkler systems, fire services features such as fire apparatus access roads, means of egress, fire safety during construction and demolition, and wildland-urban interface areas.

FIRE HAZARD SEVERITY ZONES

Fire Hazard Severity Zones (FHSZs) are areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors that have been mapped by the California Department of Forestry and Fire Protection (CAL FIRE) under the direction of (Public Resources Code (PRC) 4201-4204 and Government Code 51175-89. FHSZs are ranked from moderate to very high and are categorized fire protection as within a Federal Responsibility Area (FRA) under the jurisdiction of a Federal agency, within a State Responsibility Area (SRA) under the jurisdiction of CAL FIRE, or within a Local Responsibility Area (LRA) under the jurisdiction of a local agency. There are no FHSZ located in the City of Fresno. The nearest FHSZ is located approximately one-half mile north of Fresno city limits (Cal Fire, 2018).

SENATE BILL 1241

In 2012, Senate Bill 1241 added Section 66474.02 to Title 7 Division 2 of the California Government Code, commonly known as the Subdivision Map Act. The statute prohibits subdivision of parcels designated very high fire hazard, or that are in a State Responsibility Area, unless certain findings are made prior to approval of the tentative map. The statute requires that a city or county planning commission make three new findings regarding fire hazard safety before approving a subdivision proposal. The three findings are, in brief: (1) the design and location of the subdivision and its lots are consistent with defensible space regulations found in PRC Section 4290-91, (2) structural fire protection services will be available for the subdivision through a publicly funded entity, and (3) ingress and egress road standards for fire equipment are met per any applicable local ordinance and PRC Section 4290.

Local

CITY OF FRESNO GENERAL PLAN

The goals, policies, and implementation measures in the City of Fresno General Plan pertaining to wildfire hazard risk and safety.

Chapter 9. Noise and Safety

HAZARDOUS MATERIALS

Objective NS-4. Minimize the risk of loss of life, injury, serious illness, and damage to property resulting from the use, transport, treatment, and disposal of hazardous materials and hazardous wastes.

Policy NS-4-a. Require safe processing and storage of hazardous materials, consistent with the California Building Code and the Uniform Fire Code, as adopted by the City.

Policy NS-4-b. Maintain a close liaison with the Fresno County Environmental Health Department, Cal-EPA Division of Toxics, and the State Office of Emergency Services to assist in developing and maintaining hazardous material business plans, inventory statements, risk management prevention plans, and contingency/emergency response action plans.

Policy NS-4-e. 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.

CITY OF FRESNO MUNICIPAL CODE

Chapter 10, Article 5 – Fire Prevention

The City of Fresno has adopted, by reference, portions of the California Building Standards Code and the International Fire Code, with modifications and amendments. The purpose of this code is to prescribe the minimum requirements necessary to establish a reasonable level of fire safety to protect life and property from hazards created by fire, explosion, and dangerous conditions.

Section 10-1510 Defensible Space Requirements

"Defensible space" is the area within the perimeter of a parcel where basic wildfire protection practices are implemented, providing the key point of defense from an approaching wildfire or escaping structure fire. Defensible space can be created by removing dead vegetation, separating fuels, and pruning lower limbs.

FRESNO COUNTY CUPA OPERATIONAL AREA PLAN

The County of Fresno, Department of Public Health, Environmental Health Division 2016 Area Plan for Emergency Response to Hazardous Materials Incidents (Area Plan) was prepared pursuant to the California Health and Safety Code (HSC), which requires administering agencies to establish an Area Plan for emergency response to a release or threatened release of a hazardous material within its jurisdiction.

The Fresno County Department of Public Health, Environmental Health Division Fresno County CUPA was designated as the Certified Unified Program Agency (CUPA) for the County of Fresno by the State Secretary for Environmental Protection Agency. The Fresno County CUPA is the local administrative agency that coordinates the regulation of hazardous materials and hazardous wastes in Fresno County through the following six programs:

- Hazardous Materials Business Plans (HMBP);
- Hazardous Waste Generator (HWG);
- Onsite Hazardous Waste Treatment (Tiered Permitting);
- Underground Storage Tank (UST);
- Aboveground Petroleum Storage Act (APSA); and
- California Accidental Release Prevention (CalARP)

The Fresno County CUPA service area includes 15 cities covering 200 square miles. The population of the unincorporated area is approximately 170,459, and the area includes significant wildland areas as well as residential and commercial occupancies. In addition to the 5,811 square-mile unincorporated area, the 15 cities covered in this Area Plan include Clovis, Coalinga, Firebaugh, Fowler, Fresno, Huron, Kerman, Kingsburg, Mendota, Orange Cove, Parlier, Reedley, San Joaquin, Sanger, and Selma.

The Fresno County CUPA collects information disclosed by businesses for verification and provides it to agencies that are responsible for the protection of public health and safety and the environment, including fire departments, hazardous materials response teams and other local environmental regulatory groups, who then have immediate access to chemical inventories and facility site maps in the region in case of a spill, fire or other incident. During a hazardous materials incident this information is used to supplement the Area Plan at fixed facilities. By developing hazardous materials emergency response plans, both businesses and government agencies are better prepared for a coordinated response to hazardous materials incidents, thus minimizing potential risks to life, the environment, and property.

CITY OF FRESNO FIRE DEPARTMENT

In 2018, the City of Fresno Fire Department (FFD) responded to 45,049 incidents (City of Fresno Fire Department, 2019). Of these incidents, 3,575 calls were for fire suppression. Seventy-two percent of structure fire calls were reached within four minutes, while 65 percent of all fire calls were reached within four minutes.

4.20.4 - IMPACTS AND MITIGATION MEASURES

This section analyzes the impacts associated with implementation of the proposed Project related to the risk of exposure to wildfire. The impact analysis describes the methods used to determine the Project's impacts and lists the thresholds used to conclude the significance of an impact. Measures to mitigate (avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion, as appropriate.

Methodology

This analysis is based on publicly available data provided by CAL FIRE, City of Fresno, Fresno County, and other publicly available information.

Thresholds of Significance

Appendix G of the California Environmental Quality Act (CEQA) Guidelines as amended contain analysis guidelines related to the assessment of wildfire hazards impacts. If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project:

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; or

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.

Project Impacts

The Project includes the cultivation, distribution, manufacturing, testing, and retail sales of commercial cannabis. Project related traffic could interfere with emergency response to the Project area or emergency evacuation procedures in the event of an emergency such as a wildfire, a natural gas pipeline explosion, or a chemical spill within or adjacent to the Project area. New cannabis retail business construction-related traffic could also potentially interfere with emergency response to any residences or businesses in the Project area.

Impact 4.20-1: Substantially Impair an Adopted Emergency Response Plan or Emergency Evacuation Plan

Project related development will be reviewed and approved in compliance with the City's Municipal Code and General Plan, which includes assuring that emergency vehicles have access to the Project area. During project operation, businesses will be required to comply with the applicable neighborhood responsibility plan to ensure that the proposed use and its operating characteristics are not detrimental to the public health, safety, convenience, or welfare. Emergency response vehicles will have access to each site in accordance with City of Fresno Development Standards, Building Codes and standards established by the City of Fresno Fire Department. Therefore, the Project would result in a less-than-significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be *less than significant.*

Impact 4.20-2: Due to Slope, Prevailing Winds, and Other Factors, Exacerbate Wildfire Risks, and Thereby Expose Project Occupants to, Pollutant Concentrations from a Wildfire or the Uncontrolled Spread of a Wildfire

As detailed in the City of Fresno Map Atlas Existing Conditions Report (August 2011), although the City of Fresno is proximate to 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 prone to wildfires due to relatively steep terrain/vegetation, and these areas are classified as high fire hazard areas (Fresno General Plan, 2014).

State Responsibility Areas (SRA) are recognized by the Board of Forestry and Fire Protection as areas where CAL FIRE is the primary emergency response agency responsible for fire suppression and prevention. According to available data, the Project area is not in a designated State Responsibility Area (SRA) or Fire Hazard Severity Zone (FHSZ). The Project area is entirely located in a Local Responsibility Area (LRA) and has been designated as Non-Wildland (Cal Fire, 2018).

As noted in Section 4.15, *Public Services*, The City of Fresno Fire Department has 20 fire stations located throughout the City and includes a Hazardous Materials Response Team (HMRT). There are 48F firefighters on duty daily providing fire suppression, emergency medical service, rescue, and fire prevention and education to approximately 220,000 people.

The operation of the Project would pose minimal wildfire risk during construction or business operations in the Project area. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be *less than significant*.

Impact 4.20-3: Require the Installation or Maintenance of Associated Infrastructure (Such as Roads, Fuel Breaks, Emergency Water Sources, Power Lines or Other Utilities) that may Exacerbate Fire Risk or that may Result in Temporary or Ongoing Impacts to the Environment.

The City of Fresno is urbanized, and predominantly developed. As noted in Impact 4.20-2, the Project area is not in a designated SRA or FHSZ and is designated as Non-Wildland by CAL FIRE. This designation indicates a low risk of wildfires. All new commercial cannabis uses would be required to comply with federal, State, and local health and safety regulations, development standards, building codes, and other laws and regulations that govern fire protection. Included in these regulations are the adopted NFPA Fire Code, referred to as NFPA 1. NFPA 1 includes Chapter 38 (Marijuana Growing, Processing, and Extraction Facilities), specifically to address fire and safety related issues for cannabis facilities. This chapter includes specific requirements relating to ozone generators used for odor control, fumigation, pesticide application, egress and ingress, rooms used for cannabis extraction (including LPG extraction), gas detection systems, storage, and flammable and combustible liquid extraction.

All Project related construction will meet or exceed all federal, State and local regulations and codes related to fire protection and suppression. Additionally, the Project would not require the installation or maintenance of associated infrastructure and will not exacerbate fire risk that may result in impacts to the environment. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be *less than significant.*

Impact 4.20-4: Expose People or Structures to Significant Risks, Including Downslope or Downstream Flooding or Landslides, as a Result of Runoff, Post-fire Slope Instability, or Drainage Changes

As noted previously in Section 3.3, *Project Environmental Setting*, the topography of the site is relatively flat with little topographic variation. It occurs at an elevation of approximately 550 feet above mean sea level (AMSL). The surrounding land is relatively flat with a slight upwards slope towards the foothills of the Sierra Nevada Mountain Range to the east. Therefore, there is minimal risk of landslides.

The Project is predominantly urbanized with non-developed areas under agricultural crops cultivation and orchards, with non-native, invasive grasses in some non-developed areas.

As noted in Section 4.7, *Geology and Soils* for those sites that are undeveloped, construction of the Project could involve excavation, soil stockpiling, mass and fine grading, and the installation of associated infrastructure. During site grading and construction activities, large areas of bare soil could be exposed to erosive forces for long periods of time. Construction activities involving soil disturbance, excavation, cutting/filling, stockpiling, and grading activities could result in increased erosion and sedimentation to surface waters.

The proposed Project could alter the existing drainage patterns, which would have the potential to result in erosion, siltation, or flooding on or offsite. The disturbance of soils during construction could cause erosion, resulting in temporary construction impacts. In addition, the placement of permanent structures could affect drainage in the long-term.

In order to reduce potential impacts during construction activities, Mitigation Measure MM 4.10-1 requires submittal of a conditional use permit for any cultivation facility.

> **MM 4.10-1:** Concurrent with submittal of a conditional use permit for any cultivation facility, the applicant shall submit to the City Planning and Development Department a Wastewater Control Plan (WCP). The WCP shall include best management practices for capture and treatment of runoff (including recycling systems for capture and reuse of produced water, disclosure of pesticides to be used, and amounts of individual contaminate concentrates that will be disposed of through public wastewater treatment facilities. If contaminate concentrations exceed wastewater standards, pretreatment of wastewater will be required, prior to disposal. The plan shall also outline the materials to be used to create impermeable flooring surfaces and containment directly beneath all cultivation areas and associated walkways.

The application will include a Wastewater Control Plan that includes BMPs for capture and treatment of runoff including recycling systems for capture and reuse of produced water. In addition, when applicable, applicants are required to file a Notice of Intent to comply with the NPDES General Construction Permit and prepare a SWPPP. A SWPPP would include BMPs targeted at minimizing and controlling construction and post-construction runoff and erosion to the maximum extent practicable. Therefore, with implementation of MM 4.10-1, impacts regarding runoff would be less than significant.

Regarding drainage impacts, as noted in Section 4.10, *Hydrology and Water Quality*, the Project does not propose any activities that would impact canals or the river or result in adverse changes to the streams and creeks in the Project area. With adherence to existing City ordinances and regulations regarding usage and construction activities (requirement of SWPPPs, drainage plans, slope stability reporting, etc.), no alterations of streams or rivers, which would result in substantial erosion or siltation, will occur. Therefore, impacts would be less than significant.

Mitigation Measures

Implement MM 4.10-1.

Level of Significance after Mitigation

Impacts would *be less than significant with mitigation incorporated*.

Cumulative Setting Impacts and Mitigation Measures

CUMULATIVE SETTING

The study area for the analysis of cumulative impacts is the City of Fresno and the unincorporated portions of Fresno County located adjacent to the city limits, as well as portions of the City of Clovis and the County of Madera adjacent to the City of Fresno. The applicable cumulative projections include growth projections from the City of Fresno General Plan, Fresno County General Plan, Madera County General Plan, and the City of Clovis General Plan.

The City of Fresno General Plan was last adopted in the year 2014. Anticipated development within the General Plan includes 186,840 dwelling units, 66.4 million square feet (msf) of commercial/office/public facility, 100,000 square feet of mixed uses, and 72.8 msf of industrial uses. The General Plan contains approximately 11,714 acres of agricultural land, 12,288 acres of open space, and 12,522 acres of vacant land. Existing agricultural land is primarily located in the southeastern and western portions of the General Plan.

The General Plan contains two major rail lines that generally traverse in a southeast to northwest direction. These railways include the Union Pacific Railroad line that is generally located along SR-99, and the BNSF Railway that diverges from the SR-99 in the southwest and travels through the Downtown to the northwest. There are three airports located within the City of Fresno including the Fresno-Yosemite International Airport located in the eastern portion of the Planning Area, the Fresno-Chandler Downtown Airport located west of Downtown, and Sierra Sky Park Airport that is located on the northern portion of the General Plan.

The County of Fresno General Plan was last adopted in the year 2000. The County General Plan was prepared to accommodate population growth through the year 2020, consistent with the California Department of Finance projection of 1.1 million by 2020. This represents an additional population of approximately 344,000, which includes the year 2020 projections outside the sphere of influences for cities within the East Valley area, which is located east of Interstate 5. Additional development projects are proposed northeast of the City of Fresno Project area including Friant Ranch that represents an additional population of approximately 164,693 through the year 2020.

The County of Madera General Plan was last adopted in the year 1995. The Madera County General Plan identifies population and employment growth projections through the year 2010 and includes 177,071 people and 61,866 employees. Since the adoption of Madera County's General Plan, substantial new development projects have been proposed in the southern portion of Madera County, some of which is proposed within close proximity of the City of Fresno Project area including Gateway, Gunner Ranch, Liberty Groves, North Fork Village, Tesoro Viejo, and River Ranch Estates. These projects include approximately 23,000 units, and supporting uses such as commercial, public facilities, parks, and open space.

The City of Clovis General Plan was last adopted in the year 2014. The Clovis General Plan forecasts the ultimate buildout of the entire Clovis General Plan area that is expected to occur

for at least 70 years. The Clovis General Plan forecasts an additional 65,100 residential units, 179,300 population, and 38,250,000 square feet of buildings.

CUMULATIVE IMPACTS

CEQA Section 15130(a) states: An EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in Section 15065(a)(3). Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

The Project area and surrounding area is relatively flat, with little topographic elevation or features. The area is located in an LRA and has been designated as Non-Wildland/Non-Urban, with minimal risk of wildfire.

In order to reduce potential impacts during construction activities, Mitigation Measure MM 4.10-1 requires submittal of a conditional use permit for any cultivation facility and develop a Wastewater Control Plan that includes BMPs for capture and treatment of runoff including recycling systems for capture and reuse of produced water. All new construction activities within the Project area are also required to comply with the NPDES General Construction Permit and prepare a SWPPP, when applicable. A SWPPP would include BMPs targeted at minimizing and controlling construction and post-construction runoff and erosion. Other proposed cumulative development projects would be required to comply with all federal, State and local regulations and codes. This impact does not have the potential to combine with impacts of other projects because of the localized nature of the impacts, and because appropriate safety, cleanup, and disposal methods would be implemented to reduce the impact to a level that would not combine with impact of other projects. Therefore, impacts of the proposed Project would not combine with impacts from past, present, or reasonably foreseeable projects to result in a cumulative impact.

Mitigation Measures

Implement MM 4.10-1.

Cumulative Level of Significance

Cumulative impacts would be *less than significant with mitigation.*

CHAPTER 5 - CONSEQUENCES OF PROJECT IMPLEMENTATION

5.1 - Environmental Effects Found to be Less than Significant

Section 15128 of the California Environmental Quality Act (CEQA) Guidelines requires that an Environmental Impact Report (EIR) "contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR."

The City of Fresno has engaged the public in the scoping of the environmental document. Comments received during scoping have been considered in the process of identifying issue areas that should receive attention in the EIR. The contents of this EIR were established based on the Notice of Preparation (NOP) prepared in accordance with the CEQA Guidelines and on public and agency input received during the scoping process.

After further study and environmental review in this EIR, direct and indirect impacts of the proposed project (not including cumulative impacts) would be less than significant or could be reduced to less-than-significant levels with mitigation measures for the resource areas listed below.

5.1.1 - POTENTIAL FOR LESS-THAN-SIGNIFICANT IMPACTS TO OCCUR

Aesthetics

- Impact 4.1-1: Have a Substantial Adverse Effect on a Scenic Vista
- Impact 4.1-2: Substantially Damage Scenic Resources, Including, but not Limited to, Trees, Rock Outcroppings, and Historic Buildings Within a State Scenic Highway
- Impact 4.1-3: 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
- Impact 4.1-4: Create a New Source of Substantial Light or Glare Which Would Adversely Affect Day or Nighttime Views in the Area

Air Quality

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

Biological Resources

- Impact 4.4-4: Interfere Substantially with the Movement of any Native Resident or Migratory Fish or Wildlife Species or with Established Native Resident or Migratory Wildlife Corridors, or Impede the Use of Native Wildlife Nursery Sites

Geology and Soils

- Impact 4.7-1: Directly or Indirectly Cause Potential Substantial Adverse Effects, Including the Risk of Loss, Injury, or Death Involving the Rupture of a Known Earthquake Fault
- Impact 4.7-2: Directly or Indirectly Cause Potential Substantial Adverse Effects, Including the Risk of Loss, Injury, or Death Involving Strong Seismic Ground Shaking
- Impact 4.7-3: Directly or Indirectly Cause Potential Substantial Adverse Effects, Including the Risk of Loss, Injury, or Death Involving Seismic-related Ground Failure, Including Liquefaction
- Impact 4.7-4: Directly or Indirectly Cause Potentially Substantial Adverse Effects, Including the Risk of Loss, Injury, or Death Involving Landslides
- Impact 4.7-5: Result in Substantial Soil Erosion or Loss of Topsoil
- Impact 4.7-6: 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 Offsite Landslide, Lateral Spreading, Subsidence, Liquefaction, or Collapse
- Impact 4.7-7: Be Located on Expansive Soil, as Defined in Table 18-1-B of the Uniform Building Code (1994), Creating Substantial Direct or Indirect Risks to Life or Property
- Impact 4.7-8: 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

Hazards and Hazardous Materials

- Impact 4.9-5: For a Project Located Within an Airport Land Use Plan or, Where Such a Plan Has Not Been Adopted, Within Two Miles of a Public Airport or Public Use Airport, Would the Project Result in a Safety Hazard or Excessive Noise for People Residing or Working in the Project Area
- Impact 4.9-6: Impair Implementation of, or Physically Interfere with, an Adopted Emergency Response Plan or Emergency Evacuation Plan

- Impact 4.9-7: Expose People or Structures, Either Directly or Indirectly, to a Significant Risk of Loss, Injury, or Death Involving Wildland Fires

Hydrology and Water Quality

- Impact 4.10-3(i): Substantially Alter the Existing Drainage Pattern of the Site or Area, Including Through the Alteration of the Course of a Stream or River, or Through the Addition of Impervious Surfaces, in a Manner Which Would: Result in Substantial Erosion or Siltation On- or Off-Site

- Impact 4.10-3(ii): Substantially Alter the Existing Drainage Pattern of the Site or Area, Including the Alteration of the Course of a Stream or River or Through the Addition of Impervious Surfaces, or Substantially Increase the Rate or Amount of Surface Runoff in a Manner Which Would Result in Flooding On- Or Off-Site

- Impact 4.10-4: In Flood Hazard, Tsunami, or Seiche Zones, Risk Release of Pollutants Due to Project Inundation

- Impact 4.10-5: Conflict with or Obstruct Implementation of a Water Quality Control Plan or Sustainable Groundwater Management Plan

Land Use and Planning

- Impact 4.11-1: Physically Divide an Established Community

- Impact 4.11-2: Cause a Significant Environmental Impact Due to a Conflict with Any Land Use Plan, Policy, or Regulation Adopted for the Purpose of Avoiding or Mitigating an Environmental Effect

Mineral Resources

- Impact 4.12-1: Result in the Loss of Availability of a Known Mineral Resource that Would be of Value to the Region and the Residents of the State

- Impact 4.12-2: Result in the Loss of Availability of a Locally Important Mineral Resource Recovery Site Delineated on a Local General Plan, Specific Plan, or Other Land Use Plan

Noise

- Impact 4.13-2: Generation of Excessive Groundborne Vibration or Groundborne Noise Levels

- Impact 4.13-3: For a Project Located Within the Vicinity of a Private Airstrip or an Airport Land Use Plan or, Where Such a Plan has Not Been Adopted, Within Two Miles of a Public

Airport or Public Use Airport, Would the Project Expose People Residing or Working in the Project Area to Excessive Noise Levels

Population and Housing

- Impact 4.14-1: Induce Substantial Unplanned Population Growth in an Area, Either Directly or Indirectly

- Impact 4.14-2: Displace Substantial Number of Existing People or Housing Necessitating the Construction

Public Services

- Impact 4.15-2: Result in Substantial Adverse Physical Impacts Associated with the Provision of New or Physically Altered Governmental Facilities, Need for New or Physically Altered Governmental Facilities, the Construction of Which Could Cause Significant Environmental Impacts in order to Maintain Acceptable Service Ratios, Response Times, or Other Performance Objectives for Police Protection Services

- Impact 4.15-3: Result in Substantial Adverse Physical Impacts Associated with the Provision of New or Physically Altered Governmental Facilities, Need for New or Physically Altered Governmental Facilities, the Construction of Which Could Cause Significant Environmental Impacts in Order to Maintain Acceptable Service Ratios, Response Times, or Other Performance Objectives for School Services

- Impact 4.15-4: Result in Substantial Adverse Physical Impacts Associated with the Provision of New or Physically Altered Governmental Facilities, Need for New or Physically Altered Governmental Facilities, the Construction of Which Could Cause Significant Environmental Impacts in order to Maintain Acceptable Service Ratios, Response Times, or Other Performance Objectives for Park Services

Utilities and Service Systems

- Impact 4.19-2: Have Sufficient Water Supplies Available to Serve the Project from Existing Entitlements and Resources, or Would New or are New or Expanded Entitlements Needed

Wildfire

- Impact 4.20-1: Substantially Impair an Adopted Emergency Response Plan or Emergency Evacuation Plan

- Impact 4.20-2: Due to Slope, Prevailing Winds, and Other Factors, Exacerbate Wildfire Risks, and Thereby Expose Project Occupants to, Pollutant Concentrations from a Wildfire or the Uncontrolled Spread of a Wildfire

- Impact 4.20-3: Require the Installation or Maintenance of Associated Infrastructure (Such as Roads, Fuel Breaks, Emergency Water Sources, Power Lines or Other Utilities) that may Exacerbate Fire Risk or that may Result in Temporary or Ongoing Impacts to the Environment

5.1.2 - Potential for Less-than-Significant Impacts to Occur with Incorporation of Mitigation Measures

Potential environmental effects of the Project and mitigation measures are discussed in detail in Chapter 4 of this EIR. After full analysis, the following effects were determined to be less than significant with the incorporation of mitigation measures.

Agriculture and Forest Resources

- Impact 4.2-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as Shown on the Maps Prepared Pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to Non-Agricultural Use

- Impact 4.2-5: Involve Other Changes in the Existing Environment Which, Because of Their Location or Nature, Could Result in Conversion of Farmland to Non-Agricultural Use or Conversion of Forest Land to Non-Forest Use

Air Quality

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

Biological Resources

- Impact 4.4-1: Have a Substantial Adverse Effect, Either Directly or through Habitat Modifications, on any Species Identified as a Candidate, Sensitive, or Special Status Species in Local or Regional Plans, Policies, or Regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service

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

Cultural Resources

- Impact 4.5-1: Cause a Substantial Adverse Change in the Significance of a Historical Resource Pursuant to Section 15064.5

- Impact 4.5-2: Cause a Substantial Adverse Change in the Significant of an Archaeological Resource Pursuant to Section 15064.5

- Impact 4.5-3: Disturb any Human Remains, including those Interred Outside of Dedicated Cemeteries

Energy

- Impact 4.6-1: Result in Potentially Significant Environmental Impact Due to Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources, During Project Construction or Operation

- Impact 4.6-2: Conflict with or Obstruct a State or Local Plan for Renewable Energy or Energy Efficiency

Geology and Soils

- Impact 4.7-9: Directly or Indirectly Destroy a Unique Paleontological Resource or Site or Unique Geologic Feature

Greenhouse Gas Emissions

- Impact 4.8.2: Conflict with Any Applicable Plan, Policy or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases

Hazards and Hazardous Materials

- Impact 4.9-1: Create a Significant Hazard to the Public or the Environment Through the Routine Transport, Use, or Disposal of Hazardous Materials

- Impact 4.9-2: Create a Significant Hazard to the Public or the Environment Through Reasonably Foreseeable Upset and Accident Conditions Involving the Release of Hazardous Materials into the Environment

- Impact 4.9-3: Emit Hazardous Emissions or Handle Hazardous or Acutely Hazardous Materials, Substances, or Waste Within One-Quarter Mile of an Existing or Proposed School

- Impact 4.9-4: Create a Hazard to Public or the Environment as a Result of Being Located on a Site that is Included on a List of Hazardous Material Sites Compiled Pursuant to Government Code Section 65962.5

Hydrology and Water Quality

- Impact 4.10-1: Violate Any Water Quality Standards or Waste Discharge Requirements or Otherwise Substantially Degrade Surface or Groundwater Quality

- Impact 4.10-2: Substantially Decrease Groundwater Supplies or Interfere Substantially with Groundwater Recharge Such That the Project May Impede Sustainable Groundwater Management of the Basin

- Impact 4.10-3(iii): Substantially Alter the Existing Drainage Pattern of the Site or Area, Including Through the Alteration of the Course of a Stream or River or Through the Addition of Impervious Surfaces, in a Manner Which Would Create or Contribute Runoff Water Which Would Exceed the Capacity of Existing or Planned Stormwater Drainage Systems or Provide Substantially Additional Sources of Polluted Runoff

- Impact 4.10-3(iv): Substantially Alter the Existing Drainage Pattern of the Site or Area, Including Through the Alteration of the Course of a Stream or River or Through the Addition of Impervious Surfaces, in a Manner Which Would impede or redirect flood flows

Noise

- Impact 4.13-1: Generation of a Substantial Temporary or Permanent Increase in Ambient Noise Levels in the Vicinity of the Project in Excess of Standards Established in the Local General Plan or Noise Ordinance or Applicable Standards of Other Agencies

Public Services

- Impact 4.15-1: Result in Substantial Adverse Physical Impacts Associated with the Provision of New or Physically Altered Governmental Facilities, Need for New or Physically Altered Governmental Facilities, the Construction of Which Could Cause Significant Environmental Impacts in order to Maintain Acceptable Service Ratios, Response Times, or Other Performance Objectives for Fire Protection

- Impact 4.15-5: Result in Substantial Adverse Physical Impacts Associated with the Provision of New or Physically Altered Governmental Facilities, Need for New or Physically Altered Governmental Facilities, the Construction of Which Could Cause Significant Environmental Impacts in order to Maintain Acceptable Service Ratios, Response Times, or Other Performance Objectives for Other Public Facilities

Transportation

- Impact 4.17-1: Conflict with a Program, Plan, Ordinance, or Policy Addressing the Circulation System, Including Transit, Roadway, Bicycle and Pedestrian Facilities

- Impact 4.17-2: Conflict or be Inconsistent with CEQA Guidelines 15064.3, Subdivision (b)

- Impact 4.17-3: Substantially Increase Hazards Due to a Geometric Design Feature or Incompatible Uses

- Impact 4.17-4: Result in Inadequate Emergency Access

Tribal Cultural Resources

- Impact 4.18-1: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource, Defined in Public Resources Code Section 21074 as Either a Site, Feature, Place, Cultural Landscape that is Geographically Defined in Terms of the Size and Scope of the Landscape, Sacred Place, or Object with Cultural Value to a California Native American Tribe, and that is Listed or Eligible for Listing in the California Register of Historical Resources, or in a Local Register of Historical Resources as Defined in Public Resources Code Section 5020.1(k)

- Impact 4.18-2: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource, Defined in Public Resources Code Section 21074 as Either a Site, Feature, Place, Cultural Landscape that is Geographically Defined in Terms of the Size and Scope of the Landscape, Sacred Place, or Object with Cultural Value to a California Native American Tribe, and that is a Resource Determined by the Lead Agency, in its Discretion and Supported by Substantial Evidence, to be Significant Pursuant to Criteria Set Forth in Subdivision (c) of Public Resources Code Section 5024.1. In Applying the Criteria Set Forth in Subdivision (c) of Public Resource Code Section 5024.1

Utilities and Service Systems

- Impact 4.19-1: Require or Result in the Relocation or Construction of New or Expanded Water, Wastewater Treatment or Storm Water Drainage, Electric Power, Natural Gas, or Telecommunications Facilities, the Construction or Relocation of Which Could Cause Significant Environmental Effects

- Impact 4.19-3: Result in a Determination by the Wastewater Treatment Provider Which Serves or May Serve the Project That It Has Adequate Capacity to Serve the Project's Projected Demand in Addition to the Provider's Existing Commitments

- Impact 4.19-4: Generate Solid Waste in Excess of State or Local Standards, or in Excess of the Capacity of Local Infrastructure, or Otherwise Impair the Attainment of Solid Waste Reduction Goals

- Impact 4.19-5: Comply with Federal, State, and Local Management and Reduction Statutes and Regulations Related to Solid Waste

Wildfire

- Impact 4.20-4: Expose People or Structures to Significant Risks, Including Downslope or Downstream Flooding or Landslides, as a Result of Runoff, Post-fire Slope Instability, or Drainage Changes

5.1.3 - SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED

Section 15126.2(b) of the CEQA Guidelines requires that the EIR describe any significant impacts, including those that can be mitigated but not reduced to less-than-significant levels. Potential environmental effects of the project and proposed mitigation measures are discussed in detail in Chapter 4, *Environmental Analysis*, of this EIR.

The environmental impacts determined to be significant and unavoidable and described in Table 5-1, *Summary of Significant Impacts of the Proposed Project*.

Table 5-1
Summary of Significant Impacts of the Proposed Project

Resources	Project Impacts	Cumulative Impacts
Air Quality Impact 4.3-1	NOx emissions during construction would result in temporary increases above the established thresholds. NOx emissions during project operation would exceed SJVAPCD thresholds. Since the project would conflict with the applicable air quality plans by generating criteria pollutants, temporary (construction) and permanent (operation) impacts are considered **significant and unavoidable.**	Although implementation of mitigation measures 4.3.4-1 and 4.3.4-4 are expected to reduce emissions, exact construction and operational mitigation is on an individual project basis and is unknown at this time. It would be speculative to conclude emissions could be reduced to below the threshold for the total buildout of the Project. For these reasons, the proposed Project would have a **significant and unavoidable** cumulatively considerable contribution to conflicting with implementation of an applicable air quality plan.
Air Quality Impact 4.3-2	NOx emissions during construction would result in temporary increases above the established thresholds. NOx emissions during project operation would exceed SJVAPCD thresholds. Since the project would generate criteria pollutants for which the project region is under non-attainment, temporary (construction) and permanent (operation) impacts are considered **significant and unavoidable.**	Although implementation of mitigation measures 4.3.4-1 and 4.3.4-4 are expected to reduce emissions, exact construction and operational mitigation is on an individual project basis and is unknown at this time. It would be speculative to conclude emissions could be reduced to below the threshold for the total buildout of the Project. For these reasons, the proposed Project would have a

Resources	Project Impacts	Cumulative Impacts
		significant and unavoidable cumulatively considerable contribution to increasing criteria pollutants for which the region is in nonattainment.
Greenhouse Gas Emissions Impact 4.8-1	Although implementation of these mitigation measures are expected to reduce emissions that can impact greenhouse gases, the proposed Project's preliminary GHG analysis demonstrates that the Project will not meet a 29% reduction in GHG emissions from BAU. Therefore, GHG emissions would be considered **significant and unavoidable**.	Although many other agencies with the necessary jurisdiction are currently taking action to reduce GHG emissions, the City cannot assure that these measures would ultimately be implemented or sufficient to address climate change. Therefore, GHG emissions would be considered **cumulatively significant and unavoidable**.

5.2 - Growth Inducing Impacts

The City of Fresno General Plan recognizes that certain forms of growth are beneficial, both economically and socially. Section 15126.2(d) of the CEQA Guidelines provides the following guidance on growth-inducing impacts: a project is identified as growth inducing if it "could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment."

Growth inducement can be a result of new development that requires an increase in dwelling units or an increase in employment, removes barriers to development, or provides resources that lead to secondary growth. The Project would add new cannabis related business uses throughout the City, but no residential uses are included in the proposed project. Growth inducement is discussed in detail in Section 4.14, *Population and Housing*, of this EIR.

With respect to residential land uses, the Project does not include the addition of any residentially designated uses nor does it include typical elements that would directly or indirectly affect population or housing (i.e. extension of roads or other infrastructure). The Project would accordingly not directly result in population growth of the City.

With respect to employment during construction, the proposed Project would add approximately 2,114 new jobs, which accounts for a 0.05 percent increase in the number of jobs in the Fresno MSA. The jobs created by these industries will primarily employ persons living within the City. It is anticipated that the majority of the jobs will be filled by existing City or County residents; some employees would come from the region and commute, while a small number would relocate to the City. This small number of new residents is anticipated by the General Plan.

Therefore, this Project would not result in a large increase in employment. In addition, the Project is situated in urbanized areas within the City of Fresno where substantial employment and housing opportunities currently exist. The Project would accordingly accommodate planned growth, and not induce unplanned growth.

With respect to removing barriers to development, such as through providing access to previously undeveloped areas, the Project is not anticipated to result in significant growth inducement. The Project does not include the construction of infrastructure that could provide for future residential development, it does not remove barriers to off-site development.

Although the project accommodates planned economic growth at suitable locations, as discussed further in Section 4.14, *Population and Housing*, the net increase in population on the Project site would be less than significant.

5.3 - Significant Irreversible Changes

As stated in the CEQA Guidelines, an EIR must address any significant irreversible environmental change that would result from project implementation. According to Section 15126.2(c) of the CEQA Guidelines, such a change would occur if one of the following scenarios occurs:

- The project would involve a large commitment of nonrenewable resources;
- Irreversible damage can result from environmental accidents associated with the project; and
- 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 Chapter 4, *Environmental Impact Analysis*, of this EIR and summarized in the Executive Summary. Implementation of the proposed Project would commit nonrenewable resources during any construction activities and future cannabis related facility operations. Future cannabis related operations, oil, gas, and other nonrenewable resources would be consumed for the cultivation, manufacturing, distribution, and retail sales of cannabis products. Therefore, an irreversible commitment of nonrenewable resources would occur as a result of the proposed Project. However, assuming that those commitments occur in accordance with the adopted goals, policies, and implementation measures of the Fresno General Plan, as a matter of public policy, those commitments have been determined to be acceptable. The policies of the Fresno General Plan ensure that any irreversible environmental changes associated with those commitments will be minimized.

CHAPTER 6 - ALTERNATIVES

6.1 - Introduction

The California Environmental Quality Act (CEQA) requires that an Environmental Impact Report (EIR) describe a range of reasonable alternatives to the project or to the location of the project site that could feasibly avoid or lessen any significant environmental impacts of the project while attaining most of the project's basic objectives. An EIR also must compare and evaluate the environmental effects and comparative merits of the alternatives. This chapter describes alternatives considered but eliminated from further consideration, including the reasons for elimination, and compares the environmental impacts of several alternatives retained with those of the project.

The following are key provisions of the CEQA Guidelines (Section 15126.6):

- 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 costlier.

- The No Project Alternative shall be evaluated, along with its impacts. The no project analysis shall discuss the existing conditions at the time the notice of preparation was published, as well as what would be reasonably expected to occur in the foreseeable future if the Project were not approved, based on current plans and consistent with available infrastructure and community services.

- The range of alternatives required in an EIR is governed by a "rule of reason;" therefore, the EIR must evaluate 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.

- 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.

- An EIR need not consider an alternative whose effects cannot be reasonably ascertained and whose implementation is remote and speculative.

The range of feasible alternatives is 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, as described in Section 15126.6(f)(1) of the CEQA Guidelines, are environmental impacts, site suitability, economic viability, availability of infrastructure, general plan consistency, regulatory limitations, jurisdictional boundaries, and whether the project proponent could reasonably acquire, control, or otherwise have access to an alternative site. An EIR need not consider an alternative whose effects could not be reasonably

identified, whose implementation is remote or speculative, and that would not achieve the basic project objectives.

Under case law and CEQA Section 15126.6(f), the discussion of alternatives need not be exhaustive and is subject to a rule of reason. CEQA Section 15126.6(d) states that "if an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternatives shall be discussed, but in less detail than the significant effects of the project as proposed." Determining factors that may be used to eliminate alternatives from detailed consideration in an EIR are (a) failure to meet most of the basic project objectives, (b) infeasibility, or (c) inability to avoid significant environmental impacts. CEQA Section 15364 defines "feasibility" as "Capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors."

The Project has the potential to have significant adverse effects, at either a project-level or cumulative-level, on aesthetics, agriculture, air quality, biological resources, greenhouse gas emissions, noise, population, and housing at the project site. Even with the mitigation measures described in Chapter 4, *Environmental Analysis*, of this EIR, impacts in these issue areas would be significant and unavoidable. Therefore, per the CEQA Guidelines, this section discusses alternatives that are capable of avoiding or substantially lessening effects on these resources. Significant, unavoidable impacts of the Project are summarized below. Following these summaries, Section 6.2, *Project Objectives*, restates the Project proponent's project objectives. Section 6.3, *Alternatives Eliminated from Further Consideration*, presents alternatives to the project that were considered but eliminated for further analysis. Section 6.4, *Alternatives Analyzed in This EIR*, presents alternatives fully analyzed in this EIR, provides a comparison of alternatives, and makes a determination about the environmentally superior alternative.

6.1.1 - SIGNIFICANT IMPACTS OF THE PROJECT

The implementation of the proposed Project would result in significant and unavoidable impacts and significant impacts prior to mitigation incorporated. These potential significant and unavoidable impacts and less-than-significant impacts with mitigation incorporated are evaluated for each of the alternatives that are considered and evaluated as discussed below.

No Potential for Impacts to Occur

Potential environmental effects of the Project and mitigation measures are discussed in detail in Chapter 4 of this EIR. After full analysis, the following effects were determined to have no potential for impacts to occur:

Agriculture and Forest Resources

- Impact 4.2-2: Conflict with Existing Zoning for Agricultural Use or a Williamson Act Contract

- Impact 4.2-3: : Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), or timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Productions (as defined in Government Code Section 51104(g))

- Impact 4.2-4: Result in the Loss of Forest Land or Conversion of Forest Land to Non-Forest Use

Biological Resources

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

- Impact 4.4-3: Have a Substantial Adverse Effect on State or Federally Protected Wetlands (Including, but Not Limited to, Marsh, Vernal Pool, Coastal, etc.) Through Direct Removal, Filling, Hydrological Interruption, or Other Means

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

Recreation

- Impact 4.16-1: Result in Increased Use of Existing Neighborhood and Regional Parks or Other Recreational Facilities Such that Substantial Physical Deterioration Would Occur or be Accelerated

- Impact 4.16-2: Include Recreational Facilities or Require Construction or Expansion of Recreational Facilities That Might Have an Adverse Physical Effect on the Environment

Potential for Less than Significant Impacts

Aesthetics

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

- Impact 4.1-2: Substantially Damage Scenic Resources, Including, but not Limited to, Trees, Rock Outcroppings, and Historic Buildings Within a State Scenic Highway

- Impact 4.1-3: 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

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

Air Quality

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

Biological Resources

- Impact 4.4-4: Interfere Substantially with the Movement of any Native Resident or Migratory Fish or Wildlife Species or with Established Native Resident or Migratory Wildlife Corridors, or Impede the Use of Native Wildlife Nursery Sites

Geology and Soils

- Impact 4.7-1: Directly or Indirectly Cause Potential Substantial Adverse Effects, Including the Risk of Loss, Injury, or Death Involving the Rupture of a Known Earthquake Fault

- Impact 4.7-2: Directly or Indirectly Cause Potential Substantial Adverse Effects, Including the Risk of Loss, Injury, or Death Involving Strong Seismic Ground Shaking

- Impact 4.7-3: Directly or Indirectly Cause Potential Substantial Adverse Effects, Including the Risk of Loss, Injury, or Death Involving Seismic-related Ground Failure, Including Liquefaction

- Impact 4.7-4: Directly or Indirectly Cause Potentially Substantial Adverse Effects, Including the Risk of Loss, Injury, or Death Involving Landslides

- Impact 4.7-5: Result in Substantial Soil Erosion or Loss of Topsoil

- Impact 4.7-6: 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 Offsite Landslide, Lateral Spreading, Subsidence, Liquefaction, or Collapse

- Impact 4.7-7: Be Located on Expansive Soil, as Defined in Table 18-1-B of the Uniform Building Code (1994), Creating Substantial Direct or Indirect Risks to Life or Property

- Impact 4.7-8: 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

Hazards and Hazardous Materials

- Impact 4.9-5: For A Project Located Within an Airport Land Use Plan or, Where Such a Plan Has Not Been Adopted, Within Two Miles of a Public Airport or Public Use Airport, Would

the Project Result in a Safety Hazard or Excessive Noise for People Residing or Working in the Project Area

- Impact 4.9-6: Impair Implementation of, or Physically Interfere with, an Adopted Emergency Response Plan or Emergency Evacuation Plan

- Impact 4.9-7: Expose People or Structures, Either Directly or Indirectly, to a Significant Risk of Loss, Injury, or Death Involving Wildland Fires

Hydrology and Water Quality

- Impact 4.10-3(i): Substantially Alter the Existing Drainage Pattern of the Site or Area, Including Through the Alteration of the Course of a Stream or River, or Through the Addition of Impervious Surfaces, in a Manner Which Would: Result in Substantial Erosion or Siltation On- or Off-Site

- Impact 4.10-3(ii): Substantially Alter the Existing Drainage Pattern of the Site or Area, Including the Alteration of the Course of a Stream or River or Through the Addition of Impervious Surfaces, or Substantially Increase the Rate or Amount of Surface Runoff in a Manner Which Would Result in Flooding On- Or Off-Site

- Impact 4.10-4: In Flood Hazard, Tsunami, or Seiche Zones, Risk Release of Pollutants Due to Project Inundation

- Impact 4.10-5: Conflict with or Obstruct Implementation of a Water Quality Control Plan or Sustainable Groundwater Management Plan

Land Use and Planning

- Impact 4.11-1: Physically Divide an Established Community

- Impact 4.11-2: Cause a Significant Environmental Impact Due to a Conflict with Any Land Use Plan, Policy, or Regulation Adopted for the Purpose of Avoiding or Mitigating an Environmental Effect

Mineral Resources

- Impact 4.12-1: Result in the Loss of Availability of a Known Mineral Resource that Would be of Value to the Region and the Residents of the State

- Impact 4.12-2: Result in the Loss of Availability of a Locally Important Mineral Resource Recovery Site Delineated on a Local General Plan, Specific Plan, or Other Land Use Plan

Noise

- Impact 4.13-2: Generation of Excessive Groundborne Vibration or Groundborne Noise Levels

- Impact 4.13-3: For a Project Located Within the Vicinity of a Private Airstrip or an Airport Land Use Plan or, Where Such a Plan has Not Been Adopted, Within Two Miles of a Public Airport or Public Use Airport, Would the Project Expose People Residing or Working in the Project Area to Excessive Noise Levels

Population and Housing

- Impact 4.14-1: Induce Substantial Unplanned Population Growth in an Area, Either Directly or Indirectly

- Impact 4.14-2: Displace Substantial Number of Existing People or Housing Necessitating the Construction

Public Services

- Impact 4.15-2: Result in Substantial Adverse Physical Impacts Associated with the Provision of New or Physically Altered Governmental Facilities, Need for New or Physically Altered Governmental Facilities, the Construction of Which Could Cause Significant Environmental Impacts in order to Maintain Acceptable Service Ratios, Response Times, or Other Performance Objectives for Police Protection Services

- Impact 4.15-3: Result in Substantial Adverse Physical Impacts Associated with the Provision of New or Physically Altered Governmental Facilities, Need for New or Physically Altered Governmental Facilities, the Construction of Which Could Cause Significant Environmental Impacts in Order to Maintain Acceptable Service Ratios, Response Times, or Other Performance Objectives for School Services

- Impact 4.15-4: Result in Substantial Adverse Physical Impacts Associated with the Provision of New or Physically Altered Governmental Facilities, Need for New or Physically Altered Governmental Facilities, the Construction of Which Could Cause Significant Environmental Impacts in order to Maintain Acceptable Service Ratios, Response Times, or Other Performance Objectives for Park Services

Utilities and Service Systems

- Impact 4.19-2: Have Sufficient Water Supplies Available to Serve the Project from Existing Entitlements and Resources, or Would New or are New or Expanded Entitlements Needed

Wildfire

- Impact 4.20-1: Substantially Impair an Adopted Emergency Response Plan or Emergency Evacuation Plan

- Impact 4.20-2: Due to Slope, Prevailing Winds, and Other Factors, Exacerbate Wildfire Risks, and Thereby Expose Project Occupants to, Pollutant Concentrations from a Wildfire or the Uncontrolled Spread of a Wildfire

- Impact 4.20-3: Require the Installation or Maintenance of Associated Infrastructure (Such as Roads, Fuel Breaks, Emergency Water Sources, Power Lines or Other Utilities) that may Exacerbate Fire Risk or that may Result in Temporary or Ongoing Impacts to the Environment

-

Potential for Less than Significant Impacts to Occur with Incorporation of Mitigation Measures

Potential environmental effects of the Project and mitigation measures are discussed in detail in Chapter 4 of this EIR. After full analysis, the following effects were determined to be less than significant with the incorporation of mitigation measures.

Agriculture and Forest Resources

- Impact 4.2-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as Shown on the Maps Prepared Pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to Non-Agricultural Use

- Impact 4.2-5: Involve Other Changes in the Existing Environment which, Because of Their Location or Nature, Could Result in Conversion of Farmland to Non-Agricultural Use or Conversion of Forest Land to Non-Forest Use

Air Quality

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

Biological Resources

- Impact 4.4-1: Have a Substantial Adverse Effect, Either Directly or through Habitat Modifications, on any Species Identified as a Candidate, Sensitive, or Special Status

Species in Local or Regional Plans, Policies, or Regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service

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

Cultural Resources

- Impact 4.5-1: Cause a Substantial Adverse Change in the Significance of a Historical Resource Pursuant to Section 15064.5

- Impact 4.5-2: Cause A Substantial Adverse Change in the Significant of an Archaeological Resource Pursuant to Section 15064.5

- Impact 4.5-3: Disturb any Human Remains, including those Interred Outside of Dedicated Cemeteries

Energy

- Impact 4.6-1: Result in Potentially Significant Environmental Impact Due to Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources, During Project Construction or Operation

- Impact 4.6-2: Conflict with or Obstruct a State or Local Plan for Renewable Energy or Energy Efficiency

Geology and Soils

- Impact 4.7-9: Directly or Indirectly Destroy a Unique Paleontological Resource or Site or Unique Geologic Feature

Greenhouse Gas Emissions

- Impact 4.8.2: Conflict with Any Applicable Plan, Policy or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases

Hazards and Hazardous Materials

- Impact 4.9-1: Create a Significant Hazard to the Public or the Environment Through the Routine Transport, Use, or Disposal of Hazardous Materials

- Impact 4.9-2: Create a Significant Hazard to the Public or the Environment Through Reasonably Foreseeable Upset and Accident Conditions Involving the Release of Hazardous Materials into the Environment

- Impact 4.9-3: Emit Hazardous Emissions or Handle Hazardous or Acutely Hazardous Materials, Substances, or Waste Within One-Quarter Mile of an Existing or Proposed School

- Impact 4.9-4: Create a Hazard to Public or the Environment as a Result of Being Located on a Site that is Included on a List of Hazardous Material Sites Compiled Pursuant to Government Code Section 65962.5

Hydrology and Water Quality

- Impact 4.10-1: Violate Any Water Quality Standards or Waste Discharge Requirements or Otherwise Substantially Degrade Surface or Groundwater Quality

- Impact 4.10-2: Substantially Decrease Groundwater Supplies or Interfere Substantially with Groundwater Recharge Such That the Project May Impede Sustainable Groundwater Management of the Basin

- Impact 4.10-3(iii): Substantially Alter the Existing Drainage Pattern of the Site or Area, Including Through the Alteration of the Course of a Stream or River or Through the Addition of Impervious Surfaces, in a Manner Which Would Create or Contribute Runoff Water Which Would Exceed the Capacity of Existing or Planned Stormwater Drainage Systems or Provide Substantially Additional Sources of Polluted Runoff

- Impact 4.10-3(iv): Substantially Alter the Existing Drainage Pattern of the Site or Area, Including Through the Alteration of the Course of a Stream or River or Through the Addition of Impervious Surfaces, in a Manner Which Would impede or redirect flood flows

Noise

- Impact 4.13-1: Generation of a Substantial Temporary or Permanent Increase in Ambient Noise Levels in the Vicinity of the Project in Excess of Standards Established in the Local General Plan or Noise Ordinance or Applicable Standards of Other Agencies

Public Services

- Impact 4.15-1: Result in Substantial Adverse Physical Impacts Associated with the Provision of New or Physically Altered Governmental Facilities, Need for New or Physically Altered Governmental Facilities, the Construction of Which Could Cause Significant Environmental Impacts in order to Maintain Acceptable Service Ratios, Response Times, or Other Performance Objectives for Fire Protection

- Impact 4.15-5: Result in Substantial Adverse Physical Impacts Associated with the Provision of New or Physically Altered Governmental Facilities, Need for New or Physically Altered Governmental Facilities, the Construction of Which Could Cause Significant

Environmental Impacts in order to Maintain Acceptable Service Ratios, Response Times, or Other Performance Objectives for Other Public Facilities

Transportation

- Impact 4.17-1: Conflict with a Program, Plan, Ordinance, or Policy Addressing the Circulation System, Including Transit, Roadway, Bicycle and Pedestrian Facilities
- Impact 4.17-2: Conflict or be Inconsistent with CEQA Guidelines 15064.3, Subdivision (b)
- Impact 4.17-3: Substantially Increase Hazards Due to a Geometric Design Feature or Incompatible Uses
- Impact 4.17-4: Result in Inadequate Emergency Access

Tribal Cultural Resources

- Impact 4.18-1: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource, Defined in Public Resources Code Section 21074 as Either a Site, Feature, Place, Cultural Landscape that is Geographically Defined in Terms of the Size and Scope of the Landscape, Sacred Place, or Object with Cultural Value to a California Native American Tribe, and that is Listed or Eligible for Listing in the California Register of Historical Resources, or in a Local Register of Historical Resources as Defined in Public Resources Code Section 5020.1(k)
- Impact 4.18-2: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource, Defined in Public Resources Code Section 21074 as Either a Site, Feature, Place, Cultural Landscape that is Geographically Defined in Terms of the Size and Scope of the Landscape, Sacred Place, or Object with Cultural Value to a California Native American Tribe, and that is a Resource Determined by the Lead Agency, in its Discretion and Supported by Substantial Evidence, to be Significant Pursuant to Criteria Set Forth in Subdivision (c) of Public Resources Code Section 5024.1. In Applying the Criteria Set Forth in Subdivision (c) of Public Resource Code Section 5024.1

Utilities and Service Systems

- Impact 4.19-1: Require or Result in the Relocation or Construction of New or Expanded Water, Wastewater Treatment or Storm Water Drainage, Electric Power, Natural Gas, or Telecommunications Facilities, the Construction or Relocation of Which Could Cause Significant Environmental Effects
- Impact 4.19-3: Result in a Determination by the Wastewater Treatment Provider Which Serves or May Serve the Project That It Has Adequate Capacity to Serve the Project's Projected Demand in Addition to the Provider's Existing Commitments

- Impact 4.19-4: Generate Solid Waste in Excess of State or Local Standards, or in Excess of the Capacity of Local Infrastructure, or Otherwise Impair the Attainment of Solid Waste Reduction Goals

- Impact 4.19-5: Comply with Federal, State, and Local Management and Reduction Statutes and Regulations Related to Solid Waste

Wildfire

- Impact 4.20-4: Expose People or Structures to Significant Risks, Including Downslope or Downstream Flooding or Landslides, as a Result of Runoff, Post-fire Slope Instability, or Drainage Changes

Potential for Significant and Unavoidable Impacts to Occur

Air Quality

- Impact 4.3-1**:** The Project Would Conflict with or Obstruct Implementation of an Applicable Air Quality Plan.

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

Greenhouse Gases

- Impact 4.8-1: Generate Greenhouse Gas Emissions, Either Directly or Indirectly, That May Have a Significant Impact on the Environment

6.1.2 - OTHER IMPACTS OF THE PROJECT

Impacts of the Project on the other resources evaluated in this EIR were found to be either less than significant or less than significant after mitigation. Therefore, consideration of alternatives that would further reduce impacts on these resources is not required by CEQA. Only alternatives that reduce or substantially lessen the Project's impacts on aesthetics, agriculture, air quality, biological resources, greenhouse gas emissions, noise, or population and housing are considered in this EIR. If one of the alternatives would cause a greater adverse impact on another resource, these impacts are disclosed in Section 6.4, *Alternatives Analyzed in this EIR*. Otherwise, impacts to the remaining resources evaluated in this EIR are not discussed further in this section.

6.2 - Project Objectives

The Project has the following objectives:

1. Regulate commercial cannabis cultivation, manufacturing, distribution, testing and retail sales of cannabis products within the City in a manner consistent with State law, and allow the orderly development and oversight of commercial cannabis cultivation and manufacturing businesses;

2. Develop a program that encourages cannabis cultivators, manufacturers, distributors and retail sellers to operate legally and secure necessary permits and licenses to operate in full compliance with City regulations, maximizing the proportion of activities within the City and minimizing unlicensed activities;

3. Provide efficiency and clarity in the commercial cannabis cultivation, manufacturing, distribution, testing and retail sales licensing/permit processes, regulations, and standards to facilitate participation and use by applicants;

4. Prevent impacts of cannabis cultivation, manufacturing, distribution, and retail sales sites on children and sensitive populations;

5. Encourage the commercial cultivation, manufacturing, distribution, testing and retail sales of high-quality local cannabis products that meet the demand for Fresno area cannabis and cannabis products, including the needs of medical patients and their caregivers, as well as adult personal use as authorized under Proposition 64;

6. Develop a legal, local cannabis industry to improve the City's tax base in balance with other objectives;

7. Ensure compatibility of cultivation, manufacturing, distribution, testing and retail sales sites with surrounding land uses, especially residential neighborhoods, educational facilities, and agriculture operations;

8. Minimize adverse effects of commercial cultivation, manufacturing, distribution, testing and retail sales on the natural environment, natural resources and wildlife, as well as effects on water supply and water quality;

9. Regulate sites and premises used for commercial cultivation, manufacturing, distribution, testing and retail sales to avoid the risks of criminal activity, degradation of the visual setting and neighborhood character, obnoxious odors, hazardous materials, and fire hazards;

10. Ensure cannabis is cultivated, manufactured, distributed, tested and sold in a manner that supports public health and safety;

11. Ensure adequate law enforcement and fire protection response to cultivation, manufacturing, distribution, testing and retail sales; and

12. Promote energy and resource efficiency in cannabis cultivation, manufacturing, distribution, testing and retail sales of cannabis products.

CEQA requires that an EIR describe a reasonable range of alternatives to the Project, or to the location of the Project, that would avoid or substantially lessen any of the significant effects of the Project and that would feasibly attain most of the basic project objectives (Title 14, Section 15126.6). Attainment of the Project objectives is discussed for each retained alternative in Section 6.4.

6.3 - Alternatives Considered but Rejected

There were five project alternatives that were considered and rejected.

1. The *Complete Ban of Cannabis Businesses Alternative* would not fulfill the Project's objectives, which, in part, are to accommodate the needs of medically-ill persons in need and provide access to cannabis for medicinal purposes as recommended by their health care provider(s), as well as provide access to adult use cannabis, while imposing sensible regulations on the use of land to protect the City's residents, neighborhoods, and businesses from disproportionately negative impacts. The positive economic opportunity presented by the regulation of cannabis businesses would not be realized under this alternative, and illegal cannabis operations would continue to provide sources for the cannabis market.

2. The *Allow Outdoor Cultivation Alternative* would amend the existing regulations and proposed ordinance to allow for outdoor cultivation. This alternative would achieve the Project objectives of implementing regulations for the medical and adult use of cannabis; however, this would also increase the Project's water usage and odor generation, as well as jeopardize the availability of agricultural lands that could be used for a wide variety of crops.

3. The *Cannabis Businesses Located in One or More Cannabis Hubs Alternative* would establish locations throughout the City to serve as cannabis business hubs. This alternative would achieve the Project objectives of implementing regulations for the medical and adult use of cannabis; however, the concentration of cannabis businesses would create additional traffic in these areas. Additionally, public services (including police and fire services) of the area would be unduly burdened compared to those of surrounding districts.

4. *The Cannabis Cultivation Located only at Wastewater Treatment Plant Alternative* would limit the permitting of cannabis cultivation to the area in the vicinity of the existing wastewater treatment plant. This alternative would achieve the Project objectives of implementing regulations for the medical and adult use of cannabis; however, the concentration of cannabis cultivation would create additional traffic in these areas and would unduly burden the public services of the area compared to surrounding districts.

5. The *No Project/Implementation of Cannabis Regulatory Ordinance* alternative would prevent the Project's purpose, which is to regulate the cultivation, processing, manufacturing, testing, sale, delivery, distribution, and transportation of cannabis, cannabis products, medicinal cannabis, and medicinal cannabis products in a responsible manner to protect the health, safety, and welfare of the residents of the City and to enforce rules and regulations consistent with State law.

The Project proposes to implement the provisions of the Medicinal and Adult Use Cannabis Regulation and Safety Act (MAUCRSA) to accommodate the needs of medically-ill persons in need of and provide access to cannabis for medicinal purposes as recommended by their health care provider(s), as well as provide access to adult use cannabis, while imposing sensible regulations on the use of land to protect the City's residents, neighborhoods, and businesses from disproportionately negative impacts. As such, it is the purpose and intent of this Project to regulate the cultivation, processing, manufacturing, testing, sale, delivery, distribution, and transportation of cannabis, cannabis products, medicinal cannabis, and medicinal cannabis products in a responsible manner to protect the health, safety, and welfare of the residents of the city and to enforce rules and regulations consistent with State law.

This Project EIR was prepared in compliance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts associated with the implementation of the Project. The purpose of this Project 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 Project. In addition to identifying potential environmental effects, this Draft EIR also identifies methods by which these impacts can be mitigated, reduced, minimized, or avoided.

Passage of the Medical Marijuana Program Act, Medical Cannabis Regulation and Safety Act, and the Adult Use of Marijuana Act have legalized the sale, use, and cultivation of marijuana. The *No Project/Implementation of Cannabis Regulatory Ordinance* alternative would enable the sale, use, and cultivation of marijuana pursuant to the general authorizations granted by state statutes. Whereas, the preferred Project, would enable the City of Fresno to regulate and mitigate the commercial cannabis businesses on a site by site basis. Therefore, the *No Project/Implementation of Cannabis Regulatory Ordinance* alternative would prevent the Project's purpose.

None of the alternatives considered but rejected would fulfill the Project's purpose or objectives and therefore were rejected.

6.4 - Alternatives Considered and Evaluated

An evaluation of four alternatives that were considered and evaluated are provided below. These alternatives represent a reasonable range of alternatives to the proposed Project. This analysis includes alternatives that could feasibly accomplish some of the basic objectives of the proposed Project and could potentially avoid or substantially lessen one or more

of the significant effects. The following is an evaluation of each of the alternatives to the proposed Project that were further considered for analysis. Table 6-4 provides a summary of impacts comparison between the proposed project and the project alternatives. Table 6-5 includes the impacts of the alternatives and compares each impact to the impacts of the proposed project. Table 6-5 also provides the level of impact significance for each issue.

6.4.1 - ALTERNATIVE A - NO PROJECT ALTERNATIVE

Under the No Project Alternative, the Project area would remain unchanged and there would be no sites eligible for commercial cannabis businesses. None of the vacant sites would be improved, and none of the vacant buildings would be occupied. Additionally, an estimated 120 illegal cannabis operations currently exist within the City of Fresno and the current regulatory framework cannot be implemented without the proposed Project. Therefore, the No Project Alternative would not fulfill the objectives of the Project and would continue to result in impacts to land use, noise, public services, and transportation.

6.4.2 - ALTERNATIVE B - REDUCED PROJECT ALTERNATIVE – MEDICINAL ONLY

This alternative would decrease the number of businesses allowed as it would only serve residents with medical reasons for the use of cannabis products. Reductions of the Project would include:

- Cannabis Retail businesses from 21 to seven, eligible sites from 5,420 to 1,806, and overall footprint from 55,000 square feet to 18,333 square feet;
- Cultivation, distribution, and manufacturing businesses from 16 to eight, eligible sites from 1,107 to 154, and overall footprint from 700,000 sf to 350,000 square feet; and
- Testing Laboratories would remain the same as proposed.

Table 6-1
Alternative B- Reduced Project Alternative- Medical Only

Commercial Cannabis Uses	Eligible Sites	Businesses	Building sf
Cultivation, Distribution, and Manufacturing Within Cannabis Innovation Zone	154	8	350,000
Cannabis Retailers	1,806	7	18,333
Testing Laboratories	13,660	Unlimited	100,000
Totals	**15,620**	**N/A**	**468,333**

The decreased number of commercial cannabis businesses, eligible sites, and building footprint in this alternative will reduce the significant impacts associated with air quality to a less than

significant level, and further reduce greenhouse gas emissions; however, not to a less than significant level.

This alternative will meet the Project objective to - "…accommodate the needs of medically-ill persons in need of and provide access to cannabis for medicinal purposes as recommended by their health care provider(s)," but will not meet the Project objective to "...provide access to adult use cannabis, while imposing sensible regulations on the use of land to protect the City's residents, neighborhoods, and businesses from disproportionately negative impacts." Additionally, there are an estimated 120 illegal cannabis operations throughout the City. Under the **Alternative B***,* some of these operations would continue to operate due to a lack of a legal, non-medical cannabis marketplace.

6.4.3 - ALTERNATIVE C - REDUCED PROJECT ALTERNATIVE – NO RETAIL

This alternative would eliminate the process of permitting retail cannabis businesses in the City, but maintain the permitting of testing, cultivation, distribution, and manufacture of cannabis products. The site numbers, businesses, and square footage under this alternative is described below:

- Cannabis Retail businesses from 21 to zero, eligible sites from 5,420 to zero, and overall footprint from 55,000 sf to zero square feet; and

- Testing Laboratories, Cultivation, Distribution, and Manufacturing businesses would remain the same as proposed.

Table 6-2
Alternative C- Reduced Project Alternative – No Retail

Commercial Cannabis Uses	Eligible Sites	Businesses	Building sf
Cultivation, Distribution, and Manufacturing Within Cannabis Innovation Zone	154	8	350,000
Cannabis Retailers	0	0	0
Testing Laboratories	13,660	Unlimited	100,000
Totals	**13,814**	**N/A**	**450,000**

The elimination of cannabis retailers in this alternative will reduce the significant impacts associated with air quality to a less than significant level and will further reduce greenhouse gas emissions; but not to a less than significant level. However, eliminating all cannabis retailers would not meet the Project objectives to "…provide access to adult use cannabis, while imposing sensible regulations on the use of land to protect the City's residents, neighborhoods, and businesses from disproportionately negative impacts." Additionally, an estimated 120 illegal

cannabis operations exist throughout the City. Under **Alternative C**, these operations would continue to operate unimpeded by the legal, regulated cannabis marketplace.

6.4.4 - ALTERNATIVE D - REDUCED PROJECT ALTERNATIVE – RETAIL ONLY

This alternative would eliminate the permitting process for cultivation, distribution, manufacturing, and testing facilities:

- Cannabis Retail businesses (21 permitted) would remain the same as proposed;
- Testing Laboratories from unlimited to zero, eligible sites from 13,660 to zero, and the overall footprint from 100,000 square feet to zero square feet; and
- Cultivation, Distribution, and Manufacturing businesses from eight to zero, eligible sites from 154 to zero, and the overall footprint from 350,000 square feet to zero square feet.

Table 6-3
Alternative D- Reduced Project Alternative – Retail Only

Commercial Cannabis Uses	Eligible Sites	Businesses	Building sf
Cultivation, Distribution, and Manufacturing Within Cannabis Innovation Zone	0	0	0
Cannabis Retailers	5,420	21	700,000
Testing Laboratories	0	0	0
Totals	**5,420**	**21**	**700,000**

The elimination of cannabis cultivation, distribution, manufacturing, and testing facilities in this alternative will reduce the significant impacts associated with air quality to a less than significant level, and further reduce greenhouse gas emissions; however, not to a less than significant level. Additionally, this alternative would achieve the Project objectives of "…accommodate the needs of medically-ill persons in need of and provide access to cannabis for medicinal purposes as recommended by their health care provider(s), as well as provide access to adult use cannabis, while imposing sensible regulations on the use of land to protect the city's residents, neighborhoods, and businesses from disproportionately negative impacts." However, eliminating the permitting process for these types of cannabis businesses would prevent the City from fully realizing the full economic opportunity offered by the cannabis industry.

6.5 - Environmentally Superior Alternative

CEQA requires that the City identify an Environmentally Superior Alternative. If the No Project Alternative is the Environmentally Superior Alternative, the City must identify an Environmentally Superior Alternative among the other alternatives considered in the EIR (CEQA Guidelines,

Section 15126.6). This alternatives analysis includes three other Project alternatives – the Alternative B- Medicinal Only, Alternative C- No Retail, and Alternative D- Retail Only. Based on the evaluation of the three alternatives, the Alternative D - Retail Only would reduce significant and unavoidable environmental impacts to unnecessary electrical energy usage, while fulfilling most of the objectives of the proposed Project and is therefore the Environmentally Superior Alternative.

Table 6-4
Summary of Alternatives

Alternative	Description	Basis for Section and Summary of Analysis
Proposed Regulation and Permitting of Commercial Cannabis Activities (Project)	• 21 retail cannabis businesses, 5,420 eligible sites, and 55,000 sf of retail cannabis space • 16 cultivation, distribution, and manufacturing businesses, 1,107 eligible sites, and 700,000 sf designated to these activities • Unlimited testing laboratories, 13,660 eligible sites, and 100,000 sf of testing laboratory space	
No Project Alternative	• The Project area would remain unchanged and no sites would be eligible for commercial cannabis businesses • The estimated 120 illegal cannabis operations would continue operating, unimpeded by legal and regulated cannabis marketplaces	• Required by CEQA • Avoids significant impacts • Does not meet the Project objectives to "…accommodate the needs of medically-ill persons in need of and provide access to cannabis for medicinal purposes as recommended by their health care provider(s), as well as provide access to adult use cannabis, while imposing sensible regulations on the use of land to protect the city's residents, neighborhoods, and businesses from disproportionately negative impacts."
Alternative B: Reduced Project – Medicinal Only	• Reduce the number of retail businesses allowed from 21 to 7, eligible sites from	• Avoids significant impacts • Meets Project objectives to "… accommodate the needs of medically-ill

Alternative	Description	Basis for Section and Summary of Analysis
	5,420 to 1,806, and from 55,000 sf to 18,333 • Reduce the number of cultivation, distribution, and manufacturing businesses from 16 to 8, eligible sites from 1,107 to 154, and from 700,000 sf to 350,000 sf • Testing laboratories would remain the same as proposed	persons in need of and provide access to cannabis for medicinal purposes as recommended by their health care provider(s)," but does not meet the Project objective to "…provide access to adult use cannabis, while imposing sensible regulations on the use of land to protect the city's residents, neighborhoods, and businesses from disproportionately negative impacts."
Alternative C: No Retail	• Reduce the number of retail cannabis businesses allowed from 21 to 0, 5,420 to 0, and 55,000 sf to 0 sf • Cultivation, distribution, manufacturing, and testing facilities would remain the same as proposed	• Reduces some impacts • Does not meet Project objectives to " ⋯accommodate the needs of medically-ill persons in need of and provide access to cannabis for medicinal purposes as recommended by their health care provider(s), as well as provide access to adult use cannabis, while imposing sensible regulations on the use of land to protect the city's residents, neighborhoods, and businesses from disproportionately negative impacts."
Alternative D: Retail Only	• 21 retail cannabis businesses, 5,420 eligible sites, and 55,000 sf of retail cannabis space • Testing facilities from unlimited to zero, eligible sites from 13,660 to zero, and from 100,000 sf	• Avoids significant impacts to energy usage • Meets Project objectives to "…provide access to adult use cannabis, while imposing sensible regulations on the use of land to protect the city's

Alternative	Description	Basis for Section and Summary of Analysis
	• Cultivation, distribution, and manufacturing businesses from eight to zero, eligible sites from 154 to zero, and from 350,000 sf to zero sf	residents, neighborhoods, and businesses from disproportionately negative impacts." • Does not meet Project objectives to "…accommodate the needs of medically-ill persons in need of and provide access to cannabis for medicinal purposes as recommended by their health care provider(s)." • The City would not fully realize the economic opportunity presented by these aspects of the cannabis industry.

Table 6-5
Summary of Alternatives

Environmental Resource	Project	Alternative A	Alternative B	Alternative C	Alternative D
Air Quality: Conflict or obstruct implementation of air quality plan	Significant / Unavoidable	Fewer	Similar	Similar	Similar
Air Quality: Cumulative net increase of non-attainment pollutants	Significant / Unavoidable	Fewer	Similar	Similar	Similar
Air Quality: Cumulative effects	Significant / Unavoidable	Fewer	Similar	Similar	Similar
Greenhouse Gas Emissions: Generate GHG emissions	Significant / Unavoidable	Fewer	Similar	Fewer	Fewer
Greenhouse Gas Emission: Cumulative effects	Significant / Unavoidable	Fewer	Similar	Similar	Similar
Meet Project Objectives?	Yes	No	Some	Some	Some
Reduce Any Significant and Unavoidable Impacts to No Impact or Less than Significant?	—	Yes, most impacts	No	No	Yes, Unnecessary use of electrical energy

CHAPTER 7 - RESPONSE TO COMMENTS

This Chapter is being reserved for, and will be included with, the Final Environmental Impact Report (EIR).

CHAPTER 8 - ORGANIZATIONS AND PERSONS CONSULTED

Note: All of the below entities were either notified or contacted directly to ask for or directly receive consultation on their applicable area of expertise in respect to this proposed Project. This may not be an all-inclusive list.

8.1 - Federal Agencies

- U.S. Bureau of Land Management
- U.S. Department of Agriculture/Natural Resources Conservation Service
- U.S. Environmental Protection Agency—Region IX
- U.S. Fish and Wildlife Service

8.2 - State Agencies

- California Air Resources Board
- California Highway Patrol
- Department of Conservation
- Department of Parks and Recreation
- Department of Water Resources
- Department of Fish and Wildlife
- Department of Forestry and Fire Protection
- Department of Health Services
- Department of Corrections
- Native American Heritage Commission
- Office of Historic Preservation
- Public Utilities Commission
- Department of Transportation Division of Aeronautics
- Department of Transportation District 06
- Department of Toxic Substances Control
- Regional Water Quality Control Board / Central Valley Region
- State Clearinghouse Office of Planning and Research

8.3 - Regional and Local

- Fresno County Agricultural Commissioner
- Fresno County Public Works Department
- Fresno County Sheriff Department
- City of Fresno Department of Public Utilities
- City of Fresno Parks, After School, Recreation & Community Services (PARCS)
- City of Fresno Planning and Development
- School Districts of the City of Fresno
- Pacific Gas & Electric Company

- San Joaquin Valley Unified Air Pollution Control District
- Southern San Joaquin Valley Information Center
- Southern California Gas Company
- Southern California Edison

8.4 - Native American Consultation

- Dumna Wo Wah Tribal Government
- Table Mountain Rancheria of California

In accordance with Senate Bill 18 and the California Tribal Consultation guidelines, the appropriate native groups were consulted with respect to the Project's potential impacts on Native American places, features, and objects. As of the writing of this report, staff has not received any comments from consulted tribes regarding the department's SB 18 request. Staff notes consultation with appropriate Native American groups per Senate Bill 18 requirements has occurred.

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